AIFMD depositary pricing and capital
Taking a risk intelligent approach

Contents

Introduction

The Alternative Investment Fund Managers Directive (AIFMD) has fundamentally changed the European regulatory environment. Depositaries are now subject to far more detailed and prescriptive rules, which are driving changes to operational risk assessment, pricing structures, capital requirements and the depositary's interaction with other industry participants. This White Paper sets out a risk intelligent approach to pricing and capital.

We seek to address these fundamental considerations by offering a risk-based methodology to evaluate depositary capital requirements and determine a pricing strategy that reflects 'new' potential operational loss events under AIFMD.

To benchmark our analysis against industry trends, we conducted a survey of 14 major European depositaries, representing 60% of European assets under custody.[1] The results are included in this White Paper and provide an interesting and current market take on depositary operations, pricing and capital.

This White Paper seeks to address these fundamental considerations by offering a methodology for evaluating depositary capital requirements and for determining a risk-based pricing strategy post AIFMD. In doing so, we consider how the various risk factors are likely to change post AIFMD and the various responses available to depositaries in order to develop a risk intelligent approach to pricing and capital.

We hope you find this White Paper a useful reference.

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1 Calculated based on data from Monterey Insight and the European Fund and Asset Management Association (EFAMA)

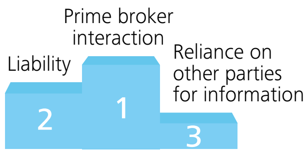
Executive summary

22 July

77% of depositaries are ready for the onboarding of their entire client base by 22 July 2014

85% of depositaries plan to increase headcount as a result of AIFMD

Top 3 concerns of depositaries:



100% of depositaries opted for contractual arrangements as their solution to address the issue of depositary liability with prime brokers

62% of depositaries have developed a pricing matrix to take account of the new standard of depositary liability

55% of depositaries cite a risk premium as the most impacting factor on depositary fees as a result of AIFMD

62% of depositaries consider that AIFMD will impact on their internal capital requirements

31% of depositaries plan to address the cash monitoring requirements by leveraging off a common utility with fund accounting

- Depositaries need to reassess their risk profile post-AIFMD and respond by either accepting, mitigating, transferring or avoiding these risks, dependent on the risk parameters set by senior management. A major part of the risk response will need to focus on the control environment, capital and pricing.
- Depositaries need to adopt risk-adjusted pricing, based on individualised scoring in relation to a range of pre-determined risk factors weighted in alignment with the organisation's risk appetite.
- Key risk pricing factors include contractual agreements, automated reporting, network overlap and number of prime brokers.
- Our analysis, based on an interpretation of the Basel framework and Deloitte Risk Intelligence™, indicates that the impact of capital on depositary pricing is expected to be limited in the vast majority of cases and this is borne out in the survey results.
- However, the impact of increased capital to the depositary's cost-base could be material for depositaries with weaker control frameworks or with limited integration of sub-custody networks.
- Depositaries have opted for 'business as usual' models with prime brokers combined with enhanced operational oversight to mitigate risk and contractual arrangements to transfer risk.
- While some depositaries are clearly concerned over the effectiveness of contractual arrangements and would like to see network integration with the prime brokers over the longer term, many are satisfied that the contractual arrangements will provide the long term solution.
- Ongoing operational costs will likely be reflected in the depositary pricing model to some extent, depending on the level of automation achieved and the increase in overheads, such as staffing costs.
- Depositaries will absorb one-off investment costs arising from AIFMD.
- Depositaries have taken different approaches to implementing the cash flow monitoring requirements. The extent to which the depositary can rely on information compiled by other parties and the definition of what constitutes an independent 'reconciliation' is one of the key matters of interpretation. A market standard may yet evolve but in the meantime depositaries may face challenges in addressing cash monitoring arrangements with non-affiliated administrators.
- Depositaries may only be willing to work with fund administrators within their group or may need to price more risk sensitively for conducting duties such as cash monitoring or 'depositary lite' with other non-affiliated entities.

