

The European Fund Management Industry Needs a Better Grasp of Non-financial Risks

December 2010



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We thank CACEIS and Isabelle Lebbe, Michael May, Stéphane Puel, Bruno Dauty, Alain Dubois, Arnaud Stevenson and Timothy Spangler for their useful comments. Any remaining errors or omissions are the sole responsibility of the authors.

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Foreword

This publication, "The European Fund Management Industry Needs a Better Grasp of Non-Financial Risks," is drawn from the CACEIS research chair—"Risk and Regulation in the European Fund Management Industry"—at EDHEC-Risk Institute.

This chair deals with the issue of non-financial risk and performance in a changing regulatory framework for the European fund management industry. It analyses the major risks those in the industry face as a result of regulation and of their practices, assessing the importance and impact of these risks in terms of solvency and business models, and proposing methods to attenuate them.

In this publication we look at how non-financial risks and failures have impacted the regulatory agenda in Europe and trace the management of liquidity, counterparty, compliance, misinformation, and other financial risks in the fund industry. By identifying the distribution of risks and responsibilities in the industry, we examine how convergence between country regulations could be achieved. Finally, we assess how fund unit-holders can best be protected with appropriate regulations, improved risk management practices, and greater transparency.

We would like to extend our warm thanks to our partners at CACEIS for their collaboration on the project and their commitment to this research chair. Our thanks in particular to Eric Derobert, Jean-Marc Eyssautier, and Anne Landier-Juglar, for allowing us to benefit from their expertise.

We wish you a pleasant and informative read.



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Abstract



Abstract

UCITS, the European retail regulated investment funds, were created shortly after the 1985 passage of the first UCITS directive. Since then, non-financial risks have increased, but European authorities and investment professionals failed to study the impact of these risks when they allowed UCITS funds to evolve.

The increase of non-financial risks in investment funds is the result above all of the growing sophistication of the transactions and financial instruments of investment funds, of the pursuit of non-traditional risk premia, as well as of such regulatory actions as the passage of the eligible assets directive (EAD) and the improved possibilities for leverage in sophisticated UCITS. In addition, inappropriate regulatory certification contributed to the sale of bad products, to misrepresentation of these products, and to increasing risk. Country competition in the implementation of EU regulations and possibly in supervisory practices also had an impact.

The vagueness of the EU definition of depositary liabilities and the explicit reliance of UCITS on country regulations mean that in the European Union country regulations in the fund industry can be understood by legal origins more than by EU law. French financial civil law takes an administrative approach to depositary protection, an approach in which the depositary is an auxiliary to the regulator, whereas common-law culture relies on private contracts. The civil-law approach has influenced European financial regulations such as UCITS, in which depositaries play a central role in the protection of unit-holders. In the current reworking of depositary obligations, the French influence on EU law threatens depositaries with

exorbitant liabilities; the temptation to rely on well-capitalised firms may also lead to consolidation in the fund industry.

To shield investors from non-financial risks, all parties can be required to hold regulatory capital against these risks; insuring non-financial risks can also be considered. The pricing of insurance and of risk-sensitive capital requirements must be based on a measure or "rating" of the non-financial risks. These ratings would shed more light on non-financial risks arising from sub-custody risk, from market infrastructures, and from investments in other funds or in derivatives on other assets, risks that are not adequately reported today. Last, governance can be improved by spelling out the responsibilities of the board and facilitating the intervention of unit-holders with class actions. The necessary improvements to risk management practices can then be driven by either regulatory bodies or industry groups. The failure to improve the regulatory framework should imply a subset of "secure UCITS" in which depositaries would be unconditionally responsible for the restitution of assets. The necessary changes having been made, assets would involve, in the main, listed European financial securities admitted to central securities depositories systems.

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This research chair on risk and regulation in the European fund industry deals with the European regulatory framework for the fund industry and focuses on the situation in France, the United Kingdom, Luxembourg, and Ireland; regulation in the United States is examined as well.

The UCITS directive fails to make adequate allowances for the operational consequences of financial innovation. Although investment funds have diversified internationally, made growing use of derivatives and other sophisticated strategies, and evolved in other ways, and although EU regulators (eligible assets directive) and EU recommendations (recommendation on sophisticated UCITS that can make more extensive use of leverage) have recognised or even favoured these changes, they have failed to do studies on their impact and they have failed to modify regulation accordingly. Madoff showed that a massive fraud made possible the disappearance of all assets in a UCITS, the retail product supposedly affording the highest degree of investor protection, and this without the supervisory authorities or any of the parties involved in the security of unit-holders (the investment firm, the board of directors, the depositary) being able either to guarantee the security of the UCITS fund or to make good on the losses of unit-holders.

In addition, the bankruptcy of Lehman Brothers, a highly rated and prestigious institution subject to banking regulation, led to the disappearance of some assets of alternative investment funds and long delays in returning remaining assets even though such institutions were implicitly considered immune to the risk of bankruptcy by regulators. Although the major impact

of the Lehman bankruptcy may have been on alternative funds, this bankruptcy must lead us to question the implicit reliance of UCITS regulation on the assumption that sub-custodians cannot fail.

That protection offered by depositaries is subject to legal interpretations and varies widely within Europe, variations that also occur in the supposedly unified scope of UCITS, means that UCITS, before being a European brand, is country specific. On the whole, Madoff and Lehman raised sufficient concerns for politicians to agree on an agenda focused on a better definition and a strengthening of depositaries' responsibilities.

Non-financial risks increased, and regulations contributed to this rise. Non-financial risks are risks that arise because of failed processes or failed counterparties and that include the risk of assets not being returned at all as opposed to the financial risk of having low returns on assets. The rise of non-financial risks in investment funds has various causes. The former is the result of financial innovation, which has greatly increased the sophistication and complexity of the transactions made by investment funds and the financial instruments they use. The latter is the result of regulation unsuited to this growing sophistication. The UCITS directive was originally drafted when funds invested, in the main, in domestic listed securities and when depositaries could ensure the safekeeping of assets. With the sophistication of fund management techniques and the growing number of asset classes used to capture risk premia, funds invested in derivatives and extended their holdings of securities with sub-custodians and registrars in

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geographies that required local custody. Misleading regulatory certification based on inappropriate rules, such as liquidity requirements, contributed to the rise of adverse selection and misselling (by which products are misrepresented) and, in the end, to a rise in risks for those who relied on these certifications. Adverse selection and misselling are especially worrying in the retail landscape because investors cannot make informed decisions. The growing sophistication of funds, as well as their greater use of derivatives and of international assets that require external sub-custody, has made bookkeeping and the monitoring of the compliance of the fund and the supervision of sub-custodians ever more important, especially as derivatives hide the underlying exposures and sometimes the true nature of risks. Although making more assets eligible has led to greater demands being made of fund management firms, with the spelling out of a programme of activities specific to the instruments dealt with, the regulators' failure to take post-market problems into account until very recently means that the European framework fails to define for the depositary either the obligations or the liability associated with custody of these instruments. In article 9 of the UCITS directive (EC 2008), the depositary is entrusted with the assets for safe-keeping but is responsible only for the consequences of its unjustifiable failure to perform (undefined) obligations.¹ So, the failure to update depositary regulations has meant that investments in derivatives deprive UCITS regulation of its substance and allowed risks to increase. Last, regulatory competition between countries in their implementation of the UCITS directive and of European recommendations was facilitated first because of loopholes in EU

laws (such as the lack of definition of duties associated with bookkeeping and with the sub-custody of assets) and second because the EU merely issues recommendations for the convergence of country laws.²

A determination to harmonise the depositary liability regime that has not yet been fully transposed into regulation and that should not mask the need to manage non-financial risks throughout the fund management industry.

As the Madoff fraud made clear that heterogeneity in the protection of unit-holders could undermine the single market for funds in Europe, a political agenda sprang from a desire to clarify, homogenise, and strengthen the UCITS regime, particularly as regards the liability of depositaries. In May 2009, Charlie McCreevy, Internal Market Commissioner, announced that he intended to clarify and strengthen the provisions of the UCITS regime, in particular those regarding the liability of depositaries. The Committee of European Securities Regulators reviewed the liability regime of the UCITS depositaries in the twenty-seven member states and concluded that depositaries' obligations of safekeeping and control laid out in the UCITS directive have been transposed in diverging ways by member states. Country regulations can then be understood by their legal origins more than by EU laws. Common-law systems rely on the assumption that extended fiduciary duties and adequate information of agents are sufficient, but law enforcement relies on costly court procedures. Civil-law systems, in which regulators detail the procedures to be followed by depositaries and entrust them with a strong mission of control and great responsibilities to the end-investor, rely on the assumption that an administrative

1 - As this document was being finished, UCITS IV was passed by the European parliament but not yet implemented in country regulations. To compare EU regulation and that enacted in individual countries, we have used references to UCITS III throughout the document when UCITS IV does not bring material changes.

2 - Technically, the outcome of level 3 of the European Lamfalussy process (supervisory committees facilitating the convergence of regulatory outcomes) is not binding and is not part of Community law; EU recommendations are—as shall probably be expected—not binding. EU laws rely on national legal regimes.

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approach to the protection of unit-holders is sufficient. Implicitly, EU laws borrow from the civil-law approach by giving a central role to the asset management firm and to the depositary and by failing to provide adequate transparency (no mention of non-financial risks). The influence of the French regulations on EU law involves the risk that, in the current reworking of depositary obligations, excessive regulatory focus on the role of the depositary in the protection of unit-holders will lead to exorbitant practical liabilities for EU depositaries. For international funds, nearly all depositaries resort to sub-custodianship agreements and the workings of the current system mean that thousands of billions of euros are entrusted to sub-custodians. The assets held by the largest sub-custodian of the many large European depositary banks represent several dozen times their capital base; so, significant disappearance of assets at large sub-custodians cannot be paid out of depositaries' capital, and the recognition of unconditional liability for assets under sub-custody could lead to an extremely sharp increase in capital requirements. For this reason, it is vital that the exemptions to the depositary liability to return assets entrusted with sub-custodians, as provided for in the AIFM directive, be workable. Finally, the regulators' temptation to rely on highly capitalised parties (such as the parent companies of the fund management firms) to protect investors could also be a source of risk for the fund management industry, as it could penalise independent management firms and concentrate risks on the larger parties.

Strengthening incentives to manage risk where risk is created. The regulatory challenge today is to fully take the best of common-law and civil-law systems. A

precise description of depositary controls typical of common-law countries should go together with enhanced fiduciary duties and transparency on non-financial risks. There are alternative and complementary ways to better protect unit-holders from non-financial risks. It is important to consider boosting capital requirements for all parties in the fund management industry, beginning with the party with the greatest obligations (and thus, in theory, the greatest responsibilities), the fund management firm. The models for allocating capital in financial conglomerates and at management firms should be reviewed, as should prudential regulations (capital requirements for limited operational risks should give way for a requirement for restitution risk). The aim of this approach is to create greater incentives to manage risk, as own capital should not be considered, as it is in the banking and insurance industries, insurance against the risk of loss. Fund management firms will never have risks sufficiently diversified for reasonable amounts of capital to insure them. The capital should be set in such a way as to ensure that the incentive to manage risks is greater than the marginal weight of this capital on the costs of management. In addition to the natural incentives to risk management created by the existence of capital requirements, modern regulations use risk-sensitive capital requirements as incentives. Regulators could lower capital requirements for investment firms (if capital requirements are set in the first place) and depositaries that manage these risks well, as well as for institutional investors that invest in low-risk alternative funds. Another way to prevent non-financial risks is to use insurance schemes. One could either require investment firms to seek insurance for the amount of non-financial risks that exceeds their available capital or insure

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retail unit-holders, as put forward in the European Commission (2010) legislative proposal for a thorough revision of the investor compensation schemes directive (ICSD).

Linking the strengthening of capital requirements and the improvement of information to the evaluation of non-financial risks. Risk-sensitive capital requirements and insurance of non-financial risks must be based on a measure of non-financial risks involved in funds, on what we call ratings of non-financial risks. Ratings of non-financial risks are necessary to shed more light on non-financial risks arising from sub-custody risk, as well as from investments in other funds or in derivatives on other assets not currently reported. The rating of the non-financial risk of a fund should, together with financial risk, represent the riskiness for investors. In opposition to the aforementioned notion of insurance of non-financial risks, a notion that, in spirit, clearly corresponds to the assumptions of total protection of the retail investor as this protection is formulated in civil law and, implicitly, in part, in European law, is the notion, dear to common law, of informed parties, and thus of transparency.

Strengthening fund governance and the representation of unit-holders. The strengthening of governance and greater involvement of unit-holders would make it possible for fund management firms to improve the ways they take non-financial risks into account. Eddy Wymeersch, president of the CESR, has sharply criticised (Autret 2009) the governance of the fund management industry and argued that the current practices are far from meeting the recommendations of the

International Organization of Securities Commissions (IOSCO), do not meet the standards of ordinary corporations and that checks and balances should do more than monitor compliance. EU laws impose no fiduciary duties on boards of directors, and the definition of their role is again left at the discretion of country regulators. The fiduciary duty of the board and of the chief compliance officer could be reinforced and include formal responsibility towards end-investors to ensure high standards of governance and best practices in the management of non-financial risks (as for financial risks). Class actions are likewise a means of imposing responsibilities, as investors can, as consumers, pool their resources to bring claims, regardless of the legal structure of the investment fund (investors are currently not greatly involved in daily monitoring of fund management and the unit-holder base is generally too highly fragmented to bring a claim, after the fact, against management).

Improving methods of managing non-financial risks. Ultimately, better regulation should lead to improved methods of managing such non-financial risks as counterparty risk, liquidity risk, or sub-custody risk. The needed improvements in the techniques for the management of non-financial risks can be driven by regulatory bodies or industry groups. For the management of counterparty risk, the regulatory technique is to create central counterparties (CCPs), which are a buyer to every seller and a seller to every buyer, and in effect eliminate nearly all counterparty risk. CCPs, however, require that margins be set as cash on a daily basis, and the requirement for cash margins raises the cost of derivatives and results

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in higher funding costs for investment funds. EDHEC argues that an alternative means of managing counterparty risk would involve relying on tri-party collateral agreements and over-collateralisation with less liquid instruments. Tri-party arrangements would make it possible to shed counterparty risk and avoid the funding cost of posting cash or liquid instruments as margins (equities could then be posted as collateral). Another question is whether regulations have limited the development of risk management techniques. Arguably, they have not helped asset managers adopt best practices for liquidity risk management: by certifying funds invested in potentially illiquid assets as liquid UCITS funds, sometimes even as very liquid money market funds, regulators gave investors a false sense of security. Funds that invest in assets that may become illiquid face the risk of high redemptions, which could lead to fire-sales of their assets; for most illiquid assets, redemptions may simply be impossible. Distributors and management firms, which relied on such certifications, were also deceived. Regulatory bodies would also be well advised to seek alternative regulated vehicles to structure funds with illiquid assets: closed-end funds, which would require a stronger governance framework, are a possible means of isolating and distributing illiquid strategies. The fund industry could also use liquidity risk management techniques, examples of which can be found in the literature on the risk management of hedge funds (De Souza and Smirnov 2004). The assumption that investors will redeem if their capital is insufficiently protected makes the case for a dynamic strategy inspired by constant proportion portfolio insurance. Last, managing sub-custody

risk is important for the protection of investors.

Reducing European regulatory arbitrage.

We conclude that homogenisation of country regulations and of supervisory cultures is necessary to prevent regulatory arbitrage: now that the differences in the depositary liabilities are better understood, the costs of depositary services in different European countries could soon diverge and regulatory arbitrage could gain importance, as investment firms could choose their home countries for no other reason than to reduce their costs, perhaps to the detriment of investor protection. The European Securities and Markets Authority (ESMA) will contribute to harmonisation, but the European regulations themselves (level 1 and level 2) should be reworked to ensure “better regulation”, to use a term popularised by the European Commission. Despite the great historical discrepancies in the regulation of funds, convergence is possible. After all, there are elements of convergence; fiduciary duties were once typical of common laws; fiduciary duties for depositaries, asset managers and distributors are now also defined in all European countries because UCITS and MiFID make such provisions; in the British principle-based regulatory environment, depositaries would like more detailed regulatory guidelines and assessment of the responsibility of each party; in the French rule-based regulatory environment, depositaries demand a more principle-based regulation that acknowledges that depositaries cannot be held responsible for what they cannot control. On the whole, a practical definition of depositary duties as well as adequate disclosure of information on non-financial risks to unit-holders is needed. Ideally,

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EU rules would be drafted as regulations, not only as directives. These rules should specify the duties of all parties and the legal proceedings involved when losses occur. The ESMA should be responsible for the direct supervision of funds or at least have very clear direct authority over country supervisors.

Last, if the member states of the European Union are unable to agree on reform, UCITS not exposed to non-financial risks should be distinguished from more modern UCITS that have potentially greater exposure to these risks. Secure UCITS funds would be investment funds for which the depositary has unconditional responsibility for returning assets. The eligibility of assets—by regulation or by the contract between the fund and the depositary—would then depend on both financial and operational criteria. These funds, with the necessary changes having been made, would be akin to those of the 1980s, when the UCITS label was created: for the most part, their assets would be listed European financial securities admitted to central securities depositories systems. It is clear that this distinction between secure UCITS and other UCITS can be considered an option only by default; we believe that incentives to manage non-financial risks, increased disclosure of these risks, and regulatory harmonisation are better ways for the UCITS framework to take non-financial risks into account.

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1. Large Non-financial Risks in Retail Funds Finally Make a Mark on the Regulatory Agenda



1. Large Non-financial Risks in Retail Funds Finally Make a Mark on the Regulatory Agenda

1.1 Introduction: Motivation for and Plan of the Study

This research chair on risks and regulations in the European fund industry deals with the regulatory framework in the fund industry in France, the United Kingdom, Luxembourg, and Ireland; regulation in the United States is studied as well. This research examines the rise of non-financial risks in the fund industry, how they came under the spotlight, the differences in country regulations, the risks of badly drafted EU laws, and the ways of protecting unit-holders from non-financial risks, a term that we use for risks in addition to the financial risks made clear in the fund's prospectus, risks that arise because of failed processes or failed counterparties and that include the risk of assets not being returned at all.

The recent crisis has led to large losses in the fund industry. The losses that spread through what was seemingly a single market for funds in Europe, however, were shared by depositaries, investment firms, and distributors in a very different manner across countries. These disparities have revealed regulatory loopholes and inconsistencies. Until the Madoff fraud and the demise of Lehman, the role of the custodian and depositary "was not understood outside the circle of practitioners who are professionally involved with custody and settlement activities" (Oxera 2002, 5). But the European Commission is now working on a set of rules for depositaries and proposing new regulations for investment funds. The EU proposals and regulations will have a major impact on the fund industry and on the supply of investment funds.

The first section of the study illustrates the failure of regulatory authorities, the fund industry, and investors to take non-financial risks into consideration until the Madoff fraud and the Lehman bankruptcy thrust these risks into the spotlight.

The second section of this study reviews the reasons for the rise of non-financial risks in investment funds, from the enlargement of available assets, through misplaced confidence in regulatory certifications, to country competition in the application of EU regulations and in supervisory practices.

The third section of this study focuses on country regulations in Europe as they are explained by legal origins, on EU laws that give a central role to depositaries in the protection of unit-holders but contain loopholes; we also comment on the risk of depositaries' being forced to take on exorbitant responsibilities in future EU regulations, and on the risk of a concentration of the industry if supervisors are tempted to rely on well-capitalised firms.

In the fourth section of this study, we review the means of shielding investors from non-financial risks: higher capital ratios for investment companies, the evaluation of non-financial risks involved in investment funds, insurance against non-financial risks, insurance whose pricing could rely on these ratings, or simply more transparency. Last, improving governance should result in better management of non-financial risks such as counterparty risk, liquidity risk, and sub-custody risks.

The conclusion summarises the main ideas expressed in this study and suggests that a survey of investment professionals would

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be a useful means of eliciting their views on necessary regulatory changes and on risk management practices.

1.2 EU Regulatory Authorities and the Industry Failed to Take Non-financial Risks into Account

EU regulators and the fund industry have failed to make adequate allowances for the operational consequences of financial innovation and for changes to funds. Progress has been made, to be sure, above all in governance, but, on the whole, provisions for managing non-financial risks, as well as the means of managing them, are still unsatisfactory in the UCITS framework.

Governance was improved and operational risks on transactions made with central counterparties (CCPs) were given more attention. On the whole, however, transactions outside CCPs were neglected.³ Corporate law has accorded governance greater importance.