Why is the risk and cost profile changing for depositaries?

Overview

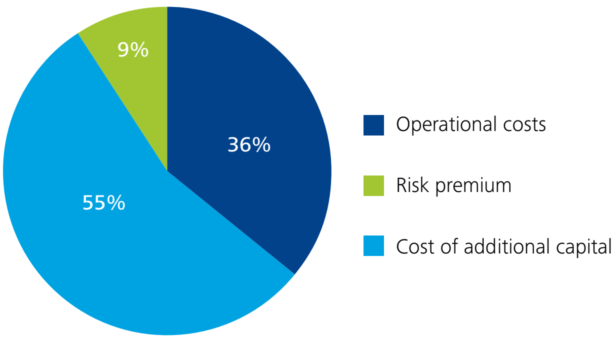
The AIFMD regime includes a range of new and more prescriptive requirements to harmonise depositary duties across the EU. These requirements include daily monitoring of all cash flows, more frequent reconciliations and verifications, more robust due diligence and risk assessments, stronger segregation requirements and more detailed sub-custody oversight. Underlying these requirements is a change in the standard of liability, which firmly places the burden of proof on the depositary and makes it liable for loss of assets in the first instance (see 'depositary liability' overleaf).

While depositaries have their own internal operational oversight and due diligence standards, the new regulatory framework has required all depositaries to invest in operational realignment to varying degrees. The vast majority of respondents (85%) plan to increase headcount to address new operational oversight requirements. Some depositaries plan only for marginal increases, several plan to hire in the region of 5%-10% of total headcount, whereas for those with extensive sub-custody networks, the figure may reach 20%. While initial operational alignment costs, such as IT development, may be absorbed by depositaries, at some stage increased ongoing operational costs can be expected to filter through to depositary pricing.

However, it is the changing risk profile associated with the new duties and new liabilities that is likely to impact the depositary cost base and pricing to the greatest extent. Depositaries have sought to negotiate new contractual arrangements with prime brokers to mitigate or transfer this risk but will still be reliant on other parties in order to fulfil key duties. Operational risks can be addressed through an enhanced control framework or increased automation. However, additional 'residual' risk will remain for depositaries under the new AIFMD regime, owing to the increased liability and the new depositary duties that have been defined. The key driver of cost and any increase in depositary pricing is therefore likely to be an individual risk premium based on a client's specific risk profile, as determined by the depositary.

While there is a diverse and evolving range of practices apparent in the market, we expect depositary pricing to focus increasingly on key risk factors such as contractual arrangements, automated reporting from other parties, network overlap with the prime broker, the location of the assets and the complexity of arrangements/number of parties involved, etc.

Most impactful factor on AIFMD depositary fees



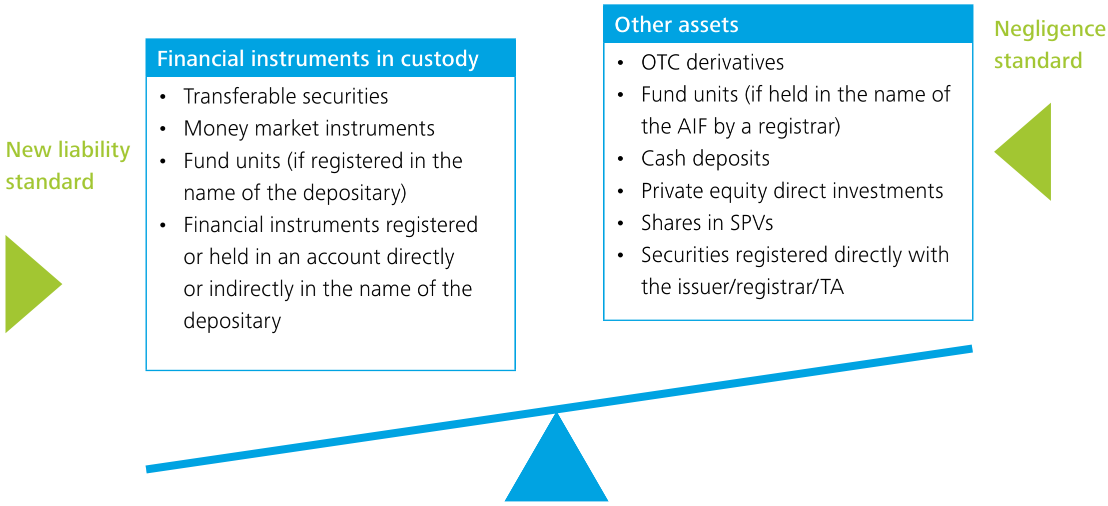
Depositary To Do List:

- ☐ Implement new cash flow monitoring requirements
- ☐ Implement new oversight controls on subs/reds accounts
- ☐ Implement new prime broker sub-custody reporting arrangements
- ☐ Ensure new asset segregation and reconciliation requirements are met at sub-custody level
- ☐ Implement new ownership verification and record keeping requirements and be able to produce a real-time inventory of OTC positions
- ☐ Increase due diligence and compliance monitoring of sub-custodians
- ☐ Increase monitoring of income distribution
- ☐ Monitor timeliness of settlements
- ☐ Increase frequency of valuation verifications
- ☐ Conduct a risk assessment of the AIF strategy and the AIFM organisation
- ☐ Implement look through on safe-keeping of financial instruments in custody
- ☐ Take action to mitigate liability risk

Depositary liability

Under AIFMD, the depositary acts like a quasi-insurer for financial instruments held in custody. If such an asset is lost, the depositary will need to make the fund whole without 'undue delay'. For 'other assets' that by their nature cannot be held in custody, the depositary is subject to a best efforts 'negligence' standard. Strict liability aside, depositaries face increased liability due to the risk of an error or breach in relation to the new range of more prescriptive duties they must fulfil. Also, even for these non-custody assets, the bar has been raised via the imposition of new duties related to record-keeping and ownership verification.

Financial instruments subject to the new liability standard



The depositary is liable for the loss of financial instruments held by both affiliated and unaffiliated sub-custodians and can only discharge its liability subject to strict conditions.[1] Fraud, accounting errors, operational failures and failure to apply asset segregation requirements all count as 'internal events' falling under strict liability. The depositary remains liable for financial instruments held in custody that are passed from the Alternative Investment Fund (AIF) to the prime broker, even though operationally it has no line of sight into the prime broker sub-custody network. All of these changes present significant operational oversight challenges and imply a change in the risk dynamic and consequently, the cost profile for depositaries.

All of these duties present significant operational oversight challenges and imply a change in the risk dynamic

1 See Appendix 1 for further details on discharging depositary liability.

Identifying risk factors and adopting the right response

The increase in depositary requirements under AIFMD calls for sound risk management approaches to properly identify, assess, manage, monitor and report the various types of risk faced by depositaries (operational, regulatory, financial, counterparty and reputational). The changes in risk profile can take various forms:

- **New risks** arising from new regulatory requirements and the consequential operational changes, e.g. new cash monitoring duties
- **Increased exposure** to pre-existing risks, e.g. increased liability for loss of financial instruments held in custody
- **Modification** of how existing risks can materialise, i.e. the event(s) leading to the occurrence of the risk differ due to revised operating models. For instance, depositaries might have to adapt monitoring processes with respect to cash movements for private equity or real estate funds.

Aligning risk responses with business strategy

Each depositary is expected to address the development of an AIFMD-compliant model differently. Responses can take various forms that can be categorised into four types, according to leading Enterprise Risk Management (ERM) frameworks such as ISO31000[1], COSO-ERM[2] and Deloitte's Risk Intelligence™[3]: accept, mitigate, transfer or avoid.