The European Commission, however, has failed to guarantee the security of the settlement, custody, and control of operations performed outside the traditional space of securities held by central security depositories; it is of course outside this space that the main realistic non-financial risks in investment funds arise. This failure is apparent in the European green and white papers (EU 2005, 2006) on enhancing the EU framework for investment funds, since the objective of white papers is to make concrete proposals to be discussed before laws are drafted. The green and white papers dealt mainly with simplifications in procedures; some attention was given to the prevention of

risks by a limitation of conflicts of interests (notably by disclosures). The preparatory green paper (EU 2005) shows that regulators were not unaware of potential risks: "the Commission feels that, with its reliance on formal investment limits, UCITS may struggle in the longer term to keep pace with financial innovation". UCITS (undertakings for collective investment in transferable securities) is the set of European directives that allow retail collective investment schemes to operate freely throughout the EU on the basis of a single authorisation from one member state. UCITS may designate a coordinated retail investment fund subject to the UCITS directive. This recognition, however, is part of the general statement and not of the sections regarding law improvements, probably because at the time the Commission stated: "From an investor protection perspective, there have not been notable financial scandals involving UCITS. UCITS has provided a solid underpinning for a well-regulated fund industry". Likewise, the Commission acknowledged that a single market for depositary services would first necessitate "further harmonisation of the status, mission and responsibilities of these actors", but only as part of the long-term challenges of the industry, not of any concrete proposal. In addition, the eligible assets directive (EAD) has no reference to the non-financial risks or post-market difficulties that could be generated by the enlargement in eligible assets; CESR (2007) has issued level-3 guidelines for the definition of eligible assets but no guidelines for depositories and post-market operations. In none of these texts is sub-custody mentioned.

Without improvements to EU regulations, non-financial risks increased as funds relied

3 - The growing importance of governance has been reflected, in part, in UCITS regulations. Investment firms that manage UCITS are subject to organisational and risk management requirements (III.C-5f) whose aim is to limit conflicts of interest and control risks. Organisational and risk management requirements have also been designed by the CPSS-IOSCO for central counterparties (BIS 2001) and for central securities depositories (BIS 2010). MiFID encouraged broker-dealers to compete with each other. The crisis has led IOSCO to focus again on market infrastructure; IOSCO made recommendations for CCPs for derivatives (BIS 2010)

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more heavily on leverage, on derivatives, and on investment in target funds and in countries that required local sub-custody.

1.3 Madoff Shows That UCITS Can Lose It All

Even though UCITS funds as retail products supposedly involve the highest degree of investor protection, Madoff showed that a massive fraud made possible the disappearance of all assets in a UCITS, and this without supervisory authorities or any of the parties involved in the security of unit-holders (the investment firm, the board of directors, the depositary) guaranteeing the security of the UCITS fund or making good on the losses.

The Madoff fraud showed the loopholes and inconsistencies in regulation both in the United States and in Europe, as well as the misconduct of some parties. Regulation in the United States, which until the recent Obama package did not require advisors of hedge funds to register with the SEC

and allowed custody by securities firms, facilitated fraudulent practices such as the creation of Ponzi schemes. In Europe, for the first time, some UCITS funds—UCITS are the European coordinated regulated funds, *i.e.*, the counterpart to US mutual funds—lost the bulk of their assets as a consequence of the Madoff fraud, the kind of massive losses previously thought possible only at hedge funds. Luxalpha, a European feeder fund to Madoff, had been certified as a UCITS by the Luxembourg regulator, the CSSF, and was thus directly available to retail investors. The failure of the depositary of the fund to return the assets that disappeared in sub-custody means that protection offered by UCITS depositaries is subject to legal interpretations and varies widely within Europe. In reality, then, UCITS is not a European brand; it is country specific. This uneven protection raised immediate concerns, and politicians agreed on an agenda focused on a better definition and a strengthening of depositaries' responsibilities.

Box 1: The Madoff affair

Luxalpha, a fund that fed Madoff, should not have won approval as a UCITS because delegating core functions is forbidden in UCITS. UBS Asset Management in fact delegated the management of Luxalpha to Madoff and gave Bernard Madoff Investment Securities (BMIS) sub-custody of all its assets without mentioning this sub-custody in the prospectus. UBS Securities did exempt itself from its responsibility to return the assets but only mentions (Luxalpha 2008) that "The rights and duties of the Custodian pursuant to article 34 of the law of December 20, 2002, have been assumed by UBS Luxembourg S.A., pursuant to a Custodian and Paying Agency Agreement dated August 1, 2006, concluded between the Fund and the Custodian Bank". That exemption is, however, incompatible with UCITS regulations (UCITS III, art. 7): "A depositary's liability [...] shall not be affected by the fact that it has entrusted to a third party all or some of the assets in its safe-keeping" (EC 2008). Furthermore, Madoff was at the end of the day the manager and custodian of his own funds, which is also forbidden by UCITS. The certification of a fund incompatible with UCITS regulation, certification done to comply with requests from UBS clients to access Madoff, illustrates the so-called business-friendliness of Luxembourg.

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The liquidators of Luxalpha have taken legal action against the Luxembourg regulator (LePage 2009).

This failure to return assets of a UCITS raised awareness of the diverging obligations of depositaries in Europe and the notion that they are greater in France than in most other countries in Europe. The enforcement of regulations in France and Luxembourg differs too. The French Monetary Authority has direct powers of enforcement, but the CSSF, the Luxembourg regulator does not: if the client refers a case to the regulatory authority, the financial institution is not bound by the CSSF's decision. In the resolution of disputes between professionals under its supervision "the opinions it issues are not binding" (CSSF 2007, 160).

When assessing the responsibility of the depositary in the Lehman case, the French supervisor imposed a strict liability on the depositaries of funds in a strict interpretation of a law that was very protective of investors. When assessing the Luxalpha case, the Luxembourg supervisory authorities have pointed towards inadequate due diligence by UBS Securities but have not taken a public position on the obligation of restitution of UBS, a move that was interpreted as business-friendly.

The Madoff case also illustrates insufficient supervision by boards of directors of corporate-form investment funds. After all, Gregoriou and Lhabitant (2009) showed that an analysis of the Madoff funds revealed inconsistencies or "a riot of red flags", which suggests that the board of directors did not aim at best practices in the management of non-financial risks and failed to exercise effective oversight.

4 - In the traditional alternative investment landscape, investment funds use prime brokers for such services as execution of transactions and clearing of derivatives, producing consolidated risk and P&L reports, providing cash, and securities lending.

1.4 Lehman: Large Sub-custodians Can Default

Lehman Brothers was a prestigious institution subject to banking regulations; it benefited from the highest rating and was probably considered immune to the risk of bankruptcy. When it did go bankrupt, however, the assets of some investment funds disappeared and there were long delays in returning other assets. Furthermore, the bankruptcy was the result not of fraud but of a banking and liquidity crisis. Its failure highlighted the pervasiveness of sub-custody risk.

The demise of Lehman as a prime broker meant a failure to return the assets of

hedge funds it held in custody; it affected primarily equity long/short funds, regulated or not, that used the prime broker as a sub-custodian: borrowing securities from a prime broker⁴ generally involves posting more collateral than the amounts borrowed and the right for the prime broker to rehypothecate (or reuse) 120% of the value of the loan made to the fund. Assets held in sub-custody are kept in a segregated account at the prime broker, and reused assets fall in the prime broker's general account, from which they usually disappear since they are lent to other investment firms or hedge funds for covering short sales. In addition, country-regulated funds (ARIA EL funds, for instance) usually had

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an independent depositary or custodian,⁵ yet a widespread practice was to have all the fund's assets safe-kept at the prime broker.

The Lehman bankruptcy involved a legal issue: the legal treatment of assets held as collateral at the prime broker, even when segregated, was different in France from what it was in the United Kingdom. The French regulator required that collateral, minus the debt of the investment funds to Lehman, be returned immediately to the investment fund; the UK liquidator blocked the restitution of assets held as collateral, probably on the grounds that this collateral was not free of debt (the borrowings from investment funds). As a consequence, many investment funds could not complete any transactions, and the French regulator ordered depositaries to return the value of the assets to the investment fund. Investment funds lost the cash margins left at Lehman because, even if the cash was posted to be used as collateral, all cash deposits at institutions bear credit risk and disappear when the counterparty goes bankrupt.

In addition, asset management firms and depositaries did not meet their obligation to ensure that Lehman did not rehypothecate more than the contractual 120% or 140% limit.

Finally, at the time of bankruptcy, Lehman had failed to effectively segregate clients' assets, as indicated by Justice Michael Briggs in London (Fortado 2010). The practice of rehypothecation naturally limits the effectiveness of segregation and the ability to return assets lent to other firms immediately (prime brokers usually did not commit to immediate restitution).

An important lesson is that even well-regulated and reputed institutions, such as those that act as sub-custodians, may go bankrupt during market crises and that it may be impossible for depositaries to return assets with short delays. In France, where depositaries had an immediate and unconditional obligation of restitution, depositaries had to compensate investors in some ARIA EL funds for assets that had been posted as collateral to Lehman, but the order of 23 October 2008 and the decree of 24 July 2009 allow a depositary's liabilities to be contractually lowered for *OPCVM ARIA* and *OPCVM contractuel* (which use the prime broker to borrow assets).

1.5 Previous Losses Had Already Pointed to Non-financial Risks

The Madoff fraud and the bankruptcy of Lehman Brothers are the two recent cases that, more than any other, underlined that non-financial losses can be very large in investment funds and showed up the failings of the regulation of non-financial risks in investment funds. These events echo in a magnified way other heavy operational losses of the last ten years. Until recently, however, the comfort zone of regulatory bodies, politicians, investors, and the entire industry had not been breached, and no clear action was taken. Some historical losses are summarised below (see also figure 4 in appendix 1 for a synthesis).

The demise of AIG and Lehman as counterparties for derivatives

The demise of Lehman and of AIG led to systemic risk, because all investors who used derivatives as a hedge found their hedges torn up after the bankruptcy: they were suddenly unprotected. Pension funds that hedged their long-term interest rate

5 - The definition of depositary and custodian may differ across countries. In France, the depositary (in charge of controls and safe-keeping) usually does the safe-keeping, too, thus acts as a custodian, a term rarely used. In the US, there is no depositary, as the board of directors is in charge of monitoring; there, a custodian does the safe-keeping. In the UK, the two functions may be distinct. The depositary is in charge of controls and accounting while the custodian does the safe-keeping.

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risk with swaps to which Lehman was counterparty suddenly found themselves with a huge interest rate risk on their balance sheet, just as the crisis was provoking a flight to quality and sharply falling interest rates. Investors who had relied on AIG for protection from credit risk found that they were likewise exposed. The main items used to hedge financial risk, financial derivatives, could become useless to end-users exactly when they are most needed, during times of crisis, and increases in systemic risk triggered a swift regulatory response: regulatory bodies proposed an extension of the role of central counterparties to derivatives, *i.e.*, clearing houses that do not just match transactions but also assume counterparty risk associated with derivative instruments.

Richelieu—KBC AM and the poor practical requirements for liquidity risk management in UCITS

KBC, Belgium's second-largest financial-services company, acquired French fund manager Richelieu Finance, with €4 billion under management at the end of 2007, which after investing heavily in small caps found itself unable to honour redemptions after a fall in market prices. Paris-based Richelieu commented that it had remained profitable despite the redemptions, with shareholders' equity of €100 million, but that it was seeking a partner to be able to maintain the liquidity of its funds. That redemptions cannot be honoured easily during market crises for UCITS funds such as those specialised in small capitalisation stocks underscores the vagueness of the practical definition of liquidity requirements for UCITS funds.

Six months later, the effects of the crisis were rippling through the fund management

industry, and the regulators allowed funds to isolate illiquid assets in separate accounts called side-pockets if in the interest of investors (for France, order of 23 October 2008 implementing articles L. 214-19 of the monetary code for corporate-form investment funds—SICAVs—and article L. 214-30 for contractual funds—FCPs).

Real estate investment funds in Europe and cash+ funds in France: liquidity risk management and reputation risks

In the UK, real estate funds—usually real estate investment trusts—are not UCITS since they rely heavily on illiquid investments. They are, however, regulated as retail schemes. As the fall in housing prices in the UK triggered surrenders in property funds in early 2008, many investment firms, in accordance with the law, barred investors from withdrawing cash. After all, in these funds, redemptions may be suspended as long as the reasons for the suspension and the expected duration of the suspension are clearly spelled out to investors. Real estate funds in general pose valuation, transparency, and distribution or advertising problems because they rely on potentially illiquid assets and on mark-to-model rather than mark-to-market valuation. In 2005, German property funds had experienced a liquidity crisis, and at the time, promoters of property funds had made good on investor losses by injecting money into funds or by buying back the units of funds with their own capital. In 2010, some German property funds were frozen and others were liquidated.

These problems are best illustrated with money-market funds partly invested in real estate or mortgage-backed securities. In France, cash+ funds (money-market funds that were partly invested

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in mortgage-backed securities, including on the sub-prime market) were approved by the regulator as money-market funds, the safest and most liquid UCITS. When the underlying assets became illiquid and could no longer be traded, at least a dozen money-market funds from major French investment firms had to be closed. Shareholders of the investment firms not only provided liquidity to the funds (more than €8 billion was redeemed in the third quarter of 2009 alone) but also took some of the losses.

These shareholders acted not because regulation required them to do so but simply to safeguard their reputations. That the shareholders of investment firms had to bear losses as a result of risks they did not know they were taking highlights the importance of transparency, not only towards investors but also towards shareholders of investment firms (which may also be distributors or sponsors of funds). Regulations without transparency cannot but be a failure, as unit-holders are not informed of the risks they take when they rely on regulations to protect them; they will instead rely primarily on large financial groups attempting to preserve their good names.

US money-market funds and the rating of structured products

Some US mutual funds, including money-market funds with a usually constant \$1 NAV, "broke the buck" after investments in AA-rated structured products collapsed. Other funds with concentrated investments in debt issued by financial institutions were hit by their bankruptcy (Reserve Primary Fund wrote off \$785 million of debt issued by bankrupt Lehman Brothers).

As part of the Dodd-Frank Financial Reform Bill, the SEC will have two years to study the establishment of a lottery of agencies to rate securitisations; the regulator will need to define the conditions under which investors will sue agencies, if they have "knowingly or negligently" failed to do their research. The bill also directs regulators to study the conflict of interest that occurs when ratings agencies are paid by the firms issuing the assets they are rating. To limit the practice of "ratings shopping" (by which rating agencies do a preliminary analysis and the rating agency that takes the most favourable outlook is hired) all pre-ratings will be made public.

Maxwell, Albion, the importance of the segregation of clients' assets

Spalek (2007, 2) writes: "Following the death of Robert Maxwell on 5 November 1991, it became apparent that hundreds of millions of pounds were missing from the pension funds of companies belonging to Maxwell's business empire, and that the lives of approximately 30,000 Maxwell pensioners across the UK were affected. Robert Maxwell had essentially juggled assets around his business empire, which involved him using company pension scheme assets as collateral for bank loans that were then partly used to fund a lavish lifestyle".

The Maxwell affair, as well as Albion, which had to wind up in 2002 because it did not have the means to make up the shortfall of about £1 million in client assets it had been holding directly, led to stricter segregation requirements in pension funds and investment funds in the UK, as well as to the Financial Services Market Act 2000, after which the FSA became the single financial regulator in the UK.

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MGAM and the importance of external monitoring of compliance

In September 1996, dealing in three Morgan Grenfell funds was suspended after the discovery of irregularities. After taking over the management of the funds in 1994, the fund manager started changing the nature of the funds' investments. Well diversified at first, the portfolios became increasingly concentrated in high-risk holdings of unlisted securities, and the ten-percent cap on unit-trust holdings in unapproved securities (securities not listed in an eligible securities market and issued on terms not calling for an application for listing within twelve months) was soon exceeded; Deutsche Bank, the parent company, injected £180 million into the funds to solve the problem. Both the trustee and the asset manager had failed to verify the compliance of the funds with the contract and with regulation. The verification of compliance was made more complex by investments in opaque structured bonds that hid the nature of the underlying investments. At the time, it was unclear whether the trustee would have had to compensate the investor for losses if MGAM's parent—Deutsche Bank—had not had pockets deep enough to resolve matters.

An undisclosed German investment fund and the lack of checks and balances beyond the monitoring of compliance with regulations

An option-type fund, managed by a German firm kept anonymous by the German Federal Court of Justice, had invested exclusively in Japanese options, whose value fell precipitously. The investor sued the depositary for breach of its duty to supervise the investment firm's adherence to the principle of geographical risk

diversification, even though the fund did not commit to such diversification. The case was dismissed on 18 September 2001 by the German Federal Court of Justice on the grounds that a depositary bank is not responsible for verifying the suitability of investment decisions of the management company, only their legality. The investor's losses were therefore not compensated for by the depositary.

This judgement underscores the importance of transparency and distribution: funds should be distributed to investors capable of fully understanding the risk embedded in funds. It also underscores the absence of independent checks and balances in funds, since depositaries must execute the instructions of the investment firm if they comply with the regulation and with the prospectus, even if they are at odds with the tenets of financial theory.

Custodians that are also broker-dealers are subject to conflicts of interests with their clients

US regulation requires a custodian to safe-keep assets but entrusts monitoring to the board of directors, not to the depositary. Broker-dealers and securities firms are allowed to act as custodians. Republic Securities was a custodian for Armstrong, an investment firm (and the manager of the fund), improperly certified the accounts of Armstrong and was complicit in falsifying them. Employees of the custodian abetted the fraud. Broker-dealers allowed to act as custodians have potential conflicts of interests with investors since they also trade with the fund. Republic and its parent were able to compensate investors fully.

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2. The Rise of Non-financial Risks in the Fund Industry



2. The Rise of Non-financial Risks in the Fund Industry

The second section of this study explains the rise of non-financial risks in investment funds. The enlargement of available assets is a first explanation. Regulatory certification based on inadequate rules contributed to a rise of risks. The last reason lies in the diverging application of EU regulations and supervisory practices, which can be partly explained by competition between countries.

2.1 The Evolution of Fund Management Techniques Has Increased Non-financial Risks

UCITS regulation was originally constructed from country regulations when funds invested mainly in domestic listed securities, and when depositaries could hold all assets in custody. With the increasing sophistication of fund management techniques and number of asset classes, investment funds invested in derivatives and extended their holdings of securities to geographies that required local custody.

The legislative framework, as we saw in section one, was unsuited to managing the risks arising from the changes in the investment fund industry. After all, the continuous evolution of funds makes non-financial losses all the more likely.

The evolution of financial techniques used in UCITS funds has been acknowledged in the CESR (2007) advice on eligible assets and in the resulting eligible assets directive (or EAD) (EU 2007), which have made tentative clarifications of the use of these new assets, and the recommendation EC/2004/383 (EU 2004) on sophisticated UCITS has clarified the very vague article 21 in UCITS III (EC 2008) that allows member states and

UCITS some leeway in calculating global exposure when investments in derivatives are made. The EAD has allowed investment in indices representative of such ineligible assets as commodities and hedge funds, in non-leveraged collateralised debt obligations, and even in real estate and private equity if the indices comply with liquidity and diversification requirements of UCITS. Derivatives on ineligible assets must naturally be settled in cash (otherwise, the fund would receive ineligible assets directly); in theory, exposure to precious metals is not allowed, but this UCITS requirement is being discussed, if not challenged, by some country regulators. The CESR (2007) has also exempted UCITS funds from incorporating the underlying positions of their investments in financial indices for the calculation of the quantitative restrictions (such as the limitation of concentration risk) of their funds. Along with these increased possibilities for investing, funds have ever more means of investing in other geographies. Exotic geographies usually require sub-custody, so restitution risk increases. In exotic geographies, restitution risk is similar to default risk as it is closely linked to the choice of investment and cannot be fully mitigated by European regulations to which the sub-custodians are not subject.

Second, the UCITS framework allows higher leverage for sophisticated UCITS as a result of the authorisation to use Value-at-Risk to measure leverage. The CESR (2009b) advice on sophisticated funds requires that monthly VaR be limited to 20%, a fairly lenient figure, (conventional UCITS, not subject to VAR rules, can be riskier than sophisticated UCITS), which has made possible a wave of such funds.

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Leverage is usually achieved with derivatives since cash borrowings by a UCITS are limited to 10% of its net asset value.

On the whole, the pursuit of returns outside the traditional investment scope, naturally increase non-financial risks, as losses in the fund management industry have illustrated. But the duties of depositaries with respect to bookkeeping for derivatives and sub-custody have never been defined with precision at the European level. The EU recommendation that defines sophisticated funds as well as the extension of eligible assets has not been preceded by an impact assessment on back-office and middle-office functions or by reflection on the greater transparency needed by investors. In general, UCITS funds have been able to gather more risks without proper information and monitoring by parties: new instruments such as derivatives or funds of funds give access to risks that investors are unaware of because the true nature of risk is hidden.

2.2 Regulatory Certifications Based on Inadequate Rules Contributed to Adverse Selection and Misselling

Regulatory certification based on inadequate rules contributed to the rise of adverse selection and misselling and in the end to an increase in risk. After all, the publicised objective of regulations to create a safe environment for investors and thus to protect unit-holders from non-financial risks leads investors to trust that certified funds will be free of non-financial risks. Adverse selection and misselling are especially worrying in the retail landscape because investors are often unable to make informed decisions (perhaps

because they lack the relevant knowledge or because regulators have not required of investment professionals the necessary transparency).

Adverse selection may arise when certification can be obtained by complying with the letter of the law but without truly restricting the fund's investment strategy or protecting investors. UCITS money-market funds, supposedly the most liquid, have been able to invest in illiquid assets, such as sub-prime securities, which only seemed liquid, as trading volumes were very thin relative to the size of the underlying assets. Investment in structured products can provide the same illusion of liquidity. For such funds, the requirement to have bi-weekly calculation does not mean that fund liquidity will be available when needed by investors, and it creates a false sense of security, especially since regulators and supervisors authorised in UCITS funds suspensions and side pockets typical of illiquid hedge fund strategies.

Inadequate prescriptions and misleading certifications also contribute to misselling (inadequate representation of the characteristics of the product and erroneous investment decisions) as well as poor risk management (when regulators state that risks can be neglected). By certifying funds with illiquid assets as very liquid UCITS money-market funds, regulators misled end-investors; distributors and parent companies, which relied on such certifications, were also deceived.

Because distributors are responsible for marketing and distributing products that conform to the investor's profile, they have been sued by retail investors when commercial documents failed to

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mention the risks embedded in funds. In some cases, as with Madoff, the simplified prospectus of UCITS funds failed to mention large concentration or sub-custody risks; structured products and other complex financial products sold by banking networks to retail clients outside the UCITS scope raised numerous complaints—in many cases, structured products offered capital protection but no real guarantee, since stock market falls of more than 20% wiped out any possible protection. Distributors have also been held liable for giving advice at odds with the fundamentals of financial theory. In France, distributors recently made good on investor losses in cash+ funds, as the risk of these money-market funds going illiquid had not been clearly disclosed to investors.

On the whole, no certification at all would have been better, as misleading certification also limits the incentives to transparency and risk management (if the fund is certified as a money-market fund by the regulator and perceived as low-risk by the market, what are the incentives to disclose the nature of the risks to investors or to the shareholder of the investment firm?).

In the absence of a clear definition of responsibilities for the management of non-financial risks and of clear communication of non-financial risks, the full UCITS universe is at risk of the same adverse selection and misselling practices, which mean, in the end, higher non-financial risks for end-investors.

It is clear that, in the responsibility of fund-industry professionals for the non-financial risks of products sold to investors, a subsidiarity principle should prevail. In this framework, it is logical for

the distributor that ultimately sells the products to bear the primary responsibility for disclosing the financial and non-financial risks of the financial instruments it sells. As such, the distributor should ensure that the products offered the client are in keeping with the client's risk profile and wealth; it should also make every effort to provide the investor the clearest, most accurate, and least misleading information possible. It is, first of all, the distributor that is liable for poor investment choices or for misinforming the client. Of course, if the distributor can prove that the fund manager or the depositary has provided erroneous information or failed to respect contractual or legal terms, the burden of this liability can be shifted or financial compensation for damages can be awarded. It is, as it happens, one of the reasons for which, in application of MiFID, some country regulations defined the relationship between distributor and manager and made it possible for the distributor to have its promotional documents for a product approved by the manager of the product. The UCITS IV directive seeks to harmonise country regulations as well as the distribution of funds in Europe, so the ties between distributors and managers, currently a matter of national law, could be formalised in EU regulations, too.

2.3 Unclear Depositary Obligations and Liabilities Increased Risks

The growing sophistication of funds, as well as their greater use of derivatives and of international assets that require external sub-custody, has made bookkeeping and the monitoring of compliance of the fund ever more important means of protecting investors. Making more assets

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eligible may well have strengthened the risk management requirements made of fund management firms—including the definition of a programme of activities specific to the instruments dealt with—but the regulators' failure, until very recently, to take into account post-market problems means that the European framework does not spell out for the depositary the custodial obligations and responsibilities associated with these instruments.

In UCITS directives (see article 9 of UCITS III and article 22 of UCITS II): "The assets of a common fund shall be entrusted to a depositary for safe-keeping" and "a depositary shall, in accordance with the national law of the State in which the management company's registered office is situated, be liable to the management company and the unit-holders for any loss suffered by them as a result of its unjustifiable failure to perform its obligations or its improper performance of them" (EC 2008). To decide whether depositaries have performed their obligations properly is, of course, difficult. After all, bookkeeping and depositary obligations were left rather undefined in UCITS. Bookkeeping of assets not safe-kept is associated with the verification of the rights to the assets. Responsibility for verification lies first with the investment firm (as it initiates the purchase of assets that cannot be safe-kept) and then with depositaries. The UCITS directive dictates the organisation that investment firms must have to perform adequate verifications and risk management, but specifies that (UCITS III directive, article 5f) it is the "Member State [that] shall draw up rules of conduct which management companies [...] shall observe at all times" (EC 2008). The verifications that depositaries must

perform, however, have not been defined in European law.

The unclear liabilities of depositaries are a major stumbling block, because it is hard for depositaries to know the extent to which they need to perform due diligence and exercise oversight and because it is hard for them to charge investment firms for additional verifications not clearly expressed in regulations.

Depositaries cannot check every investment made by the asset manager, so it is hard for them to meet the letter of their obligation to exercise checks over the entire portfolio. The possible incompleteness of *ex post* partial controls has always been a problem; in fact, there is an inherent conflict between the depositary's obligation to monitor the decisions made by asset managers and the need to allow swift implementation of investment decisions. In practice, then, most monitoring takes place after the fact. So what is the appropriate time-frame for verifications? How exhaustive should they be? How to split the liability for losses between the asset managers and the depositary? Too often, these questions have not been posed. For all the checks that cannot be automated, depositaries sometimes choose a sample of the transactions completed by asset managers and check compliance. UCITS regulations requires that target funds comply with quantitative restrictions: article 19 (EC 2008) requires that target funds be "authorised under laws which provide that they are subject to supervision considered by the UCITS' competent authorities to be equivalent to that laid down in Community law" and that "protection for unit-holders in the other collective investment undertakings [be] equivalent

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to that provided for unit-holders in a UCITS, and in particular that the rules on assets segregation, borrowing, lending, and uncovered sales of transferable securities and money-market instruments [be] equivalent to the requirements of this Directive". It is also required that target funds invest no more than 10% of their net asset value in other funds. The notion of supervision equivalent to that of UCITS has not been defined in detail (so, are American mutual funds equivalent to UCITS?); in addition, depositaries must rely on the analysis of the prospectus to assess whether target funds comply with other restrictions, and in practice depositary controls vary widely across countries or depositary institutions.

The obligation of depositary control is made more difficult with derivatives and structured products since the quantitative restrictions are made more difficult to monitor by the very fact that underlying positions are not always visible⁷ and by the vagueness of the interpretation of quantitative restrictions when investments are made on bond futures.⁸ The risk in money-market funds that invested in structured products was likewise very poorly understood. Derivatives also facilitate fraudulent investments: the MGAM case involved fraudulent exposures hidden in opaque structured bonds.

On the whole, from a practical standpoint, the use of structured instruments to acquire exposure to a fund means a great loss of visibility of the underlying exposures. At the extreme, a fund that invests solely in derivatives seemingly takes only counterparty and market risk, and all quantitative restrictions vanish because it is impossible to observe the total underlying exposure to a single security (the seller of

a derivative is not obliged to report the concentration of the underlying assets in the derivative, and neither the depositary nor the asset manager may have access to this data).

Depositaries must ensure that the investment firm has sound risk measurement processes and that it is able to monitor quantitative restrictions on its own. For funds of funds or funds with derivatives on other assets, depositaries are in a better position to assess the suitability of the risk management capability of the investment firm than to perform every check directly (which would mean duplicating the investment firm's systems and entail large costs). There are limitations. According to the UCITS directive, depositaries must ensure that the investment policy complies with the law, not simply that investment firms have adequate systems. Yet it may simply be impossible to report whether a UCITS that invests in derivatives complies with the quantitative restrictions in UCITS.

So, the failure to update depositary regulations has made it possible for investments in derivatives to deprive UCITS regulation of its substance and increased risks.

2.4 Country Competition in Implementation Guidelines

The UCITS regulation has inherited from country and European retail regulations the objective to protect unit-holders of regulated investment funds. It relies on requirements on eligible assets (definition of eligible assets and diversification requirements) and on the enforcement of risk management practices. The regulatory competition between countries in their implementation of the UCITS directive

7 - Derivatives and structured products lack the necessary transparency for compliance with the quantitative restrictions of UCITS regulations to be monitored. Because aggregate investment in other funds is limited to 30% of a UCITS' net asset value, full exposures to other selected investment funds can usually be achieved through derivatives, structured bonds, or structured funds that deliver a payoff linked to the chosen target investment fund. These instruments allow UCITS funds to bypass the maximum theoretical exposure to other funds, because the exposure is acquired indirectly rather than by investing directly in another fund.

8 - The maximum exposure to a government bond is 35% of the net asset value of a fund, a limit monitored in a clear and easy manner for long-only funds. Suppose now a fixed-income arbitrage fund. Because of the low volatility of the yield curve, these funds may be highly levered and still pass the sophisticated UCITS one-month 20%-VaR99% requirement. This fund may take short positions in a few government bonds and neutralise its interest rate sensitivity with a long position on a future. When the future is close to expiry, its change in value is closely linked to the change in value of the cheapest-to-deliver bond; at expiry, the holder of a future receives the cheapest-to-deliver bond in exchange for cash. Depositaries will find it hard to determine whether a risk-neutral fund with a unitary long position consisting of six government bonds and a unitary short position made of a future complies with UCITS quantitative restrictions.

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and of European recommendations was facilitated because the loopholes in EU laws (such as the failure to spell out the duties associated with bookkeeping and with the sub-custody of assets) mean that country regulators are left to define—or not to define—these duties and because the outcome of level 3 of the European Lamfalussy process (supervisory committees facilitating the convergence of regulatory outcomes) is not binding and is not part of Community law and it is not mandatory to take EU implementations.

Various definitions of eligible assets

Article 19(1) of the UCITS directive defined eligible assets (in the main, transferable securities, units of other investment funds, deposits and money-market instruments, and financial derivative instruments) as well as the quantitative restrictions that can be interpreted as diversification requirements. As the examples below will show, the UCITS directive gives countries leeway in the choice of authorised instruments and techniques.

The definition of eligible assets in the UCITS regulation is sometimes vague. Ireland, for its part, has defined more precisely the recently issued transferable securities (UCITS, 19.1.d) and limited holdings of them to 10%.⁹ The French regulator (Monetary and Financial Code, article R. 214-1-1) has defined a list of eligible assets; other countries have not.

According to article 19, UCITS can invest in "units of UCITS authorised according to this Directive and/or other collective investment undertakings within the meaning of the first and second indent of article 1(2), should they be situated in a Member State or not". In such countries as France, target funds must be UCITS, whereas

in others, such as Luxembourg, they must be equivalent to UCITS.

A more widely discussed issue has been that, although UCITS regulation stipulates that (article 19.2.d) "a UCITS may not acquire either precious metals or certificates representing them", this clause has not been transposed equally in all countries. France has been the most faithful to the UCITS directive, and thus the most restrictive, by forbidding investments in precious metals. Luxembourg and the UK have allowed investments in gold bullion securities (as long as there is no physical delivery, in compliance with the UCITS requirement for derivatives on commodities), and the UK has allowed investments in other precious metals; Ireland has not transposed article 19.2.d at all, and thus authorises investments in securities with precious metals as the underlying asset. These differences are disappearing with the development of exchange-traded funds (ETFs) on precious metals. After all, ETFs are listed regulated funds and as such are usually eligible for UCITS, even when they have precious metals as underlying assets.

In addition, although UCITS allows temporary borrowings of amounts less than 10% of the NAV of the fund, which can be seen as an impediment to short selling (naked short sales are forbidden), country regulations (see article R. 214-12 of the French Monetary and Financial Code) sometimes allow temporary acquisition or sale of assets (in other words, repurchase agreements) for up to 100% of the NAV of a fund. In practice, then, traditional forms of short selling are possible even without recourse to derivatives, which, because they hide the true nature of transactions, make it possible to get around

9 - There are also slightly different definitions of authorised deposits and money-market instruments.
10 - This practice is, however, seldom used in French UCITS because prime brokers are entrusted with the custody of some assets, yet the depositary retains full responsibility for restitution.

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restrictions.¹⁰

A great current discrepancy in eligible assets seems to lie in the practical regulation and supervision of the 10% investments in other securities, informally known as the trash ratio. It is understood (EC 2008) that regulators and market practices are diverging and that in France and Luxembourg—though not so much in Ireland—the trash ratio can be invested in hedge funds.

There are greater variations in the implementations of EC recommendations, such as that of the 2004/383/EC recommendation (EU 2004) that clarifies the measure of leverage to be used by sophisticated UCITS, a self-explanatory word that designates UCITS that have developed the methods to assess market risk with VaR and that have sophisticated risk management and risk measurement tools. The EC recommends that the monthly 99% Value-at-Risk of sophisticated funds not exceed 20%.¹¹

Some countries, largely as a result of the absence of industry demand, have not defined sophisticated funds at all. Although the general EC/CESR guidelines (99% VaR with a one-month holding assumption) have been adopted by most, the measurement of leverage differs slightly from one country to another. In Ireland the holding period must be no more than one month, which suggests that a less restrictive weekly or daily holding period can be assumed. However, industry codes of practice are such that a monthly holding period must be input. Austria, Denmark, Germany, and Spain (on paper at least) require a ten-business-day holding period. In that sense, they are less

restrictive (by a factor of the square root of two if one assumes twenty business days a month). Less restrictive again is Portugal, which requires a ten-day holding period and a 95% confidence interval. France, by contrast, requires a 95% confidence interval and a one-week period, but a 5% maximum VaR limit that makes VaR restrictions more restrictive than in neighbouring countries. In addition to the absolute VaR constraint, stress tests are generally required (in Luxembourg and Germany they must be done at least once a month).

Country competition: from level 3 to effective supervision

Legislative proposals in 2009 (EU 2009c) address weaknesses in macro- and micro-prudential supervision by creating different two systems of supervision, the European Systemic Risk Board, in charge of macro-supervision, and the European System of Financial Supervisors (ESFS), for the supervision of individual financial institutions. The ESFS will include the European Securities and Markets Authority (ESMA), whose role will involve contributing to consistent application of technical Community rules, direct supervisory powers for credit rating agencies, coordination in emergencies, and the creation of a common supervisory culture in European countries.

Even supposing that level 1 and level 2 of European regulations are made clear and that the ESMA ensures a homogeneous implementation of EU regulations, the supervision of funds and investment firms will be a country prerogative, and country competition will still be possible.

In UCITS IV (EU 2009a), the simplified prospectus is to be replaced by the key

11 - The EC also recommends that a relative VaR limit be used where the monthly 99% Value-at-Risk should be less than twice the VaR of a derivative-free benchmark, but this has proved less relevant. Until 2004, UCITS III had not spelled out the way to measure exposure (see art. 21).

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information document (KID), a crucial document, as it alone, a homogeneous European document, need be translated into the language of the target country in the accelerated notification procedure that automatically authorises the distribution of funds in target countries. Since the domestic supervisor opens the European market by validating the prospectus or the KID, countries may try to attract funds by facilitating validation. And supervisors in target countries will have reduced means of controlling the distribution of foreign funds.¹² So we argue that the ESMA should be responsible for the direct supervision of funds or at least have very clear direct authority over country supervisors.

¹² - Country supervisors, however, still have some control over any marketing material used. The Delmas-Marsalet (2005, 5) report argues that "product advertising should be monitored more systematically to ensure it is correct, clear and not misleading, balanced in its presentation of the risks and benefits of the product, and consistent with its characteristics", and that, likewise, the suitability of the advice given to the client should be better monitored. The reinforcement of the control of product advertising and advice on products could be the primary way for country regulators and supervisors to control the distribution of foreign UCITS in their territory.

2. The Rise of Non-financial Risks in the Fund Industry

3. Risks and Responsibilities in the Fund Industry



3. Risks and Responsibilities in the Fund Industry

As the Madoff fraud made clear that the heterogeneity in the protection of unit-holders could undermine the single market for funds in Europe, a political agenda sprang from a desire to clarify, homogenise, and strengthen the UCITS regime, particularly as regards the liability of depositaries. In May 2009, Charlie McCreevy, Internal Market Commissioner, announced that he intended to clarify and strengthen the provisions of the UCITS regime, in particular those regarding the liability of depositaries: "One of the consequences of the Madoff scandal in the EU is that it affected retail investors who had invested in certain UCITS funds the assets of which had been entrusted to a Madoff entity as a sub-custodian" (EU 2009b); the subsequent CESR (2010) review of the liability regime of the UCITS depositaries showed that the depositaries' (rather undefined) obligations of safekeeping in the UCITS directive have been transposed in diverging ways by member states.

If a better EU definition of depositary rules is a necessity for harmonisation, one should beware not to replicate country models that have proved obsolete. In regulatory initiatives, failure to reflect can have consequences as catastrophic as those of the failure to regulate. Here, the risk is that an excessive regulatory focus on the role of the depositary in the protection of unit-holders will lead to exorbitant practical liabilities for EU depositaries.

3.1 Country Regulations and Legal Origins

Regulation of parties in the fund management industry is the result of legal origins, of the history of banking and fund management, and of a country's status

as a producer or consumer of funds. We review these guidelines, which we think European regulators and politicians should take into account when designing "better regulations" suitable for countries and parties with different cultures.

3.1.1 Civil-Law vs. Common-Law Countries

Analyses of regulations and of governance systems usually focus on legal origin (La Porta *et al.* 1998). In common-law countries, fiduciary duty is broader, and all parties can be held liable to the end-investor, whether they have direct contract with the investor or not. Thus the British depositary (including, in relation to an authorised unit trust scheme—AUT—the trustee) and the directors have a direct fiduciary duty to act in the best interests of the unit-holders and the fund. The trustee in common-law countries is usually forbidden to act in its own interest in any situation (for instance, it cannot pocket any refund on interest rates unless this practice is explicitly allowed by the client). The same requirement prevails throughout the Commonwealth.

Parties in civil-law countries are usually bound by explicit contractual or legal obligations. Parties not bound by contracts usually have no liability to one another, so the responsibility for any loss is where it occurs, usually in the fund or in the investment firm, a poorly capitalised entity. However, when a depositary or an investment firm outsources its functions to a third party, it remains liable to end-investors (UCITS III, art. 5g).

Similarly, in common-law countries the valuator has fiduciary duties, and this liability is often made explicit. The valuator also reports directly to the regulator

3. Risks and Responsibilities in the Fund Industry

(the indemnities paid out for valuation mistakes are publicly available). In France, the valuator is purely a sub-contracting entity with little liability in addition to that contractually agreed with the investment firm. Luxembourg is a civil-law country that requires an independent valuator, probably because it competes directly with common-law countries for the domiciliation of funds.

Thus, in civil-law countries, losses were isolated where they occurred, usually in the investment firm. That these firms have low capital requirements has probably contributed to the strange determination to have the depositaries insure the end-investor against losses.

Although common-law countries are often thought to offer better investor protection than civil-law countries (fiduciary duties in common-law systems are greater), this may not be the case in the fund industry. After all, in the fund industry, the explicit duties of depositaries in civil-law countries have contributed to investor protection by ensuring professional oversight of compliance and preventing the most severe forms of tunnelling (theft); by contrast, in common-law countries, the actual involvement of boards in monitoring and governance is slight,¹³ and board members have very limited liability.