Risk responses

Response	Definition	Examples
Risk acceptance	Deciding not to change the current situation and accept the risk exposure as it is considered to fall within the company's risk tolerance. Acceptance entails no specific action, but also does not permit modification of the risk exposure.	• Business as usual
Risk mitigation	Reducing the probability of occurrence or impact of a risk (or both) below an acceptable threshold. This is typically achieved through the improvement of existing controls or the addition of new controls. Mitigation may also include contingency, in the event that the risk still arises (e.g. the business continuity plan).	• Enhanced control environment • Enhanced capital buffer • Increased use of internal depository network • Pricing strategy
Risk transfer	Shifting the threat of impact and ownership of response to a third party, by way of a contractual agreement between the two parties, typically through insurance policies or indemnification or risk transfer pricing.	• Contractual arrangements • Extension of insurance policies • Pricing strategy
Risk avoidance	Eliminating the risk, or protecting the business activities from its impact, e.g. via a restriction of products or activities.	• Complete market exit • Withdrawal from high risk sectors/markets • Avoid certain clients • Avoid dealing with certain third parties

1 http://www.iso.org/iso/home/standards/iso31000.htm
2 http://www.coso.org/-erm.htm
3 http://www2.deloitte.com/global/en/services/risk.html

There is no 'one-size-fits-all' solution. Responses are dependent on depositary-specific circumstances (e.g. the selected operating model) and strategic implications (e.g. the desired market positioning in the alternative investment industry). Key questions need to be addressed at board level so that the resulting risk profile remains within an acceptable risk tolerance for the organisation. In practice it is possible that certain depositaries will be willing to work outside of these target parameters if the commercial considerations on a client specific circumstance require it.

The board will need to consider the wide range of factors arising from changes under AIFMD when determining risk response strategies.

Depositaries with limited exposure to AIFs or with a book of relatively low risk securities could accept the risks as not material. Acceptance of risks may also be particularly desirable for organisations with greater risk-taking capacities or a higher level of risk tolerance.

Depositaries that intend to maintain or build a significant presence in the AIF market (and the UCITS market post UCITS V) need to consider risk mitigation and risk transfer responses. These measures may include enhancing the control environment and/or adding further capital buffer (mitigate) as well as enhancing insurance cover, contractual structuring and/or adjusting the pricing strategy (transfer).

Responses will require an operational realignment in a way that maximises efficiencies and effectively manages risk such that the business can maintain the optimum level of capital and competitive pricing. Developing the optimum target operating model is challenging and is typically achieved through a number of stages involving first stabilising, then optimising and finally transforming the business structure.

The exact risk measures applied will be specific to each organisation and even business segments within each organisation but can include a combination of all four risk responses

Key AIFMD risk factors for depositaries

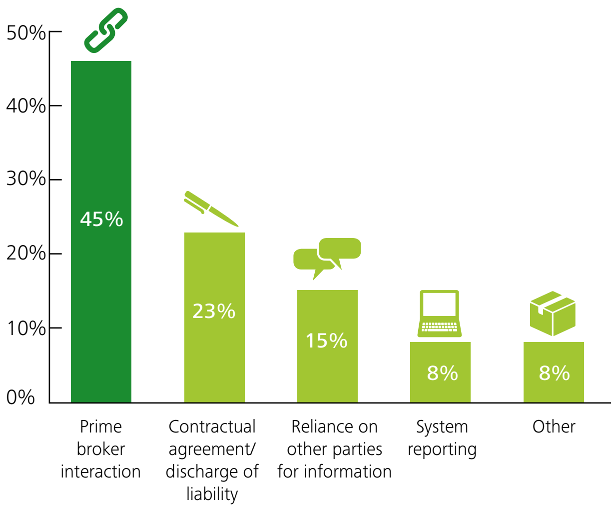
Depositaries need to map out all of the risk factors relevant to their business that arise from changes occurring under AIFMD (and UCITS V). Our survey found that almost half of depositaries rank interaction with their prime broker as their main concern, followed by contractual arrangements, reliance on other parties and system reporting.