Both systems have drawbacks. In common-law countries, the principle of fiduciary duty leads to the recognition that each party is responsible for its actions; because the duties are not practically defined, this principle leads to reliance on court procedures, which ends up being costly. Regulation in civil-law countries, French regulation in particular, perhaps, has

historically avoided the excessive reliance on court procedures; French regulation, however, relies essentially on depositaries, the most highly capitalised parties, to protect unit-holders, but asking depositaries to provide insurance-like services to unit-holders is a dead-end because depositaries are not insurance companies, they are not capitalised as such, and, last, this system certainly does not give fund managers incentives to disclose and manage risks. The French system, by focusing on an administrative approach to depositary protection, has recently been unable to avoid the recourse to courts, because the complexity of arrangements in modern fund management means that the regulation is outdated. Likewise, a logical consequence of the administrative approach to protection is that France has long delayed adding class actions to its legislative arsenal.

Jurisdictions that rely essentially on the contract have understood that the absence of a clear definition of depositary checks (associated with the bookkeeping of assets that are not safe-kept in depositaries' networks) and of clear disclosure of large non-financial risks such as sub-custody risk was threatening the stability of their legal framework. Without communication of non-financial risks, unit-holders are in effect deprived of the necessary information to understand the contract that binds them to investment firms and depositaries; without a clear notion of best practices for depositary controls, it is very unclear when depositaries and investment firms have been remiss, and who is responsible for investor losses.

That both systems have recently shown their drawbacks after the expansion of available assets and techniques in UCITS

13 - Khorana, Tufano, and Wedge (2007, 6) note: "The SEC has mandated that boards have 75% independent members, but our results suggest that it is boards composed wholly of independent members that seem to be most vigilant with respect to performance"; they remark that boards have exercised their right to take the management contract away from the original fund sponsor only on very rare occasions.

3. Risks and Responsibilities in the Fund Industry

funds calls for convergence towards "better regulation".

3.1.2 The Influence of the Model of the Firm

Countries such as Luxembourg, Ireland, and the United States have regulation that resembles that of corporations, as they place large responsibilities on the board of directors and give the board a role that resembles that of the board in a corporation (technically, the board is elected at general meetings; it hires the investment manager; it usually has direct fiduciary duties towards the end-investor and is responsible for ensuring that the fund complies with regulations, even in countries where there is a depositary).

France and the United Kingdom, by contrast, have financial laws very distinct from the corporate laws that inspired the regulations of many other countries; in the United Kingdom, there need only be a sole director (in which case this must be an authorised corporate director [ACD], who will serve as the authorised fund manager). The ACD, even if he or she has fiduciary duties, has naturally limited power to oversee his or her own activities. In France, for corporate investment funds (SICAVs), the board is generally made up of the manager, a secretary, and a president, but directors are not required to be independent, and the role of directors is limited to the regulatory minimum: approving the accounts and monitoring legal changes.

Last, countries with large domestic markets, such as France, Germany, and the United Kingdom, have historically focused on consumer protection, whereas such countries as Luxembourg have created a market for funds. Luxembourg regulation borrows

from corporate law, so its prescriptions are not as detailed as other countries with civil-law origins. Its legal code is closer to the original Napoleonic code, whereas in France subsequent prescriptions have been added. Luxembourg has detailed the duties of the valuator (the valuator/fund administrator is not regulated in France).

The corporate model, with emphasis on the responsibilities of the board of directors, has the theoretical advantage of making possible controls over such common triggers of conflicts of interests as fees, expenses, and turnover. In the US model, where the board technically hires the custodian and the investment manager, it is easy to entrust the board with the responsibility for following best practices in risk management and sub-custodian arrangements, but guidelines are sometimes necessary to perform tasks made more difficult by conflicts of interest. The European model relies on the depositary to assess the compliance of the fund (with regulations and with its prospectus); the relative advantage of reliance on the depositary is that the board of directors cannot assume large financial responsibilities with respect to the end-investor and that, as large firms, they have professional and independent staff; depositaries, unlike the board, have capital requirements, so they may have further incentives to monitor the compliance of funds. In the same line of thought, Morley, Curtis, and Olin (2010) argue that the board of directors is not well equipped to monitor the compliance of funds. Finally, some European models can be thought of as hybrids with both a depositary and a board, where compliance is entrusted to the depositary and the board has more general oversight functions. Boards of directors and depositaries could complement each

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other, since the board could be responsible for ensuring that appropriate service providers are hired and that high standards of governance and of risk management are met.

Box 2: The main forms of investment funds

There are two lines of analysis for the main forms of investment funds. First, corporations and trusts, though legally distinct, are now extremely similar in countries (common-law countries) where the trust form exists. Countries where trusts originated, however, have a different regulatory culture, and convergence with countries where corporate-form investment funds are the traditional form is not yet complete.

Second, the temptation to get around regulation by using contractual funds has always existed. The contractual form, after all, eliminates the possibility that unit-holders will participate in the decisions made by the fund. The contractual form is historically typical of civil-law countries such as France and Luxembourg. To some extent, the contractual form recognises the relative unimportance of the board of directors and the fact that the depositary and the investment firm are the two true partners in a fund. It is for this reason that the contractual form has not been accepted by the SEC for US mutual funds. In UCITS, depositaries of contractual funds have greater responsibilities than depositaries of corporate-form investment funds (UCITS III, article 7) and must ensure the correct valuation of units as well as "carry out the instructions of the management company, unless they conflict with the law or the fund rules" (EC 2008), obligations that are not made of depositaries of incorporated funds. In France, where the responsibilities of the board of incorporated funds are limited, the depositary has the same obligations for the two sorts of funds. In Luxembourg, where the board is more important than in France, the depositary has greater responsibilities in contractual funds. Ireland has recently adopted contractual funds as a "convergence move", and the subject is being discussed in the United Kingdom.

Corporations vs. trusts

The trust type is the oldest form of investment fund. Trusts were developed in England in the twelfth and thirteenth centuries, when landowners left England to fight in the Crusades and needed someone to run their estates in their absence. In common-law legal systems today, a trust is a relationship whereby property (including real, tangible, and intangible) is managed by one person (or persons, or organisations) for the benefit of another.

By contrast, a corporate-form investment fund has the same legal structure as a corporation, but the number of shares is variable: shares can be redeemed or created on a continuous basis, rather than exchanged on the secondary market for corporations.

The legal forms of trusts and corporations thus differ as follows (see Rounds and Dehio 2007 for a more technical description): in trusts, title to the underlying assets is with the fund trustees, who hold the underlying assets for the sole benefit of the investor-

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beneficiaries. In corporations, by contrast, title to fund assets is with the corporation, which is governed by directors; the investors are the stockholders of the corporation.

Historically, the trust could be seen as a hybrid form mixing elements of the corporate type (with supervisory powers) and of the contractual form (without direct voting rights from unit-holders); likewise, an ETF is a hybrid of a mutual fund and a closed-end fund. After the 1990s, common-law countries aligned the regulation of the trust and that of incorporated funds, so these two types can nowadays be considered equivalent. In the United States, the trustee's functions are the same as those of the the board of directors, and in the United Kingdom, the trustee of an authorised unit trust scheme (AUT) has the same function as the depositary of an incorporated fund. Notifications, disclosures, and votes on fundamental changes are also defined in a very similar manner in both trusts and corporate-form funds.

Contractual form

The contractual form has been preferred in some countries. In this form, which is that of Fonds Communs de Placement or FCP in France, the fund is usually set up jointly by the investment firm and the depositary, with the investment management the responsibility of the investment firm and the monitoring that of the depositary.

The shareholder does not have the possibility to vote (he should be notified, however, of important changes, which are monitored by the investment firm and the depositary, which, in practice, share responsibility for legal and contractual oversight).

If one believes that beyond the oversight of compliance with regulations and contracts entrusted to depositaries, more oversight is necessary, then one should question the existence of the contractual form: in corporate-form investment funds, it is easier to entrust the board with the mission to select adequate service providers and to ensure that non-financial risks are well managed. If one believes that investment firms capture the board of directors, then one should prefer the contractual form, which places the investment firm and the depositary as the contractually responsible entities; the fact that the largest funds in Europe are often of the contractual type also reflects the perceptions of investors, who see themselves not as owners of the fund but as customers of an investment firm.

3.1.3 Differences in Country Regulations and in Depositaries' Liabilities

The liabilities and obligations of depositaries differ markedly from one European country to another primarily because EU regulation has not specified them. Moreover, depositary rules are tied closely to a country's legal

origins, its history of banking and fund management, and its status as a producer or consumer of funds. As it happens, countries with large domestic markets, such as France, Germany, and the United Kingdom, have historically focused on consumer protection, as they needed a fund industry to intermediate savings and channel

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them to finance investment (and growth). These countries, however, have different legal origins, so depositary liabilities and obligations are different as well. Figure 1 summarises how responsibilities for the main tasks are shared in several countries of interest.

such has high-level principles such as the fiduciary duty of all parties; yet, unlike other common-law countries such as the United Kingdom, the United States has incredibly detailed regulatory requirements, probably because of frequent litigation and because of the SEC's mission to protect retail investors.

3.1.3.1 The United States

The United States is the largest representative of the common-law countries, and as

Mutual funds are the regulated¹⁵ American investment funds equivalent to UCITS in

Figure 1: Parties and responsibilities by country
InFrm is the investment firm, BoD the board of directors, TA the transfer agent.

	US	UCITS	FR	UK	LUX	IRL
Custody	Custodian	Depositary	Depositary	Depositary/Trustee	Depositary	Depositary/Trustee
Compliance with regulations	Board of directors + chief compliance officer	Depositary + InFrm	Depositary + InFrm	Depositary + InFrm (or board)	Depositary + Board	Depositary/trustee + Board
Bookkeeping	BoD with custodian	Depositary				Depositary/trustee
Valuation	Fund, but usually with administrator. BoD supervises.	InFrm must produce it. InFrm or laws responsible valuation rules. Depositary supervises (+independent auditor).	InFrm company, depositary validates process	InFrm company, depositary validates process and tools	Fund for guidelines and decisions, valuator for calculations. Depositary supervises; promoters ensure compensation for errors.	Fund but usually administrator; depositary supervises (a depositary/trustee cannot be administrator)
Centralisation	Fund, but usually administration services (admin or TA/underwriter)	By or on behalf of an InFrm; compliance monitored by depositary	InFrm but usually depositary	Manager but usually depositary; depositary supervises	Fund but usually transfer agent	Trustee (in unit trust) under InFrm instructions
Unit-holder register	Fund, but usually administration services (admin or TA/underwriter)	Country regulations apply	InFrm but usually depositary	Manager but usually depositary; depositary supervises	Fund but usually transfer agent	Trustee (in unit trust) under InFrm instructions
Check and balance	BoD even if not accurately defined	Not defined in regulations	Not defined, limited responsibility from board		Board may be responsible	Board may be responsible
Investment management	Investment advisor; compliance monitored by BoD	InFrm; compliance monitored by depositary				InFrm; compliance monitored by depositary/trustee

15 - The benchmark text for the regulation of open-ended investment funds is the Investment Company Act of 1940 (SEC 1940), supplemented by the federal regulation code (SEC 2003) and the Investment Advisers Act of 1940 that regulates investment firms. The act can be found in the investment company registration and regulation package (SEC 2009).

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Europe. In the United States, there are no regulated alternative funds such as those found in every European country, and investment funds that are not mutual funds are hedge funds.

The American regulator, the Securities and Exchange Commission (SEC), is arguably the regulator with the most aggressive oversight of mutual funds. Until recently, however, American hedge fund managers were exempt from requirements to register with the SEC¹⁶ and from the SEC's oversight. President Obama's new plan to regulate hedge funds, included in the overhaul of the financial system, will require hedge fund (as well as private equity and venture capital fund) managers to register as investment advisors with the SEC; annual accounting checks at a random date are planned.

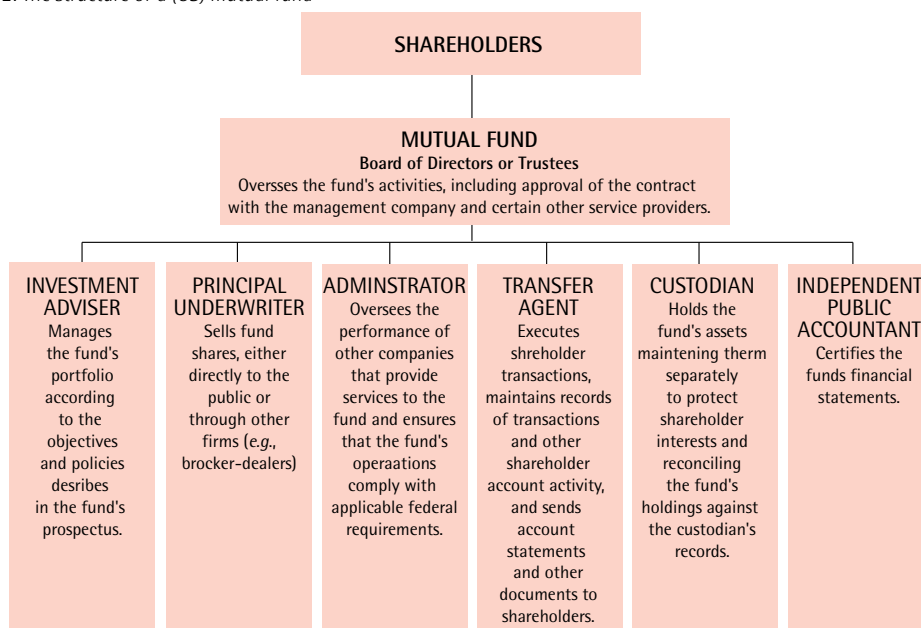
Mutual funds are required to disclose fees and expenses, as in other common-law countries. But the US regulation of investment funds is very similar to corporate law¹⁷ and thus gives a central

role to the board of directors. Contractually, it is the board that hires the fund manager (called the investment advisor) as well as the custodian to safe-keep the assets (see figure 2). Oversight is the responsibility not of a depository but of the board. In addition, the US board of directors can discuss the fund's strategy, seek to reduce expenses, merge funds, or even dismiss the fund manager it has contracted, although it rarely does so.

In 2004, the SEC introduced a formal requirement that the chair and 75% of the mutual fund board be independent of the fund advisor¹⁸ to prevent capture of the board. The role of the board, however, remains controversial; Morley, Curtis, and Olin (2010) argue that even independent directors on boards are usually hired by the investment firm, and are no less subject to capture than are chief compliance officers.¹⁹ The SEC, however, always maintained the essential role of the board as a watchdog, and it has refused to implement the contractual form of mutual funds.

16 - These exemptions, provided for in the Investment Company Act of 1940, are for funds with one hundred or fewer investors and funds where the investors are "qualified purchasers".
 17 - The board was made mandatory in the Investment Company Act of 1940, despite strong initial opposition from open-ended funds: at the time no investment funds had boards.
 18 - This requirement is being challenged by the chamber of commerce.
 19 - US regulation requires that a chief compliance officer be responsible for administering the fund's policies and procedures and that designation and compensation of this officer be approved by the fund's board of directors, which has the power to remove him or her from office.

Figure 2: The structure of a (US) mutual fund



Source: Investment Company Institute

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The lack of a depositary in the US, together with the possibility for brokers to be custodians, has given brokers a prominent role in the American fund landscape. With light regulation, brokers have also been involved in the Madoff case (Madoff Securities was an authorised custodian for funds for which Madoff acted unofficially²⁰ as an advisor).

3.1.3.2 France: A Consumer Country with a Napoleonic Code and a Fund Industry Developed in the 1990s

France, with its Napoleonic code, has civil-law origins. France is the second largest market for funds in Europe and assets under management amounted to €1.42 trillion at the end of 2009 (ALFI 2010). As Luxembourg produces funds for export, France is the largest domestic market in Europe. That the assets under management of French funds are more than twice those of British funds can be explained partly by the lack of pension fund vehicles for funded retirement savings in France, as well as by a tax system that favours holdings of investment funds.

The obligations of parties to the fund industry are described in the French Financial Market Authority General Regulations and in the Monetary and Financial Code. Depositary rules are defined in articles L. 214-16 and L. 214-26 of the monetary and financial code, and fully described in articles 323-1 and following of the AMF General Regulations.

In France, responsibilities lie first with the investment firm and then with the depositary.

With respect to funds structured as companies (SICAV), the board of directors

merely signs accounting documents, prepares an annual report, and monitors regulatory changes; most of the work is done by the investment manager.

Contractual funds (FCP) have no board of directors, but are jointly supervised by the investment firm and the depositary—an indication of the little importance accorded oversight by the board in this country. The valuator is not explicitly recognised, and the monetary and financial code (article R. 214-19) requires that the regulated fund or the investment firm be able to value accurately all on- and off-balance-sheet assets (see also UCITS regulation).

Depositaries currently shoulder much of the ultimate liability for large non-financial risks in spite of the first-hand responsibility of the investment firm. Depositaries are fully responsible for any activity they choose to or are required to delegate. France, with much of its law a legacy of the Napoleonic code, has detailed the liabilities of each party rather rigidly; for instance, there is an unconditional responsibility of restitution²¹ that dates to the times when safekeeping involved storage of assets in a locked safe and when, quite naturally, a bank could not attempt to shed liability by resorting to a sub-custodian. This responsibility does not apply to financial derivatives, which depositaries need only book; it applies to assets that can be safe-kept, and, following the order of 23 October 2008 and the decree of 24 July 2009, which allow depositary banks to reduce their liability to *OPCVM ARIA* and *OPCVM contractuel*²² that use a prime broker, it can be lessened in limited cases. These laws can be seen as investor-friendly but are clearly unsuited to the changing fund management landscape.

20 - The official advisor of Luxalpha was Access Partners.

21 - In UCITS, "the assets of a common fund shall be entrusted to a depositary for safe-keeping" and "a depositary shall, in accordance with the national law of the State in which the management company's registered office is situated, be liable to the management company and the unit-holders for any loss suffered by them as a result of its unjustifiable failure to perform its obligations", but there is no unconditional obligation to return the assets.

22 - There are, in addition to the investment funds for retail investors, investment funds in which only institutional investors can invest (i.e., the OPCVM contractuels). Such OPCVM contractuels are very flexible because they can invest in any assets, which do not need to be financial instruments (for example, debt) and they require only notification to the French regulator (no pre-approval required).

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The lack of transparency can be seen as a logical consequence of the administrative approach to protection.

In France, both independent investment firms and depositary banks were created in the 1990s, first as subsidiaries of banks; before then, banks were integrated entities and provided asset management services as part of their banking services; depositary banks usually provided bundled depositary and custodian services for what were captive assets. Only with the independence of fund management companies were depositary services properly identified and priced independently of custodian services.

French investment firms usually outsource valuation; they nonetheless take full responsibility for the pricing of units (and the valuator is simply an outsourced service, not a regulated activity).

3.1.3.3 The United Kingdom: A Consumer Country with Principle-Based Laws and an Older Fund Management Industry

The United Kingdom is the largest European country representative of common-law regulation; its fund industry has assets under management of more than €1.17 trillion. Because the United Kingdom is the home country of managers of funds domiciled offshore, the funds domiciled in the United Kingdom accounted for only €0.6 billion at the end of 2009, and, by this metric, British funds managed 9% of all assets managed by European investment fund, making its fund industry the fifth largest in Europe (ALFI 2010).

In the United Kingdom, as in other European countries, regulations result from the transposition of European directives such as UCITS and from domestic

regulations sometimes modified to comply with European directives. The UK fund management industry has been independent longer than its French counterpart.²³ The United Kingdom relies on detailed regulations as well as on decrees or laws. The country has harmonised the regulation and practical monitoring of trust funds (authorised unit trusts or AUTs) and of corporate-type mutual funds (open-ended investment companies or OEICs). The Financial Services and Markets Act 2000 (FSMA) regulates authorised funds in the form of UK AUTs and UK OEICs and other recognised schemes, such as UCITS, constituted outside the country. An FSA handbook (UK FSA) in which guidelines and rules are published is updated and amended on an ongoing basis.

Regulation of investment funds is not greatly inspired, as it is in the United States, by corporate law. For OEICs, regulation requires that there be at least one director, and when, as is generally the case, there is only one, that this director be an authorised corporate body (the authorised corporate director or ACD). The ACD is the authorised fund manager of the OEIC. The depositary must be independent of the OEIC and its director(s). The trustee of an AUT, the counterpart of the depositary of an OEIC, has extended fiduciary duties towards the investor and must be independent of the AUT manager.

In addition, the United Kingdom has tackled some of the usual bones of contention by making mandatory notification of significant changes and prior approval by unit-holders for fundamental changes, including any modifications that "changes the purposes or nature of the scheme or may materially prejudice a unit-holder".²⁴

23 - In the UK, the fund industry has its roots in the nineteenth century, and M & G launched the first UK unit trust in 1931. The 1980s were a period of fast growth for mutual funds and investment firms.

24 - See section 4.3 of the Collective Investment Schemes Sourcebook of the FSA Handbook.

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Fee and remuneration structures must be made transparent.

Like France, the United Kingdom has a large domestic savings market, and it has focused on investor protection, relying on the fiduciary duties of all parties and on the subsidiarity principle, by which responsibility for any losses is determined and appropriate action is taken. Though this practice may be more appropriate in theory, it has led to problems, because the responsibilities of each party are undefined and because there have been no clear guidelines (see the failure of Morgan Grenfell in 1996, a failure characterised by a lack of risk monitoring from all parties). In addition, capital requirements are very low in the United Kingdom (as in most countries), which means that when asset managers are not backed by a well-capitalised parent the degree of investor protection is unknown, and depositaries, trustees, and custodians have wondered whether regulators would have tapped their capital reserves if Deutsche Bank, the parent company of Morgan Grenfell, had not paid. In principle, when the depositary chooses to delegate the custody, it remains responsible for the return of assets; when the asset manager delegates it, the asset manager retains the responsibility for potential losses. Naturally,

the responsibilities are not always easy to assess.

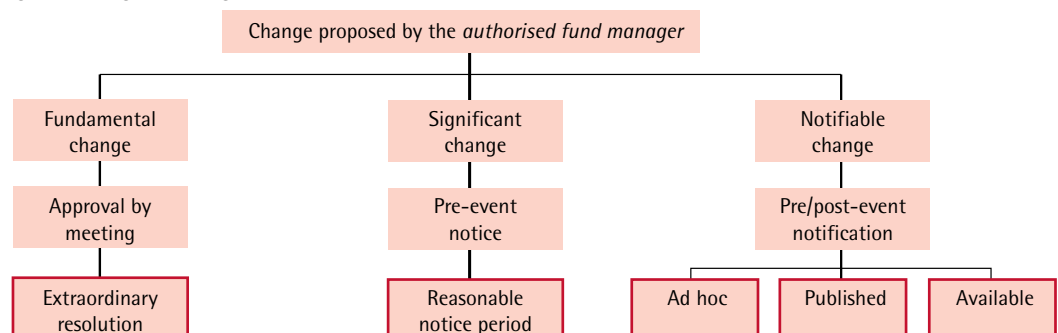
3.1.3.4 Ireland: A Service Industry, Taking the British Rules as Guidelines

British funds have relied fairly heavily on Ireland-based providers of asset management services. As many of the services are sent "offshore" to Ireland from head offices in the UK, and as the two countries have a common language and are bound by social and cultural ties, Ireland has drawn up a set of rules inspired by those of the United Kingdom;²⁵ aspects of the code of conduct draw on that of the United Kingdom as well. As a result, Ireland has developed expertise in fund administration and custody. It is the fourth biggest market for domiciliation of funds in Europe: at the end of 2009 assets under management were of €0.75 trillion of UCITS and non-UCITS, an 11% share of the European fund market (ALFI 2010). At the end of August 2009, the Irish fund administration industry, which services offshore funds as well, oversaw 9,600 funds with assets of €1.2 trillion (€706 billion domiciled in Ireland and €536 billion in other countries) (IFIA 2010).

Ireland services an alternative fund industry regulated as non-UCITS funds, which includes qualified investor funds (QIFs) and professional investor funds (PIFs). Qualified

25 - The Irish regulator requires a truly independent administrator to value funds; British regulation does not require an independent valuator.

Figure 3: Change event diagram



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investor funds can be distributed only to qualified investors (as defined by non-UCITS notice 24.8) and have investment constraints less restrictive than those of UCITS funds. Professional investor funds can be likened to hedge funds and are available only to professional investors.

The Irish regulatory framework²⁶ borrows from corporate law. Irish regulation of investment funds accords relatively great importance to the board of directors: at least two Irish directors are required, and directors must demonstrate sufficient expertise and have a good reputation. The Irish standard also requires full independence and is thus more stringent than that of the United States.

Where the trustee/depositary²⁷ utilises the services of a sub-custodian the trustee must ensure that these standards are maintained by the sub-custodian, but the trustee has no specific responsibility for sub-custody: it will be held liable for losses if there is an unjustifiable failure to monitor and to exercise due diligence. So, the trustee has an obligation of means.

Monitoring of compliance is the responsibility of the trustee/depositary; the administrator, which must be independent of both the board of directors and the trustee/depositary, is in charge of valuing the units. The required transparency of fees and expenses is similar to that in the United Kingdom; valuation errors must be reported to the regulator, and the industry standard for an admissible error is fifty basis points (quite large, perhaps, for money-market funds and strict for equity funds). A code of practice dictates that the valuation of units be done independently of the asset manager; prices from the

counterparty of the derivative transaction can be used. In Ireland, investment firms retain responsibility for the valuation of fund units, which probably comes from the UCITS requirement (art. 31) that investment firms be responsible for producing the key investor information.

3.1.3.5 Luxembourg: A Fund Industry with Relatively Recent Depositary Rules

Luxembourg has civil legal origins. Most of its civil laws come from French culture (Napoleonic code), but its tax code has Germanic origins. Luxembourg is the second largest fund centre in the world after the USA. €1.8 trillion is managed as UCITS and non-UCITS, a figure that accounts for 26% of all the assets managed by the European fund industry in 2009 (ALFI 2010). There are two distinct legal frameworks, one for "public funds"²⁸ (including UCITS or Part I funds, and non-UCITS Part II funds, or regulated alternatives), and one for specialised funds (SIFs) for well-informed investors. Specialised funds (SIFs)²⁹ have very relaxed obligations and can freely take on non-financial risks such as unlimited exposure to prime brokers. Luxembourg requires that most fund services be provided by Luxembourg companies (custody as well as central administration, a task that includes valuation).

Most of the country's laws governing investment funds originate in corporate law and in EU financial regulations. As such, monitoring duties are given to the board, as in other corporations. Likewise, the board is entrusted with all responsibilities not the direct responsibility of shareholders or unit-holders. Technically, the board is elected at the general meeting (even if, in practice, it is initially hired by the promoter or the investment firm and there

26 - The Irish regulatory framework relies on the Unit Trust Act of 1990 (for unit trusts), on the Companies Act of 1990, part XIII (for open-ended fixed and variable capital funds), on the Investment Limited Partnership Act of 1994 (for partnerships), and on the Companies and Miscellaneous Provisions Act of 2005 (for contractual funds). UCITS and non-UCITS notices (IFR 2010a, 2010b) provide a detailed overview of requirements for both types of funds. The responsibilities of trustees are defined in UCITS notices section 4.4 and non-UCITS (NU) notice section 7.11.
27 - Irish regulations use the term trustee for all types of funds, and trustee can thus be understood as the Irish term for depositary.
28 - Public funds are bound primarily by the law of 20 December 2002 (CSSF 2002a).
29 - SIFs are subject to the law of 13 February 2007.

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is little participation by unit-holders), and board members (known as administrators in Luxembourg) must be approved by the Luxembourg supervisor (the CSSF); shareholders must vote on remuneration at the general meeting at the same time as they approve the annual accounts; in short, greater responsibility is borne by board of directors. This responsibility, though an important arrow of the legislative quiver, has not contributed in the past to strong monitoring, as illustrated by the Madoff case; funds may also limit the liability of the board to unintentional unjustifiable failure to perform. The promoter is also responsible for the losses posted by the fund, if he or she contributed to an ill-founded fund.

Luxembourg has created a European fund industry to serve both European and non-European markets. So it also created a body of regulation whose primary aim was to make business easy; that it is inspired by an older civil code as well as by corporate law has helped make Luxembourg regulation less detailed than that of other civil-law jurisdictions such as France and Germany. The supervisory authority has no power of enforcement, so investors must resort to civil courts, with costly litigation and often unfavourable outcomes. On the whole, many rules are relatively flexible; providers of asset management services must, however, be located in Luxembourg.

Until relatively recently, depositary rules in Luxembourg were, for two additional reasons, relatively vague. First, Luxembourg, a small country with all parties initially located in walking distance of the regulator, took, so to speak, a middle way. From civil law, for instance, it took the obligation to have a depositary, and it has been found and

reaffirmed recently (Berthat 2009) that the depositary has an obligation of restitution from the civil code of 1804.³⁰ There is no mention, however, of an obligation of restitution in the decrees and circulars for parties of investment funds, which mention an obligation of supervision.

From corporate laws, it accorded greater importance to the board, of which the promoter is usually a member. Second, the growth of the Luxembourg fund industry dates to the 1990s, and the original regulatory focus was on competition rather than on consumer protection (after all, the consumers of Luxembourg's products are foreigners). It may be for this reason that until recently there was no detailed code of conduct or best practices for doing business; face-to-face discussions with the regulator were more typical. The Madoff scandal underscored the weaknesses of this system of governance, and by 2009 changes, including the publication of codes of conduct, were on the drawing board.

The use of an independent valuator has been made obligatory, an obligation that provides transparency for investors in alternative funds, yet does not supersede managerial responsibility for valuation, as input from the manager may be required for products that are hard to value.³¹ Valuation errors³² are systematically reported to the regulator, which compiles summary statistics. Depositaries must oversee the valuation process, but need not formally validate NAV.

The board of directors also has greater obligations and supervisory duties than in France. The Luxembourg regulator, the CSSF, may prohibit directors who have failed to oversee funds in an appropriate manner

30 - The law of 14 March 1804 in the civil code reads: "The depositary shall return the same as that which he received".

31 - The depositary has greater responsibility for the valuation of contractual funds, in application of UCITS (article 7).

32 - Circular CSSF 02/77 (CSSF 2002b) defines rule that apply in the case of NAV calculation errors.

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from serving again as board members in Luxembourg. Because of the monitoring role of the board in Luxembourg, shareholders of corporate-form investment funds should be better protected than unit-holders of contractual funds.

3.2 The Central Role of Investment Firms and Depositaries in the Protection of Unit-Holders

Investment firms are regulated; they must have sound procedures to prevent conflicts of interests and manage risks. They are directly responsible for collateral management and pricing. The main responsibility for decisions and for compliance with regulatory obligations lies with asset managers themselves.

A central role—that of safe-keeping assets and checking the regulatory compliance of UCITS funds and firms—has been given to depositaries in the protection of unit-holders. This central role has been defined in Europe partly under the influence of civil law (there are more countries of civil-law origin in Europe than there are of common-law origin) and of the French regulator (France is the largest domestic market for funds in Europe).

This central role of the depositary is the result of several factors, above all the greater belief in rules drawn up by government authorities than in contracts. In the French system, ultimate responsibility lies with a

well-capitalised party such as a depositary, to the detriment of a protective system involving all the risk-taking parties in the fund management industry. The industry was conceived as an industry without own capital and not at all liable for the financial consequences of the financial—the firm need only follow the rules—and non-financial risks it takes (in the end, that a purportedly well-capitalised party will foot the bill fosters the illusion that any wrongs are righted when the depositary makes immediate reparations for damage).

Finally, the European directives have made depositaries supervisory auxiliaries that must check compliance of investment policy with the prospectus and with regulation; in several respects, these checks are a major element in the protection of the interests of investors. In general, professional investors are believed to have the means to select and oversee the execution of fund investment policies, but the same is not generally believed of so-called retail investors. This argument applies by default to small investment firms that do not always have the set of oversight tools that professional investors may be seeking. In addition, the fund management industry is characterised by an absence of investor participation; for this reason, a third party to which some of the monitoring not done by investors can be entrusted is especially important. In European laws, this monitoring is entrusted to the depositary alone; the role of the board is spelled out only in country regulation.

Box 3: The lack of activism in the investment fund industry

Some of the problems often encountered in corporations are magnified in the fund management industry. In ordinary corporations, for instance, the shareholder delegates decision rights to the manager to act in the shareholder's best interests

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(the shareholder is called the principal); the separation of ownership and control means that shareholders lose control over managerial decisions. In investment funds, the separation of ownership and control is extreme; unit-holders participate almost not at all in supervision (except in dedicated funds).

Morley, Curtis, and Olin (2010) note that mutual funds differ from ordinary companies most greatly in the right to exit. In ordinary companies, individual shareholders can exit, but assets cannot. When a shareholder sells, the assets that underlie the shares remain part of the company. In a mutual fund, by contrast, shareholders do not sell their shares—they redeem them from the issuing funds for cash. When a shareholder redeems, the fund pays the underlying assets to the shareholder, the fund shrinks accordingly, and the shares are extinguished.

The right to redeem assets makes mutual funds more like products or services than like ordinary companies, and it profoundly influences voice, that is, unit-holders' interest in participating in fund management decisions and in acting to supervise them: "Imagine two mutual funds with identical assets and net asset values (NAVs) but different fees, and managers of differing quality. The two funds will have the same share prices but different expected returns. Investors in the fund with the lower expected returns could theoretically improve the fund's returns by voting and fee liability. But they won't bother, because they'll prefer instead to redeem their shares in the low-return fund and switch to the high-return fund. Since the two funds have *the same share price*, it costs no more to invest in the high-return fund than in the low-return fund. And since mutual fund share prices do not reflect expected returns, activism that improves a fund's returns *in the future* will not affect the share price at which an activist investor can sell *in the present*.

Shareholders of ordinary companies cannot switch so easily, because ordinary company stock prices impound information about future cash flows. Imagine two companies with identical assets, but managers of differing quality. The two companies will have different expected cash flows and therefore different share prices as well. Switching from the poorly managed company to the well managed company will require selling the shares of the poorly managed company at a low price and buying the shares of the well managed company at a higher price. The difference in share price makes switching costly. Additionally, activism that improves a company's performance *in the future* raises the stock price *in the present*. Sometimes, therefore, it makes more sense for an ordinary company's shareholders to use voting and boards to improve the company's performance and raise the share price than to sell at the current price" (Morley, Curtis, and Olin 2010, 4).

Because the current valuation of the fund is not influenced by actions from unit-holders, exiting will be the preferred strategy when there is little friction, that is, when redeeming units and buying new ones is not costly.

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European regulation seems, then, to draw on the notion that, as the depositary (the bank) is the most highly regulated party, it can act as auxiliary to the supervisory authorities, and as such take responsibility for failures to monitor enforcement of the rules. The application of this notion has spurred debate in common-law countries as well as in countries (Ireland and Luxembourg, for example) in which regulations draw heavily on corporate law and accord great importance to the role of the board.

3.3 The Failure to Define the Bookkeeping Function

Although European regulations have assigned the depositary a central role in the protection of unit-holders, the failure to define what exactly "its unjustifiable failure to perform its obligations" (EC 2008) means that assessing the depositary's liability is difficult.

Bookkeeping is defined clearly in such countries as France (book III of AMF general regulation), but it has not been defined Europe-wide. The UCITS directive requires that depositaries check that all transactions made by investment funds comply with regulation and do not violate the terms laid out in the prospectus, but because of the heightened difficulty of monitoring investments in derivatives, structured products, and target funds exhaustive checks are not always possible. Fund regulations should rely on best practices rather than on impossible rules, but no best practices for the prevention of risks have been formulated.

Finally, depositaries' liabilities have not been clearly formulated (and it will be impossible to do so as long as their obligations have

not themselves been clearly defined), which paves the way for highly divergent local interpretation. In short, depositaries run the risk of being held liable when an investment firm, short of capital, is unable to meet its obligations after losses stemming from a failure to comply with regulation.

3.4 The Influence of the French Culture on the EU Financial Laws and the Risk of Exorbitant Responsibilities for Depositaries

As a result of French influence, depositaries must bear exorbitant risks in the event of the failure of a sub-custodian. As the Lehman Brothers bankruptcy and the Madoff fraud showed, a major risk is the risk of disappearance of assets or the risk of delays in returning assets, risks we call sub-custody risks. Sub-custodianship is essential to the workings of international funds, and in many cases—when an exotic jurisdiction is chosen, for example—the choice of sub-custodian is not only the depositary's but also at least implicitly the asset manager's.

Local sub-custodianship is mandatory only in emerging economies and in mature markets such as Japan. For international funds, however, most depositaries, including the largest global depositaries, resort to sub-custodianship agreements. Bank of New York Mellon is the largest global custodian, and as it is headquartered in the United States it delegates custodianship in Europe to the best performing institutions; the largest European depositaries and custodians do likewise for many foreign investments, including in the United States.³³

In the current system of depositing managed assets thousands of billions of

33 - There are more assets under custody than held by depositaries, since custody encompasses the securities held by direct investors (individual and institutional investors) on top of securities held by collective investment schemes (CISs). In addition, as some parties are specialised in providing services to the fund industry, the classification of custodians is not necessarily the classification for depositaries.

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euros are entrusted to sub-custodians. These sub-custodianship agreements are usually the responsibility of the depositary when they have brokered these agreements (in France, except for prime-brokerage agreements, they are always the responsibility of the depositary).

The level-1 AIFM directive (EP 2010) was approved on 11 November 2010 by the European Parliament (at the time of writing, the Council had yet to endorse the directive, usually a nearly automatic step). Depositary liabilities are made stricter, since depositaries are fully liable for the restitution of assets—barring exemptions—and the burden of the proof is shifted to the depositary.

The directive notes: “The depositary shall not be liable if it can prove that the loss has arisen as a result of an external event beyond its reasonable control, the consequences of which would have been unavoidable despite all reasonable efforts to the contrary” (EP 2010). The practical definition of events that are beyond the reasonable control of depositaries and allow a “natural” exoneration of the liability of the depositary needs to be written in the yet-to-be-drafted level-2 directive.

Depositaries can also be exempted from the obligation to return assets held in sub-custody if the exemption is provided for in the terms of the contract.³⁴ Because international funds rely on sub-custody, it is important that liability exemptions be workable. For assets that must be kept in local custody in countries with immature legal frameworks or no central securities depositories, exemptions, whatever technical forms they may take, should be automatic. Contractual exemptions may be

made explicitly workable in the end in the level-2 AIFM directive, but depositaries may find it hard to reword existing contracts, so, for some assets, exemptions should be made automatic by the directive.

Exemptions should naturally be accompanied by oversight of sub-custodians. The first thing to do is ensure that assets in the accounts of the sub-custodian are segregated. Segregation is a strong guarantee that the depositary can recover investors' assets entrusted to a failed custodian. But the return of assets held at a failed foreign institution depends on national law, which may not be compatible with EU laws. There are even discrepancies between country frameworks even in Europe: after the failure of Lehman Brothers, the UK bankruptcy code resulted in some assets held by Lehman being frozen, whereas at the same time French law required depositaries to return frozen assets immediately;³⁵ the claw-back clause in US law, by which the liquidator can require unit-holders to pay back undue profits earned in the six years preceding bankruptcy, may soon be another example of legal discrepancies. Shareholders of UCITS funds do not expect to have possible liabilities after they exit a fund.

The demise of Lehman Brothers showed that sub-custody risk could be great even when well known and highly regulated institutions were involved; the EU should not rely on the pre-conception that sub-custodians other than prime brokers will never fail. Should exemptions for sub-custody risk not be workable, the failure of a large foreign sub-custodian would involve losses that exceed depositaries' capital: the largest sub-custodian of the many large European depositary banks holds assets of a value

34 - The directive states: “provided (i) that the depositary is explicitly allowed to discharge itself from its liability subject to the condition precedent of a contractual transfer of such liability to that third party, pursuant to a written contract between the depositary and the AIF, or as the case may be, the AIFM acting on behalf of the AIF, in which such a discharge is objectively justified, and (ii) that the third party can indeed be held liable for the loss based on a contract between the depositary and the third party, the depositary can discharge itself in such a case of its liability if it can prove that it has duly performed its due diligence duties and that the specific requirements for delegation are met. By imposing the requirement of a contractual transfer of liability to the third party, the Directive intends to attach external effects to such contract, making the third party directly liable to the AIF, or as the case may be, the investors of the AIF, for the loss of the financial instruments held in custody” (EP 2010).

35 - As illustrated by the Lehman bankruptcy, segregation is less effective when investors have debt with the sub-custodian and when segregated assets can be reused.

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several dozen times greater than that of the capital bases of these depositaries. In other words, unconditional liability for assets under sub-custody could lead to an extremely sharp increase in capital requirements.

3.5 The Risk of Reliance on Big Names

The temptation of the supervisory authorities to rely on such highly capitalised parties as the investment firms' parent companies to protect investors is also a source of risk for the fund management industry, as it could penalise independent investment firms and concentrate risk on the largest parties. The concentration of risk on the largest parties is exactly what regulators are trying to avoid by controlling systemic risk and, in the United States, by breaking up several banking activities. It is impossible to want to rely on big names and to have a world that could work without them.

Concentration and reputation risks arise for want of regulations that spell out the rules applicable to all parties. After all, during the financial crisis, for many funds that failed to provide overnight liquidity, regulations were powerless to protect end-investors, and the banks that owned investment firms compensated unit-holders for their losses only because they feared for their good names. In short, unsuitable regulation cost large conglomerates dear.

In addition, formalising the support parent companies offer investment firms would lead to higher capital charges for these companies (reputation risk is an integral part of operational risk, and a formalisation would lead to a weight for this risk much heavier than has hitherto been the case).

For want of laws on legal liability, the absence of regulatory protection would lead to greater reputation risk, as was made clear during the recent crisis, which would in turn lead to higher regulatory capital under Basel III.³⁶

To rely on the large capital reserves of a parent company without penalising independent investment firms, EU regulations should define the role of the sponsor and require that a well-capitalised sponsor, which, as in Ireland and Luxembourg, can be rented, participate in the creation of the fund and offer a guarantee on top of that provided by depositary controls and depositary bookkeeping. Such an explicit additional guarantee could improve the governance of investment funds. This sponsorship role could be enshrined in European law.

3.6 Conclusion: The Possible Convergence of Country Regulations and Risk-Management Practices

As we have seen, the influence of French regulatory culture on European law may result in the placement of exorbitant responsibilities on depositaries; the failure to define clearly the role of the depositary and the responsibilities of all parties to the fund management industry, by contrast, may lead to regulatory competition between the member states of the EU and greater reputation risk for the shareholders of the investment firms; the UCITS label may also be discredited.

Although cultural differences may make it hard to draw up precise level-1 and level-2 regulations (and may be partly responsible for the delays in preparing the AIFM directive), convergence is not entirely

36 - In the standardised approach, the charge for operational risk is a percentage of the gross income of each business line, but banks are required to do their own assessment of risks; additional capital needs for risks not identified in the standard approach may be needed. Banks that have implemented the advanced measurement approach need to formally measure the risks that arise from reputation, sub-custody, and so on.

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out of reach. After all, the gaps between the regulatory and governance processes in common-law and civil-law countries are gradually narrowing.

Although the concept of fiduciary duty differs greatly in common-law and civil-law countries, the entire industry is subject to common financial regulations such as UCITS and MiFID. These regulations impose obligations and assign liability, whether in contractual relationships with clients or not.³⁷ Financial regulations thus contribute to convergence. At the same time, several instances of fraud such as that perpetrated by Maxwell led the UK regulator to strengthen consumer protection and require stricter ring-fencing, an approach typical of civil-law countries.

37 - MiFID requires that distributors provide their clients proper advice and information; distributors are then liable to their client whether they are from common- or civil-law countries, in a similar way in all European countries; UCITS requires that "in the context of their respective roles the management company and the depositary must act independently and solely in the interest of the unit-holders".

In addition, the industry is now demanding convergence. Depositaries are seeking modifications that would bring regulations in civil-law and common-law countries closer together. French depositaries are demanding a more principle-based approach to their liabilities and British depositaries clearer rules for their obligations. Convergence is also sought by pan-European asset servicing companies, since large depositary networks are in effect trying to develop practices that can be applied in all countries. They could then operate by a single standard, regardless of jurisdiction.

The challenge is to take the best of common-law and civil-law systems. A precise description of depositary controls typical of common-law countries should go together with enhanced fiduciary duties and disclosure of non-financial risks. The last section takes a more detailed look at the ways to protect unit-holders from non-financial risks.

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4. Which Possible Protection of Unit-Holders?



4. Which Possible Protection of Unit-Holders?

4.1 Higher Capital Requirements

Higher capital requirements should be envisaged for all parties to the fund management industry, beginning with the party—the investment firm—that has the greatest responsibility. The notion that depositaries alone should have own capital should be scrapped; capital requirements should be based not on assets under management or in custody but on risk. The models for allocating capital in financial conglomerates and investment firms should be reviewed, as should prudential regulations (capital requirements for limited operational risks should give way to a requirement for restitution risk). The point of this approach is to create greater incentives to manage risks, as own capital should not be considered, as it is in the banking and insurance industries, insurance against the risk of loss. Investment firms, after all (most of all small firms or firms specialising in a particular asset class or strategy), will never be able to diversify their risks well enough for reasonable amounts of own capital to cover them. The capital requirement should be set in such a way as to ensure that the marginal incentive to manage risks is greater than the marginal rise in fees charged to investors as a consequence of the rise in the cost of capital.

Setting capital requirements wards off the risk of an investment firm's failing to monitor large risks or to inform shareholders and clients of them. For all parties to be held liable for their actions, they must hold capital to give them incentives to manage the risks their decisions contribute to.

Today, capital requirements are particularly small for investment firms: roughly, an investment firm managing UCITS must

have €125,000 of capital as a minimum, plus two basis points per euro of assets under management in excess of €250 million. Depositaries, since they are banks, are usually subject to Basel regulation. Their capital requirements, though large in absolute terms, are usually a very small fraction of clients' assets (0.05% is a reasonable ratio of capital to assets under custody), because the only risk involved is operational risk, and because it was believed that, for depositaries, these risks were, in the main, granular. Reliance on the reserves of depositaries to make good on the disappearance or immobilisation of assets at a large sub-custodian, which is likely to hold assets of a value many times that of the reserves of the depositaries, is not sufficient; capital requirements should be made of all parties to ensure that each manages some of the non-financial risk.

The Financial Services Authority, in its recent supervisory review, has questioned the internal capital adequacy assessment process (ICAAP) of investment firms, and concluded (Waters 2009) that "operational risk analysis has in some cases failed to quantify risk exposures at an appropriate confidence level" and that even though "it has never been our intention to increase the level of capital requirements across the whole of the industry through our Pillar 2 assessment framework [...], we will recommend additional capital to be held". Capital is no more a barrier to entry than are the requirements that UCITS investment firms have sophisticated risk management and reporting systems; lines of capital could be provided by sponsors, too. Capital, however, has a cost, so the capital requirements should be sufficient to provide incentives but set so as to limit the rise in fees charged to investors.

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4.2 Rating Non-financial Risks

The use of ratings of non-financial risks in risk-sensitive capital requirements

In addition to the natural incentives to risk management created by the existence of capital requirements, modern regulations use risk-sensitive capital requirements as incentives. Regulators could lower capital requirements for investment firms and depositaries that manage these risks well (if capital requirements are set in the first place), as well as for institutional investors that invest in low-risk funds (including alternatives).

Risk-insurance schemes

Another way to lower non-financial risks is to use insurance schemes. One could either require investment firms to seek insurance for the amount of non-financial risks that exceeds their available capital or insure retail unit-holders directly; indeed, on 12 July 2010 the European Commission (2010) adopted a legislative proposal for a thorough revision of the directive on investor-compensation schemes, a proposal by which clients of all investment services covered under MiFID should be automatically entitled to compensation if, because of the failure of a UCITS depositary or sub-custodian, the assets cannot be returned to the UCITS. The cost of this extension would be borne by depositaries and custodians rather than by investment firms. Maximum proposed compensation is €50,000 per investor; the aim is to protect small investors (or, as they are known in MiFID, non-professional clients).

Insurance, like capital requirements, must be paid for by investment firms. As of October 2010, pre-funding of 0.5% of assets under management was planned. Full pre-funding

is an option that makes it possible to hasten paying compensation to unit-holders, but, other than for money-market funds, it is not necessary for UCITS. Full pre-funding would arguably be a great shock to the industry since the amounts required are several times the operating profits of investment firms, so progressive funding should be preferred. Last, to prevent adverse selection, the pricing of such insurance should be based on the risks involved in the funds; for the moment, however, the pricing proposal made by the EU fails to take these risks into account.

The use of ratings of non-financial risks in insurance schemes

Risk-sensitive capital requirements and insurance of non-financial risks must be based on a measure of the non-financial risks involved in funds, which we call ratings of non-financial risks. Ratings of non-financial risks are necessary to shed more light the risks arising from sub-custodianship and other practices that often hide risks from the end-investor. A rating of the non-financial risk of a fund should, together with its financial risk, represent the riskiness for investors, a concept different from the riskiness of investment firms or securities firms for their investors: UBS's good rating did not keep investors in Luxalpha from getting taken to the cleaners as a result of sub-custody risk UBS failed to shield investors from.

Rating the non-financial risk of a fund is different from assigning a fund, investment firm, or depositary a general rating. It requires access to information about sub-custody risk. In general, depositaries have the best information about some non-financial risks: they are usually the best informed of sub-custody risk, they are

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involved in collateral management, exercise due diligence with investment firms, and work for several funds.

The interests of depositaries may conflict with those of the investment firms³⁸ that hire them, so one might think that it would be hard for depositaries to disclose the non-financial risks of a fund to other parties, including to end-investors, unless there are clear regulatory guidelines and incentives to do so. All the same, it is in the depositaries' best interest to disclose the sub-custody risks of the fund to which it provides services. After all, disclosure of this risk should lessen their liability

(as they have not hidden from investors risks they were aware of).

Ratings could also be beneficial to institutional investors, especially if they are produced by the specialist houses that perform due diligence of investment funds for these institutional investors. The costs of due diligence, which makes it possible to choose strategies and to assess the non-financial risks of investment funds, are partly redundant, as they are borne by different investors at the same time, and ratings made available to the public would partly suppress these redundancies.

38 - Depositaries must act only in the best interests of fund investors (UCITS, article 10: "In the context of their respective roles the management company and the depositary must act independently and solely in the interest of the unit-holders") (EU- 2008). Depositaries, however, are hired and paid by the investment firm, not by the end-investor. Potential conflicts of interest are the result, and the depositary may find it hard to challenge some of the decisions of the asset manager that may not be in the interest of the investors. Thus, additional mechanisms such as disclosures and possibly rating of the quality of the management of non-financial risks would ensure that depositaries and investment firms always act in the best interest of investors.

Box 4: Rating non-financial risks requires new processes

Traditional statistical techniques, whereby one attempts simply to model a dependent variable—losses with sub-custodians—as a function of explanatory variables, are expected to perform poorly when there are very few large losses at sub-custodians. One should then rely on knowledge from other fields, on the probability of default of sub-custodians (which can be modelled with credit scoring models using typical variables), and on the exposure to these custodians. The techniques to be used must be further specified, but they are similar in spirit to those used by rating agencies.

Rating agencies currently rate investment and securities firms. These ratings are ambiguous. First, bond ratings are regulated, but investment and securities firms ratings are not; for many people, however, the difference is unclear. Second, the rating of investment firms and depositaries provides only a partial idea of the protection offered to unit-holders: "Asset manager ratings reflect an assessment of an fund management organisation's vulnerability to operational and investment management failures, as reflected by the quality of the organisation's experience, staffing resources, investment processes, internal control environment, investment administration capabilities, and related technology resources. Asset manager ratings are assigned on a scale from 'M1' to 'M5', with 'M1' being the highest rating denoting the lowest vulnerability to operational and investment management failures" (Fitch 2010). The quality of the processes at the investment firm enables better protection of unit-holders; the strength of the asset manager, however, is not synonymous with unit-holder protection (after all, if an investment firm foists the risk onto its clients, then it becomes financially strong). Last, these ratings do not explicitly quantify sub-custody risk for investors, since this risk depends not on the type of management but on the fund itself; in some cases, sub-custody risk is borne by unit-holders, and it may, to an extent, be independent of the quality of risk management at the investment firm.

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Ratings of securities firms suffer the same drawbacks as ratings of investment firms; they may simply help small investment firms shortlist the depositary banks they want to interview.

We must emphasise that there are ratings of funds (Fitch ratings), but that they are more ambiguous again than ratings of investment firms and inappropriate as such for our purpose. They are the result of the blend of the financial risks³⁹ and the operational risks associated with the processes at the investment firm and at its service providers. Yet they do not measure explicitly what can best be defined as the risk of default of an investment fund, the risk of disappearance of assets (as in sub-custody risk), or the risk of unit-holders finding themselves unable to redeem their units. Ratings rely heavily on the credit risk of the instruments held in a fund, even though the average ratings of the instruments in a fund are not a good representative of financial risk; ratings take into account risk management and operational processes, but the risk of disappearance of assets at a sub-custodian, like the risk of default, is also independent of the processes and linked to amounts in sub-custody and to the ratings of sub-custodians. Last, derivatives hide the true nature of the risk (if the asset underlying a derivative disappears, the derivative instruments loses market value, a loss that hides the non-financial risk of the investment), but for the sake of transparency it would be of interest to have an assessment of the true extent of the non-financial risks of a fund.

39 - Rating agencies, unlike firms such as Morningstar and EuroPerformance, have access to fund positions, and are thus in a better position to assess extreme financial risks.

40 - See: <http://www.fool.com/investing/mutual-funds/2008/06/06/dont-trust-the-mutual-fund-industry.aspx>
And: www.caceis.com/fileadmin/pdf/newsletters_en/caceisnews18_EN.pdf

4.3 Transparency versus Insurance

In contrast to the aforementioned notion of insurance against non-financial risks, a notion that, in spirit, responds to the assumptions, as formulated in civil law and as implicit in European regulation, of total protection of the retail investor, is the notion, dear to common law, of informed and consenting parties and thus of transparency.

Transparency creates incentives to manage risks because informed investors may turn away from poorly managed, risky funds. Furthermore, there may be higher demand for transparency to restore trust, which, as anecdotal evidence suggests, is currently missing in the mutual fund industry.⁴⁰ We thus recommend that ratings of non-financial risks be reported together with fund rankings and the financial risk

indicator currently present in the KID (CESR 2009a). Aboulian (2010) notes correctly that "the risk and reward indicator methodology has been widely criticised for failing to truly present all risks to investors", a failure that explains why the required contents of the KID were not defined as of December 2010.

Even now, in theory, the distributor must provide all relevant information about the products being sold. After all, distributors are subject to MiFID. As retail investors are considered relatively uninformed, distributors must provide them with all relevant information. Distributors should be required to inform retail clients of the non-financial risks involved in specific fund structures. For instance, a retail investor should be aware that funds that invest in exotic locations involve sub-custody and

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restitution risk. Distributors would then have incentives to search for the relevant information and they would in turn require that the funds' documentation be clear about non-financial risks. When the fund's documentation lacks clarity, distributors should be able to decide not to sell the fund, or to sue investment firms and depositaries for incomplete information. So, the failure to provide relevant information about non-financial risks in the KID must be considered a potential problem for distributors and possibly for depositaries, too: if information about non-financial risks is unavailable to distributors, they cannot report it clearly to the end-investor; the lack of information about such risks makes depositaries the scapegoat, because investors and supervisors may wrongly assume that such risks are not supposed to exist.

In addition, the KID is bound to become the essential piece of information in UCITS IV, as only the KID, a homogeneous European document, need be translated as part of the accelerated notification procedure for distributing funds throughout Europe. In UCITS IV, as in UCITS III, the greater share of responsibility for the KID will fall on the investment firm (UCITS III, article 78).⁴¹ In the future, with a possible extension of information beyond that produced under the responsibility of the investment firm and with the simplified notification procedure, the extent to which parties are responsible for the information must be clarified. Could country supervisors try to compensate for a loss of control over domestic distribution of foreign funds by requiring more extended responsibility of parties to the KID? The responsibilities of the investment firm and of the depositary may vary from one country to another, as

the role of the valuator and the depositary vary today.

Again, improved transparency requires the KID to display clear information (such as the proposed ratings) about non-financial risks. The funds that display great extreme non-financial risks must be clearly identified as such in the KID. When the depositary commits to the unconditional restitution of assets, this commitment should be noted in the KID and could prove an advantage for depositaries and asset managers alike.

Distribution incentives

Funds with suitable practices could be given access to a wider range of clients. The UCITS designation already ensures that the fund can be distributed widely; the same incentives could be given to AIFMD-compliant funds; distribution rewards can be enhanced by distinguishing between funds that apply best practices and those with practices that involve more non-financial risks. Ratings of the non-financial risks borne by unit-holders could be used for that purpose. Making such ratings publicly available would, without further regulation, facilitate investment in funds, since investors are now eager for disclosures of non-financial risks; as such, ratings would implicitly favour the funds with better practices.

4.4 Towards Better Governance and Better Risk Management

The strengthening of governance and the greater involvement of unit-holders (through the board or through class actions) would make it possible for investment firms better to take non-financial risks into account, and help improve the management of non-financial risks.

41 - At the moment the sole indication in UCITS IV regarding the responsibility of other parties is that civil charges cannot be brought against persons (EU 2009a, article. 79-2) "Member States shall ensure that a person does not incur civil liability solely on the basis of the key investor information, including any translation thereof, unless it is misleading, inaccurate or inconsistent with the relevant parts of the prospectus. Key investor information shall contain a clear warning in this respect".

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The need for better governance

Eddy Wymeersch, president of the CESR, has sharply criticised the governance of the fund management industry. In Autret (2009) he criticised the lack of transparency of management bodies and of the information provided to retail investors, the lack of specific guidelines for the management of conflicts of interest, and, most of all, the lack of checks and balances. He argued that the current practices are far from meeting the recommendations of the International Organization of Securities Commissions (IOSCO) and do not meet the standards of ordinary corporations; he noted that monitoring compliance is insufficient.

Boards of directors or, when there are none, investment firms, are the main parties responsible for management of non-financial risks. EU laws impose no fiduciary duties on boards of directors, but corporate law (especially in common-law countries and in countries such as Luxembourg, where the rules for investment firms draw on corporate law) assigns them clear fiduciary duties: like depositaries and investment firms, they must act solely in the interest of end-investors. In practice, these principles are too vague, and we argue that the fiduciary duty of the board and of the chief compliance officer of the investment firm should be reinforced and should include a formal responsibility to end-investors to ensure high standards of governance and risk management,⁴² and to define appropriate remuneration packages for the investment managers and the investment firm.

Institutional investors could also participate in better fund governance by contracting more monitoring services. As is well known, it is usually the investment firm that

provides end-investors the performance measures used to determine the manager's pay; in addition, it is usually the investment firm, not the unit-holders, that determines the investment manager's remuneration, a practice that creates additional discrepancies between the remuneration of the investment manager and that of the end-investors, on top of the discrepancies that arise from the poorly designed remuneration contracts: at present, a very sub-optimal maximum expense ratio with no link to the welfare of the unit-holder is used to determine the remuneration of the investment firm.

Class actions

Investors are largely inactive, in daily management as well as in annual meetings, in fund governance. After losses or possible errors by the investment firm, it is hard for them to assign blame, as they themselves are highly fragmented and may be of slender means. This is especially the case in countries such as Luxembourg, where the supervisor has no power of enforcement. Class actions make it possible for investors, as clients, to pool their means to make effective claims, regardless of the underlying legal structure. Class actions are typical of common-law countries and empower consumers or investors; they provide means of appeal in the event of misleading information. Class actions are uncommon in the French system, and they are not currently a weapon in the European legal arsenal.

All the same, if the belief is, as it currently is, that retail investors should be given access to ever-riskier funds (UCITS as well as structured products) and that administrative oversight of non-financial risk is incomplete, it is necessary to make use of this tool, typical of common law, in European law. When it is hard to assign responsibilities,

42 - Capture of the board by the investment firm is a possibility that cannot be eliminated; giving a clear mission and responsibility to the board, however, diminishes the likelihood of conflicts of interest causing a board's failure to perform.

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class action can enable investors to finance the legal and financial consultations necessary to the defence of their interests and to obtaining fair compensation for any damages. The use of class action should not imply punishment—financial penalties above and beyond reparation for damages—usually associated with class actions: the idea is to ensure reparations are made, not to punish.

The subsidiarity principle

The common-law approach to regulation is founded on the principle that all parties are informed and consenting. The subsidiarity principle is at the heart of English law; the general principle is to determine responsibility for any losses and act accordingly. To incorporate this approach into European law more formally, the subsidiarity principle and the notion of informed parties could serve as the cornerstones of a directive on the sound management of the non-financial risks in UCITS; the scope could be greater than that of a mere depositary directive. We have seen that in the United Kingdom the failure to define sound risk management practices and the vagueness of the responsibilities of the depositary (see the MGAM case) and the investment firms have created great uncertainty, above all for small, not highly capitalised investment firms.

So such a directive would have to deal with all of the problems mentioned in common law and to define with precision a) the responsibilities of the investment firm (including standards of documentation and transparency of risk management and conflicts of interest), b) the financial soundness of investment firms (capital requirements and coverage of non-financial risks), c) the liability of

depositaries in the event of losses arising from an investment firm's failure to comply with rules and to honour its commitments, d) the responsibilities for the choice of sub-custodian in exotic jurisdictions or directly chosen by the investment firm (prime brokers), and e) the outside events (such as the immobilisation of segregated assets in application of the laws of the country of the sub-custodian) that may prevent the depositary from returning assets.

With these definitions made clear, it would be possible to require of the depositary immediate restitution of assets unless the depositary can prove that other parties were at fault or failed to disclose information or unless it is prevented by foreign law from returning assets. If assets really are segregated by the sub-custodians, it would then be possible to return them to the investment firms (or to the unit-holders).

Counterparty risk and collateral management

Better governance should allow better risk management, but better techniques are also needed. Finance practitioners often fail to apply state-of-the-art techniques, let alone invent or improve techniques. Techniques can be improved with appropriate regulatory guidelines, or with appropriate guidelines and best practices from industry working groups.

Counterparty risks in derivatives can be reduced by regulatory initiatives such as the creation of central counterparties (CCPs), which are a buyer to every seller and a seller to every buyer; in effect, they do away with counterparty risks altogether. CCPs, however, require that margins be set as cash on a daily basis, a requirement that

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results in higher funding costs for banks, long-only equity funds, and other cash-poor funds. This option sheds counterparty risk, but the higher liquidity requirements for banks may raise the price of derivatives.

In addition, the requirement to post cash as collateral penalises funds that do not usually hold cash. After all, because of margin calls, the volatility in the price of the derivative results in volatility of the cash account for the investment fund, and the fund may need to sell assets, generating transaction costs, to free cash.

So, the private sector could also improve collateral management by relying on tri-party agreements and over-collateralising contracts with less liquid instruments. This solution would make it possible to shed counterparty risk and get around the costs of posting cash or liquid instruments for the margin requirements of centrally cleared derivatives: equities could be posted as collateral, and counterparty risk could thus be shed without weighing too heavily on liquidity. It would also make it possible for funds that attempt to invest fully in an asset class to hedge some risk factors with derivatives, yet remain fully invested at all times.

Liquidity risk management

Long-term institutional investors can invest in illiquid assets but they must assess the risk and return characteristics of funds. Because institutional investors have large balance sheets and are able to hire specialist managers for each type of risk they buy, they may seek appropriate vehicles for illiquid strategies. To some extent, it is illusory to use UCITS to distribute illiquid strategies because UCITS is a framework based on the liquidity of assets and liabilities (units). To

lower the risk of misleading certifications, regulatory bodies could study the suitability of closed-end funds that would ensure a match between the assets and liabilities of the fund: by ensuring that liabilities have a long horizon, the fund can safely invest in less liquid assets (Amenc 2009; Amenc, Schoeffler, and Lasserre 2010). Investors locked in a fund for years cannot as easily exercise their power to exit, and asset managers can be sure that they will go on managing assets and collecting fees regardless of the quality of their management. So, further transparency and better governance mechanisms are needed to ensure the success of such funds. Further study of governance in the fund management industry is necessary before European closed-end funds can be created.

History has also shown that the UCITS requirements for liquidity are very vague; that there is a liquid secondary market when an asset is bought does not mean that the asset will be liquid at any time in the future. All derivatives based on illiquid assets run the risk of becoming illiquid, as the market for mortgage-backed securities has shown.

The fund industry could also implement liquidity risk management techniques, examples of which can be found in the literature on the risk management of hedge funds. De Souza and Smirnov (2004) note that investors have a limited tolerance for losses and that large losses may trigger redemptions. The primary objective of liquidity risk management is to avoid reaching the critical point at which counterparty obligations or investor redemptions are large enough for the necessary sale of assets to have

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severe negative effects on the portfolio. Redemptions triggered by a fall in asset prices mean that the fund manager (and other stakeholders, such as the more static investors and the sponsor) are short a put option, much as banks with very liquid liabilities but less liquid assets are; the assumption that investors will redeem if their capital is insufficiently protected makes the case for a dynamic strategy drawing on constant proportion portfolio insurance (CPPI).⁴³

Last, funds may seek to arrange potential buyers of illiquid assets.

The management of sub-custody risk

Regulatory guidelines for the management of sub-custody risk may be necessary to protect end-investors. In the AIFM directive (EP 2010), barring contractual exemptions, the depositary is responsible for sub-custodianship. In investments in foreign developed countries, the depositary will choose the sub-custodian, and no contractual exemptions will be drafted. Depositaries will then monitor the credit risk of sub-custodians closely and could be expected to take assets away from these sub-custodians if the risk of bankruptcy increases. Moreover, should all depositaries retrieve their clients' assets from a weak sub-custodian, the sub-custodian, deprived of its source of revenue, is unlikely to survive.

43 - The measure proposed by De Souza and Smirnov (2004) attempts to incorporate the liquidity of each asset in the fund by measuring its liquidity-adjusted VaR. The liquidity cycle, or the possibility that investors need to redeem their funds because they are facing liquidity constraints in other funds, is not taken into account in their model.

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UCITS directives rely partly on country regulations, so European regulations should be reworked to close loopholes in the definition of depositary duties and liabilities and to ensure that non-financial risks are taken into account; the ESMA should be given extremely clear direct authority over country supervisors.

The Madoff fraud and the demise of Lehman Brothers have put the definition of depositary rules on the regulatory agenda, but new EU regulations involve the risk of exorbitant liabilities for EU depositaries and that of implicit reliance on the reputation of large financial groups, precisely what new systemic regulations and oversight are trying to prevent.

Convergence, drawing on the best of common-law regulatory culture, which relies on the adequate information of agents, and of civil-law regulatory culture, which relies on a clear definition of the duties of parties such as depositaries, is now possible.

There are several means of providing unit holders better protection from non-financial risks, so an examination of the opinions of investment fund professionals would improve our understanding of the necessary development of regulations and risk management practices. With the support of CACEIS, EDHEC will take a survey of fund industry professionals and seek feedback on the options available. The options can be summarised as follows:

For risks to be managed, each party should be accountable for the risks it is responsible for, and each could be required to hold adequate capital to compensate unit-holders for any non-financial losses it is responsible for (otherwise, again,

responsibility without regulatory capital means that the ultimate responsibility lies with the most highly capitalised party, usually the depositary). Capital requirements must serve as incentives, not as insurance. After all, investment firms are not sufficiently diversified or capitalised to offer full protection from non-financial risks; not even depositaries, with a ratio of capital to assets under custody on the order of 0.05%, can provide insurance against large losses in the system, because the disappearance of a large sub-custodian would involve losses worth several times their capital base.

Insurance is a form of protection typical of civil-law countries. One could either require investment firms or investment funds to seek insurance against the risks that exceed a certain threshold or extend the investor-compensation schemes to the risk of disappearance of assets of UCITS funds. To prevent adverse selection, this insurance should be priced in keeping with a rating of the non-financial risks to which the unit-holders of investment funds are subject. These ratings should make more transparent the non-financial risks of investments in target funds and derivatives, which hide the true nature of risks. These ratings could also be used for risk-sensitive capital requirements.

Typical of common-law regulation is transparency, not insurance. As long as non-financial risks are present in investment funds, without transparency, regulation cannot but be a failure. That the sponsors of funds or distributors and shareholders of investment firms had to pay for losses they were not informed of is a failure of regulation, because it means that, ultimately, unit-holders cannot count on regulations to protect them. Ratings of non-financial

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risks, together with an indicator of financial risks (such as the proposed synthetic risk indicator), should thus be displayed in the key information document; such information could be used by distributors to comply with their obligations to provide appropriate advice and relevant information to retail investors.

Governance could also be improved, first by making the boards of investment firms and chief compliance officers formally answerable to end-investors for ensuring high standards of governance and risk management. Ultimately, it is expected that improved governance will improve risk management practices, but this improvement requires work of its own. In some cases, regulators can provide guidelines. In others, the industry will have to devote resources to improving methods and establishing best practices.

Last, if the member states of the European Union are unable to agree on reform, UCITS not exposed to non-financial risks should be distinguished from more modern UCITS that have potentially greater exposure to these risks. Secure UCITS funds would be investment funds for which the depositary is unconditionally responsible for returning assets. The eligibility of assets—by regulation or by the contract between the fund and the depositary—would then depend on both financial and operational criteria. These funds, with the necessary changes having been made, would be akin to those of the 1980s, when the UCITS label was created: for the most part, their assets would be listed European financial securities admitted to central securities depositories systems.

The survey will show whether new business

models, with investors paying for protection from non-financial risks, are likely to emerge or whether investors prefer to keep fees low and go without such protection. Non-financial risks are usually taken to capture new risk premia, as liquidity risk is taken to capture a liquidity risk premium. So non-financial risks can be accepted by investors if the risks they take are made clear to them. Secure UCITS would limit the number of investment opportunities and protect investors from non-financial risks; they could be a major option if information about non-financial risks is not transparent.

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Appendix 1: Synthesis of main losses

Figure 4: Large non-financial losses in the fund management industry (selection)
This figure summarises the losses detailed in section 1.5

Name	Loss	Illustrates	Consequences
Lehman Investment Bank & AIG, 2008	Losses on derivatives and high replacement cost	Counterparty risk management with derivatives	Extension of central counterparties for OTC derivatives (CCPs)
Lehman Prime Broker, 2008	Failure to return assets held by Lehman; losses for French depositaries responsible for return of assets	Counterparty risk with prime brokers; exorbitant responsibility of French depositaries; lack of homogeneity in European regulations of depositaries.	Awareness of non-financial risks and of regulatory divergences in the European fund industry;
Luxalpha, 2008	Delegation of management of a UCITS; total sub-custody of assets without due diligence and monitoring by the depositary; sponsor, depositary, and asset managers not able to assess the security of assets.	Certification of Luxalpha shows diverging supervisory practices; lack of transparency on non-financial risks; insufficient supervision; reliance on reputation of large groups, not on regulations to protect unit-holders; diverging enforcement practices	EU political agenda towards clarification, homogenisation and strengthening of depositaries' obligations and liabilities.
Madoff Securities, 2008	Madoff, not registered with the SEC, acted as an investment advisor, while Madoff securities took custody of assets. A Ponzi scheme was created.	Lack of control of managers of hedge funds in the US; securities firms as risky custodians.	Obama package: Financial advisors must register with the SEC; greater oversight planned.
French cash+ funds, 2007 (and other property funds in Europe)	In France, cash+ funds certified as money-market funds were partly invested in mortgage-backed securities. They became illiquid and shareholders of the investment firm provided liquidity to the funds and bore some of the losses.	Misleading certification of illiquid funds as liquid funds; absence of liquidity risk management by investment firms; lack of a clear definition of (eligible) liquid assets; unsuitability of the UCITS wrapper for illiquid strategies.	That the sponsors had to pay for losses which they were not informed of the possibility is a failure of regulations. New regulations/criteria for money-market funds have been adopted.
Reserve Primary Money Fund and other money-market funds.	Some US mutual funds, including money-market funds with usually constant \$1 net asset value, "broke the buck" after holdings of AA-rated structured products collapsed. Reserve Primary Fund wrote off \$785 million of debt issued by bankrupt Lehman Brothers Holdings Inc.	Relying solely on ratings to assess (extreme) financial risks is an inadequate risk-management practice. Underlines possible inadequate processes and conflicts of interest with rating agencies.	Dodd-Frank Wall Street Reform and Consumer Protection Act; SEC issues new regulations for money-market funds (2009). SEC to set up a special office to watch over rating agencies and improve their workings.
Albion, 2002.	Albion was forced to wind up because it did not have the means to make up the shortfall of about €1m in missing client assets.	Underscores the importance of segregation and ring-fencing.	At the time, these events did not attract much regulatory attention.
MGAM, 1996	The manager used opaque structured bonds for increasingly concentrated investments in high-risk holdings, and breached the regulatory restriction of 10% holdings in unapproved securities.	Underscores the difficulty of supervision of a fund with derivatives or structured products and the risk of reliance on the capital reserves of parents rather than on regulations.	
Maxwell fraud, 1992.	R. Maxwell juggled assets around his business empire, using company pension scheme assets as collateral for bank loans partly used for personal benefits. Hundreds of millions of pounds went missing.	Importance of strict segregation of funds (ring-fencing) and of consumer protection by regulations, not only by governance and fiduciary duties.	Stricter segregation in financial regulations (Pension Act and Financial Services Market Act 2000)
A German investment fund, 2001.	An option-type fund invested in Japanese options whose value fell considerably. The investor sued the depositary bank for failing to ensure that the fund was geographically diversified. The charge was dismissed on the basis that a depositary is responsible only for checking the legality (not the suitability) of the investment decisions of the management firm.	Underscores the absence of checks and balances in the fund industry (the depositary monitors the compliance of a fund, but no independent party such as the board of directors monitors the suitability of the decisions of an investment fund, contrary to what usually happens in a corporation).	(probably has no direct regulatory consequence)

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Appendix II: Review of Main Functions in and Parties to the Fund Management Industry

Appropriate regulations require the understanding of the many specifics of the fund management industry. This section describes the main roles and functions in the fund management industry in the main European jurisdictions (the specifics of the US industry are detailed in section 3.1.3.1).

The elements essential to fund management, such as the creation of the fund, the management of the fund, the custody of assets, and the distribution of the fund, can be defined in linear fashion.

The fund industry has separated ownership and control by requiring that assets be safe-kept by depositaries; for assets that cannot be safe-kept (derivatives, non-financial securities, cash, and registered securities⁴⁴), bookkeeping, along with monitoring and due diligence, would help protect unit-holders. The lack of a European definition of these additional controls is the source of many problems.

The control function is assumed first by the investment firm, then by the depositary, the board of directors, and the auditors. Administrative functions are usually the responsibility of the investment firm but tend to be outsourced.

The creation of the fund and the sponsor

The sponsor is the public face of the fund that contributed to the creation of the fund, generally a bank (which may act as a distributor for this fund or is the shareholder of the investment firm)

or an investment firm, depending on the country. In common-law countries, the sponsor of the mutual fund makes everything happen. It determines the mutual fund's legal structure, handles branding and promotion, and is usually well capitalised. It does not hold legal title to the fund's underlying assets. Sponsors in common-law countries have common-law fiduciary duties to investors. In civil-law countries, thus in many continental European countries, sponsors have no fiduciary duty (from the fact of being sponsors) to those who invest in mutual funds, because they have no contracts with end-investors. In these countries, the sponsor usually have responsibilities to investors from their status as distributors or investment firms; in addition, sponsors may be liable in the event of a fraudulent fund (after all, they cannot claim that they are unaware of the nature of the fund, as they helped set it up).

In a US incorporated mutual fund, the sponsor and the investment company sign the investment management contract, although Rounds and Dehio (2007) suggest that, in fairness, it is the directors, as representatives of the investment company, who are actually contracting with the sponsor. The sponsor generally does record-keeping, asset accounting, and interfacing with shareholders.

The sponsor is not explicitly mentioned in EU regulations, so its responsibilities differ from one country to another. In the United Kingdom, the sponsor is usually the manager. In France, the creator of the fund is usually the investment manager, and when the investment firm is owned by a parent company, the parent is often the public face of the fund.

44 - Registered securities are those in which the name of the holder of the securities is in the books of the issuer and not in central securities depositories such as Euroclear.

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There, the term "sponsor" is little used, but the bank of the investment firm sometimes acts implicitly as a sponsor, which may lead it to bear some non-financial losses in funds.

In Luxembourg, sponsors are subject to implicit capital requirements: the CSSF Circular 91/75 requires that the promoter (the sponsor) maintain an adequate line of credit with a bank for the satisfaction of possible investor claims. In Luxembourg as well as Ireland, two countries which seek to attract funds, a sponsor can be contracted, which facilitates the domiciling of funds from foreign companies.

The central role of the investment firm

The investment firm is responsible for financial management, centralisation, record-keeping, valuation, and regulatory reporting. Despite the obligations depositaries must take on, the main responsibility for decisions and for compliance with regulatory obligations rests with asset managers themselves (they select the depositary). They are responsible for valuation; for the choice of assets and due diligence; for compliance with quantitative restrictions; and for providing legal information, annual reports, and key information documents to unit-holders. Broadly, investment firms have great responsibilities in the management of non-financial risks: they choose the geographies and jurisdictions they invest in, they are responsible for liquidity and collateral risk management—depositaries also inherit responsibilities for collateral management because assets must be transferred within an appropriate time frame⁴⁵ and because of their responsibility for the pricing of contracts. UCITS investment firms

are subject to organisational and risk management requirements whose aim is to limit conflicts of interest and keep risks under control.

The core function of an investment firm is the financial management of funds. This function, arguably the best understood by the general public and by investment professionals, involves the definition and implementation of the investment strategy. The investment manager may decide to delegate the financial management of the funds to third parties licensed to manage such funds. When financial management is outsourced, the investment manager is still liable for outsourced activity and must comply with certain requirements (he or she must have in place measures to monitor the work of the entity to which the management is delegated; the outsourcing must not lead to any conflicts of interests). French regulations provide for mandatory provisions in investment management agreements.

Another core function involves reporting. The investment firm must report to the supervisor the net asset values of each fund; it must also disclose to the central bank (which is not the supervisor in all countries) the information necessary to the publication of monetary statistics. Article 27-1 of UCITS III requires that the investment company provide key information to unit-holders: "Both the simplified and the full prospectuses must include the information necessary for investors to be able to make an informed judgement of the investment proposed to them, and, in particular, of the risks attached thereto. The latter shall include, independent of the instruments invested in, a clear and easily understandable

45 - UCITS III, article 7-3: "A depositary must, moreover [...] ensure that in transactions involving a unit trust's assets any consideration is remitted to it within the usual time limits" (EC 2008).

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explanation of the fund's risk profile" (EC 2008).

From custody to bookkeeping

Custody

The depositary is in charge of custody of the assets of the UCITS,⁴⁶ a function that includes the so-called post-market functions of the investments made by the UCITS. The depositary ensures the settlement and delivery of transactions, paying for the securities on reception in the event of a purchase and delivering them on reception of cash in the event of a sale, all in liaison with the central depositary for local transactions or with its corresponding sub-custodians for international transactions. It processes securities transactions and informs the UCITS of them. Finally, it keeps certificates when the securities are not dematerialised. It records in the cash and securities accounts the transactions realised by the UCITS.

In France, depositary control and custody are historically the role of a single entity, whereas in European common-law countries they are more often separate. The depositary, like most other service providers, is usually hired by the investment firm (the custodian enters a contractual agreement with the board in the United States, but is usually chosen by the investment firm).

Custody is sometimes entrusted (to foreign sub-custodians or prime brokers), and the depositary must then make sure that its correspondent is sound and that assets are separated.

Bookkeeping

The depositary enters into its books assets

that, as a result of their nature, cannot be held in custody, a task that is not defined in EU regulations (UCITS III and UCITS IV) but is in some country regulations. Bookkeeping includes receiving all payments from the securities, booking the securities in a separate account, and confirming that these securities belong to the fund. The securities and funds involved are registered shares, investments in private equity, counterparties to derivatives, and registrars of hedge funds.

Bookkeeping prevents massive fraud by the investment manager. It does not prevent the disappearance of assets held by third parties.

Checks

Some checks (compliance checks, auditing checks) are defined fairly clearly in the UCITS directive, even if the ways they are meant to be done are unclear (or impossible). Other checks, such as those done by the board, are left undefined. As a result, the obligations of the board vary from one country to another.

Regulatory compliance monitoring by depositaries

The depositary is responsible for ensuring that the decisions made by the UCITS (or by the investment firm) comply with regulation. It must ensure that the UCITS complies with the investment rules laid out in the prospectus and regulatory ratios imposed on it. It must likewise ensure that the UCITS is correctly classified. The depositary checks compliance with rules on the minimum net asset value of the UCITS. The UCITS directives requires that depositaries of contractual funds ensure that rules for pricing the assets and establishing the net asset value are

⁴⁶ - UCITS III, article 7: "A trusts's assets must be entrusted to a depositary for safe-keeping". Article 14: "An investment company's assets must be entrusted to a depositary for safe-keeping" (EC 2008).

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applied (for corporate-form investment funds, the involvement of the depositary in oversight of the pricing of the fund varies from country to country).

Certification of accounts and of financial information:

UCITS (in either company or contractual form) must keep accounts. Entering transactions makes possible a balance sheet, an instantaneous snapshot of assets and liabilities, and a profit and loss statement.

Although producing this financial information is the responsibility of the firm managing the UCITS, the responsibility for certifying it lies with the auditors and, in the event of a UCITS formed as a company, with the board of directors, or, for a contractual fund, with the investment firm.

To certify the annual financial statements of the UCITS, the auditor should, by tradition, certify the procedures put in place to produce the statements. When the net asset value of the UCITS is checked, the auditor examines the number and nature of the assets held in the portfolio and ensures that the valuation methods, which should comply with those listed in the prospectus of the UCITS, are used consistently.

Service providers—outsourcing of administrative and accounting work

Administrative and accounting tasks are the other tasks for which fund management firms are responsible. In practice, as investment firms prefer to devote their resources to their primary specialty, these tasks are often outsourced. The so-called administrative

and accounting tasks of the company can, as in financial management, be delegated. The delegates are not always regulated for these tasks, and in this case their duty to the investment firm is contractual (the delegates can be seen as mere service providers). Tasks are generally distributed in the following fashion:

Figure 2: Summary of tasks performed by each party

Party	Tasks
Investment management firm	Financial management Regulatory Reporting Compliance checks/fighting money laundering (Tracfin)
Depositary	Custody + bookkeeping + bank Compliance checks Checks of rules for determining net asset value Checks of rules on minimum net asset value
Registry holder	Liability management
Valuator	Pricing of assets in the portfolio of the UCITS Keeping accounts
Transfer agent	Centralisation of purchase/redemption orders
Auditor	Certification of accounts and of financial information Periodic valuation of the assets of the UCITS Compliance checks (regulatory) Specific missions

The valuator:

To process purchase and redemption requests from new and old unit- or shareholders fairly, it is necessary to price the entirety of the assets of the UCITS and to take stock of revenue and expenses. Each investor must pay the expenses associated with his or her holding period and, conversely, benefit from the product associated with that period. So management fees and custody fees, as well as other possible transfers, are funded. The UCITS III directive (article 38) states: "rules for the valuation of assets and the rules for calculating the sale or issue price and the re-purchase or redemption

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price of the units of a UCITS must be laid down in the law, in the fund rules or in the investment company's instruments of incorporation" (EC 2008).

The valuation is usually done by an independent valuator. The valuator's role is delegated (as in France, where the activity is unregulated) or the valuator is a party independent of the investment firm and indispensable (as in Luxembourg, by law, and in Ireland, by custom). The depositary usually validates the valuation method.

The registrar (of registered funds):

The registry makes it possible to know the unit-holders and their rights. The registrar tracks and executes all transactions involving units of or shares in the UCITS. He or she enters in his or her books transactions in the unit-holders' accounts if the UCITS has opted for a nominal registry: new unit- or shareholders are registered and outgoing ones are removed; securities transactions on the liabilities side and the payment of distributions are centralised.

The transfer agent/centralisateur:

UCITS-compliant funds are open-ended; any investor may purchase or redeem units or shares at each date on which net asset value is established. The fragmentation of the distribution network for pooled funds means that purchase and redemption orders will have to be centralised. The transfer agent or *centralisateur* collects all such orders, timestamps them (all orders must be recorded before a cut-off time and date defined in the prospectus). As soon as the transfer agent or *centralisateur* is informed of the final net asset value, he or she converts the number of units into monetary amounts or the amounts into a

number of units. The *centralisateur's* role is especially important when transactions involving pooled funds are settled by such central depositories as Euroclear.

Distributors

In EU regulations, distributors are bound mainly by the market in financial instruments directive (MiFID).⁴⁷ Distributors and financial advisors are responsible for marketing and distributing products that conform to the investor's profile, above all when the investor is a retail investor who is assumed to have limited knowledge of the financial markets. For retail investors, financial services providers (here, distributors) subject to MiFID must evaluate the client's expertise in the relevant investment field, assess the client's needs, and establish whether the product or investment service provided is appropriate for the client. To a certain extent, the distributor may also be required to make the assumption that corporate treasurers may not have full knowledge of certain strategies, but banks generally believe their responsibilities to corporate treasurers are not quite as great.

In all cases, the distributor must provide all relevant information about the products being sold. Because no information on non-financial risks is explicitly required in the KID of UCITS funds, and because MiFID has not defined a format for communicating on non-financial risks, distributors are largely uninformed of non-financial risks. Distributors may find it very difficult to be transparent on non-financial risks, but the failure to require this transparency makes it easy for them to avoid blame for not providing it. End-investors, however, may complain about inappropriate risks in their funds. It may be in part for this

47 - In countries such as France, distributors must be licensed not only for the investment services they provide but also for the reception and transmission of orders.

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reason that distributors have indemnified investors who had invested in funds that had, in turn, invested in Luxalpha. Last, if in continental Europe the distributor is often a bank and thus has large capital reserves there are more and more independent distributors that are not subject to capital requirements and cannot always take direct responsibility for the adequacy of the information they provide.

References



References

- Aboulian, B. 2010. Brussels rejects risk indicator for Ucits. *Financial Times*. 13 June.
- ALFI (Association of the Luxembourg Fund Industry). 2010. Annual report 2009-2010.
- Amenc, N. 2009. Quelques réflexions sur la régulation de la gestion d'actifs pour vraiment tenir compte de la crise financière. EDHEC position paper.
- Amenc, N., P. Schoeffler, and P. Lasserre. 2010. Organisation optimale de la liquidité des fonds d'investissement. EDHEC position paper.
- Autret, F. 2009. Les gestionnaires d'actifs épinglés pour leur piètre gouvernance. *L'Agefi*, 2 October.
- Bank of International Settlements. 2001. Recommendations for securities settlement systems. Committee on Payment and Settlement Systems (CPSS); Technical Committee of the International Organization of Securities Commissions (known as IOSCO).
- Bank of International Settlements. 2010. Considerations for trade repositories in OTC derivatives markets - consultative report. CPSS, IOSCO.
- Berthat, F. 2009. Le Luxembourg confirme l'obligation de restitution des actifs aux dépositaires. *L'Agefi*. 21 January.
- CESR. 2007. CESR's guidelines concerning eligible assets for investment by UCITS. Ref: 07-044. March.
- —. 2009a. CESR's technical advice to the European Commission on the level 2 measures related to the format and content of key information document disclosures for UCITS. October.
- —. 2009b. CESR's technical advice at level 2 on risk measurement for the purposes of the calculation of UCITS' global exposure. June.
- —. 2010. Mapping of duties and liabilities of UCITS depositaries. CESR/09-175, January.
- De Souza, C., and M. Smirnov. 2004. Dynamic leverage. *Journal of Portfolio Management* 31 (1): 25-39.
- Delmas-Marsalet, J. 2005. Rapport relatif à la commercialisation des produits financiers. AMF. November.
- —. 2010. Proposal (...) amending Directive 97/9/EC of the European Parliament and of the Council on investor compensation schemes. 12 July.
- European Council. 2008. Consolidated UCITS directive ref 1985L0611—EN—20.03.2008—007.001 (UCITS III). March.
- European Parliament. 2010. (...) Alternative Investment Fund Managers and amending Directives AIFMD 2003/41/EC and 2009/65/EC and Regulation (EU) No .../2010 [ESMA].
- European Union. 2004. Corrigendum to Commission recommendation 2004/383/EC of 27 April 2004 on the use of financial derivative instruments for undertakings for collective investment in transferable securities (UCITS). April.

References

- —. 2005. Green paper on the enhancement of the EU framework for investment funds. July.
- —. 2006. White paper on enhancing the single market framework for investment funds. November.
- —. 2007. Commission directive 2007/16/EC [eligible assets directive, EAD]. March.
- —. 2009a. 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 IV, recast). November.
- —. 2009b. News from the Communication Directorate General's midday briefing. 28 May.
- —. 2009c. Commission adopts legislative proposals to strengthen financial supervision in Europe. 23 September.
- Fitch. 2010. Fund & asset manager ratings.
- Fortado, L. 2010. Lehman segregated accounts appeal may delay hedge fund payouts. 26 January. Bloomberg.
- France. 2008. Order n°2008-1081 of 23 October.
- —. Monetary and financial code.
- France. AMF General Regulation.
- —. AMF. 2010. Rapport final du comité de place.
- Gregoriou, G., and F. Lhabitant. 2009. Madoff: A riot of red flags. EDHEC Publication.
- Ireland Financial Regulator. 2010a. Regulatory requirements & guidance for UCITS management companies.
- —. 2010b. Regulatory requirements & guidance for non-UCITS management companies.
- Irish Funds Industry Association. 2010. Industry statistics.
- Khorana, A., P. Tufano and L. Wedge. 2007. Board structure, mergers, and shareholder wealth: A study of the mutual fund industry. *Journal of Financial Economics* 85 (2): 571-98.
- La Porta, R., F. Lopez de Silanes, A. Shleifer, and R. Vishny. 1998. Law and finance. *Journal of Political Economy* 106 (6): 1113-55.
- LePage. 2009. Les liquidateurs de Luxalpha assignent UBS et la CSSF. *Les Echos*. December.
- Luxalpha. 2008. Prospectus.
- Luxembourg CSSF. 2002a. Law relating to undertakings for collective investments. November. 20 December.

References

- —. 2002b. Circular 02-77. November.
- —. 2007. Annual report.
- Morley, J., Q. Curtis, and L. Olin. 2010. Exit, voice and fee liability in mutual funds. Yale Law School, Yale law & economics research paper no. 403.
- Oxera, 2002. The role of custody in European asset management. November.
- Rounds, J., and A. Dehio. 2007. Publicly-traded open end mutual funds in common law and civil law jurisdictions: A comparison of legal structures. *NYU Journal and Law and Business* (3): 473-518.
- Spalek, B. 2007. Knowledgeable consumers? Corporate fraud and its devastating impacts. Center for Crime and Justice Studies. Briefing paper 4:1-8.
- UK. 2000. Financial services and market act 2000.
- UK FSA. Collective investment schemes Sourcebook (within the UK FSA handbook).
- —. Full handbook glossary.
- US Securities and Exchange Commission. 1940. Investment company act.
- —. 2003. Part 270 of the rules and regulations of the investment company act of 1940.
- —. 2009. Investment company registration and regulation package.
- Waters, D. 2009. Regulatory challenges for fund managers. UK FSA. 7 April.

About EDHEC-Risk Institute



About EDHEC-Risk Institute

Founded in 1906, EDHEC is one of the foremost French business schools. Accredited by the three main international academic organisations, EQUIS, AACSB, and Association of MBAs, EDHEC has for a number of years been pursuing a strategy for international excellence that led it to set up EDHEC-Risk in 2001. With 66 professors, research engineers, and research associates, this centre has the largest asset management research team in Europe.

The Choice of Asset Allocation and Risk Management

EDHEC-Risk structures all of its research work around asset allocation and risk management. This issue corresponds to a genuine expectation from the market.

On the one hand, the prevailing stock market situation in recent years has shown the limitations of diversification alone as a risk management technique and the usefulness of approaches based on dynamic portfolio allocation.

On the other, the appearance of new asset classes (hedge funds, private equity, real assets), with risk profiles that are very different from those of the traditional investment universe, constitutes a new opportunity and challenge for the implementation of allocation in an asset management or asset-liability management context.

This strategic choice is applied to all of the Institute's research programmes, whether they involve proposing new methods of strategic allocation, which integrate the alternative class; taking extreme risks into account in portfolio construction; studying the usefulness of derivatives in implementing asset-liability management approaches; or orienting the concept of dynamic "core-satellite" investment management in the framework of absolute return or target-date funds.

An Applied Research Approach

In an attempt to ensure that the research it carries out is truly applicable, EDHEC has implemented a dual validation system for the work of EDHEC-Risk. All research work must be part of a research programme, the relevance and goals of which have been validated from both an academic and a business viewpoint by the centre's advisory board. This board is made up of internationally recognised researchers, the centre's business partners, and representatives of major international institutional investors. The management of the research programmes respects a rigorous validation process, which guarantees the scientific quality and the operational usefulness of the programmes.

Six research programmes have been conducted by the centre to date:

- Asset allocation and alternative diversification
- Style and performance analysis
- Indices and benchmarking
- Operational risks and performance
- Asset allocation and derivative instruments
- ALM and asset management

These programmes receive the support of a large number of financial companies. The results of the research programmes are disseminated through the three EDHEC-Risk locations in London, Nice, and Singapore.

About EDHEC-Risk Institute

In addition, EDHEC-Risk has developed a close partnership with a small number of sponsors within the framework of research chairs or major research projects:

- **Regulation and Institutional Investment**, *in partnership with AXA Investment Managers*
- **Asset-Liability Management and Institutional Investment Management**, *in partnership with BNP Paribas Investment Partners*
- **Risk and Regulation in the European Fund Management Industry**, *in partnership with CACEIS*
- **Structured Products and Derivative Instruments**, *sponsored by the French Banking Federation (FBF)*
- **Dynamic Allocation Models and New Forms of Target-Date Funds**, *in partnership with UFG-LFP*
- **Advanced Modelling for Alternative Investments**, *in partnership with Newedge Prime Brokerage*
- **Asset-Liability Management Techniques for Sovereign Wealth Fund Management**, *in partnership with Deutsche Bank*
- **Core-Satellite and ETF Investment**, *in partnership with Amundi ETF*
- **The Case for Inflation-Linked Corporate Bonds: Issuers' and Investors' Perspectives**, *in partnership with Rothschild & Cie*
- **Advanced Investment Solutions for Liability Hedging for Inflation Risk**, *in partnership with Ontario Teachers' Pension Plan*
- **Exploring the Commodity Futures Risk Premium: Implications for Asset Allocation and Regulation**, *in partnership with CME Group*
- **Structured Equity Investment Strategies for Long-Term Asian Investors**, *in partnership with Societe Generale Corporate & Investment Banking*

- **The Benefits of Volatility Derivatives in Equity Portfolio Management**, *in partnership with Eurex*

The philosophy of the institute is to validate its work by publication in international journals, but also to make it available to the sector through its position papers, published studies and conferences.

Each year, EDHEC-Risk organises a major international conference for institutional investors and investment management professionals with a view to presenting the results of its research: EDHEC-Risk Institutional Days.

EDHEC also provides professionals with access to its website, www.edhec-risk.com, which is entirely devoted to international asset management research. The website, which has more than 42,000 regular visitors, is aimed at professionals who wish to benefit from EDHEC's analysis and expertise in the area of applied portfolio management research. Its monthly newsletter is distributed to more than 700,000 readers.

EDHEC-Risk Institute: Key Figures, 2009-2010

Nbr of permanent staff	66
Nbr of research associates	18
Nbr of affiliate professors	6
Overall budget	€9,600,000
External financing	€6,345,000
Nbr of conference delegates	2,300
Nbr of participants at EDHEC-Risk Indices & Benchmarks seminars	582
Nbr of participants at EDHEC-Risk Institute Risk Management seminars	512
Nbr of participants at EDHEC-Risk Institute Executive Education seminars	247

About EDHEC-Risk Institute

Research for Business

The Institute's activities have also given rise to executive education and research service offshoots. EDHEC-Risk's executive education programmes help investment professionals to upgrade their skills with advanced risk and asset management training across traditional and alternative classes.

The EDHEC-Risk Institute PhD in Finance

www.edhec-risk.com/Aeducation/PhD_Finance

The EDHEC-Risk Institute PhD in Finance is designed for professionals who aspire to higher intellectual levels and aim to redefine the investment banking and asset management industries. It is offered in two tracks: a residential track for high-potential graduate students, who hold part-time positions at EDHEC, and an executive track for practitioners who keep their full-time jobs. Drawing its faculty from the world's best universities and enjoying the support of the research centre with the greatest impact on the financial industry, the EDHEC-Risk Institute PhD in Finance creates an extraordinary platform for professional development and industry innovation.

FTSE EDHEC-Risk Efficient Indices

www.edhec-risk.com/indexes/efficient

FTSE Group, the award winning global index provider, and EDHEC-Risk Institute launched the first set of FTSE EDHEC-Risk Efficient Indices at the beginning of 2010. Offered for a full global range, including All World, All World ex US, All World ex UK, Developed, Emerging, USA, UK, Eurobloc, Developed Europe, Developed Europe ex UK, Japan, Developed Asia Pacific ex Japan, Asia Pacific, Asia Pacific ex Japan, and Japan, the index series aims

to capture equity market returns with an improved risk/reward efficiency compared to cap-weighted indices. The weighting of the portfolio of constituents achieves the highest possible return-to-risk efficiency by maximising the Sharpe ratio (the reward of an investment per unit of risk). These indices provide investors with an enhanced risk-adjusted strategy in comparison to cap-weighted indices, which have been the subject of numerous critiques, both theoretical and practical, over the last few years. The index series is based on all constituent securities in the FTSE All-World Index Series. Constituents are weighted in accordance with EDHEC-Risk's portfolio optimisation, reflecting their ability to maximise the reward-to-risk ratio for a broad market index. The index series is rebalanced quarterly at the same time as the review of the underlying FTSE All-World Index Series. The performances of the EDHEC-Risk Efficient Indices are published monthly on www.edhec-risk.com.

EDHEC-Risk Alternative Indexes

www.edhec-risk.com/indexes/pure_style

The different hedge fund indexes available on the market are computed from different data, according to diverse fund selection criteria and index construction methods; they unsurprisingly tell very different stories. Challenged by this heterogeneity, investors cannot rely on competing hedge fund indexes to obtain a "true and fair" view of performance and are at a loss when selecting benchmarks. To address this issue, EDHEC Risk was the first to launch composite hedge fund strategy indexes as early as 2003. The thirteen EDHEC-Risk Alternative Indexes are published monthly on www.edhec-risk.com and are freely available to managers and investors.

About CACEIS



About CACEIS

CACEIS is the asset servicing banking group of Crédit Agricole dedicated to institutional and corporate clients. Through offices across Europe, North America and Asia, CACEIS offers a comprehensive range of high quality activities covering depositary/custody, fund administration, cross-border distribution support, middle office solutions and issuer services. All these activities combine powerful IT systems, an innovative product range and dedicated reporting offer, and expert staff to assist our clients in achieving their international business development goals. With assets under custody of €2.4 trillion and assets under administration of €1.2 trillion, CACEIS is one of the world market leaders in asset servicing and the largest depositary bank and the premier fund administrator in Europe.

CACEIS benefits from a solid AA- financial strength rating from Standard & Poor's.

(Figures as of 31 December 2010).

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- Amenc, N., F. Goltz, and L. Tang. Adoption of green investing by institutional investors: A European survey (November).
- Martellini, L., and V. Milhau. An integrated approach to asset-liability management: Capital structure choices, pension fund allocation decisions and the rational pricing of liability streams (November).
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- Sender, S. EDHEC survey of the asset and liability management practices of European pension funds (June).
- Goltz, F., A. Grigoriu, and L. Tang. The EDHEC European ETF survey 2010 (May).
- Martellini, L., et V. Milhau. Asset-liability management decisions for sovereign wealth funds (May).
- Amenc, N., and S. Sender. Are hedge-fund UCITS the cure-all? (March).
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- Amenc, N., F. Goltz, and P. Retkowsky. Efficient indexation: An alternative to cap-weighted indices (January).
- Goltz, F., and V. Le Sourd. Does finance theory make the case for capitalisation-weighted indexing? (January).

2009

- Sender, S. Reactions to an EDHEC study on the impact of regulatory constraints on the ALM of pension funds (October).
- Amenc, N., L. Martellini, V. Milhau, and V. Ziemann. Asset-liability management in private wealth management (September).
- Amenc, N., F. Goltz, A. Grigoriu, and D. Schroeder. The EDHEC European ETF survey (May).
- Sender, S. The European pension fund industry again beset by deficits (May).
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EDHEC-Risk Institute Publications (2007-2010)

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2008

- Amenc, N., L. Martellini, and V. Ziemann. Alternative investments for institutional investors: Risk budgeting techniques in asset management and asset-liability management (December).
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2007

- Ducoulombier, F. Etude EDHEC sur l'investissement et la gestion du risque immobiliers en Europe (November/December).
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- Le Sourd, V. Hedge fund performance in 2006: A vintage year for hedge funds? (March).
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EDHEC-Risk Institute Position Papers (2007–2010)

2010

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2009

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2008

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2007

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