Prime broker interaction

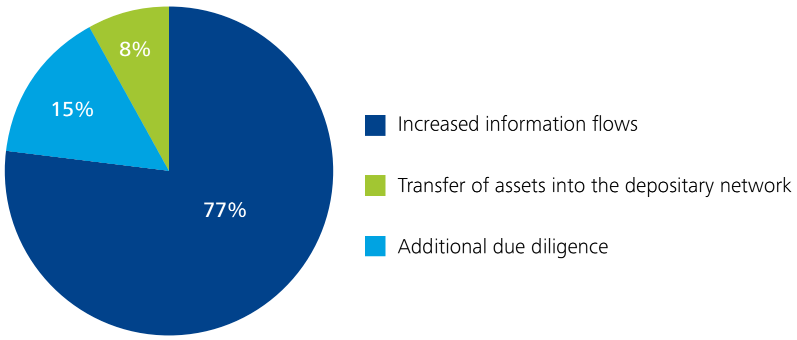
Depositaries have been required to significantly enhance oversight of prime brokers, not least due to the potential liability for assets which cannot be identified within the prime broker's network and which may not meet segregation requirements. To tackle this dilemma many depositaries have sought to transfer depositary liability to the prime broker either through indemnification (often with parental guarantee) or by contracting a discharge of liability. In fact, all of the respondents opted for either or both of these contractual arrangements in the absence of prime broker operational change. Contracting a discharge must meet strict conditions based on an objective reason that would make it operationally impossible for the depositary to fulfil its duties under the arrangements. Since indemnities become worthless in the event of insolvency and since the application of a contractual discharge may be open to a legal challenge, depositaries' second major concern is the effectiveness of these contractual arrangements.

In light of the need for greater oversight and enhanced prime broker reporting in respect of cash flows, positions and rehypothecation, 77% of depositaries are requesting increased information flows from prime brokers. A further 15% are conducting additional due diligence on prime brokers, which in a worst case scenario could result in a refusal to onboard a prime broker. Lastly, 8% are seeking the transfer of assets into their depositary network, which may particularly be the case if the depositary has not secured the contractual arrangements it was hoping for. From an operational standpoint, it would be difficult for depositaries to implement risk mitigation measures involving sweeping back assets from the prime broker at close of business. It is therefore unsurprising that there are relatively few requests to transfer assets held at the prime broker to the depositary.

Main AIFMD depositary concerns



What changes have you, or are you planning to make in relation to prime broker interaction?



Contractual arrangements

Depositaries have clearly opted for 'business as usual' models with prime brokers combined with enhanced operational oversight to mitigate risk and contractual arrangements to transfer risk. However, some depositaries are concerned about the effectiveness of contractual arrangements and close to a third would like to see network integration with prime brokers over the longer term. However, almost half of respondents are satisfied that contractual arrangements will provide the long term solution. The direction the market will take is still uncertain, but clearly greater network overlap will be in the interest of depositaries and universal solutions involving common facilities may emerge over the longer term.

Reliance on other parties

The next most pressing concern is reliance on other parties for information, which would present a major oversight challenge for depositaries if other entities failed to supply key data. Prime brokers, administrators and counterparties may be included in this category. These challenges may be particularly acute for depositaries seeking to implement the 'depositary lite' model applicable to non-EU AIFs marketed into the EU by an EU AIFM. Depositary lite permits separate entities to carry out the functions of safekeeping (prime broker), cash monitoring (administrator) and oversight (depositary). While depositaries will be able to rely on administrators within their group to provide cash flow information in a certain format, at a certain frequency and by a certain deadline, the operational risk and challenges in receiving this information from a non-affiliated administrator may be greater. The situation may evolve as a market practice in relation to how cash flow monitoring develops. However, some depositaries may refuse to take on business involving a non-affiliated administrator due to the associated risks or may seek to charge a premium for dealing with an external administrator.

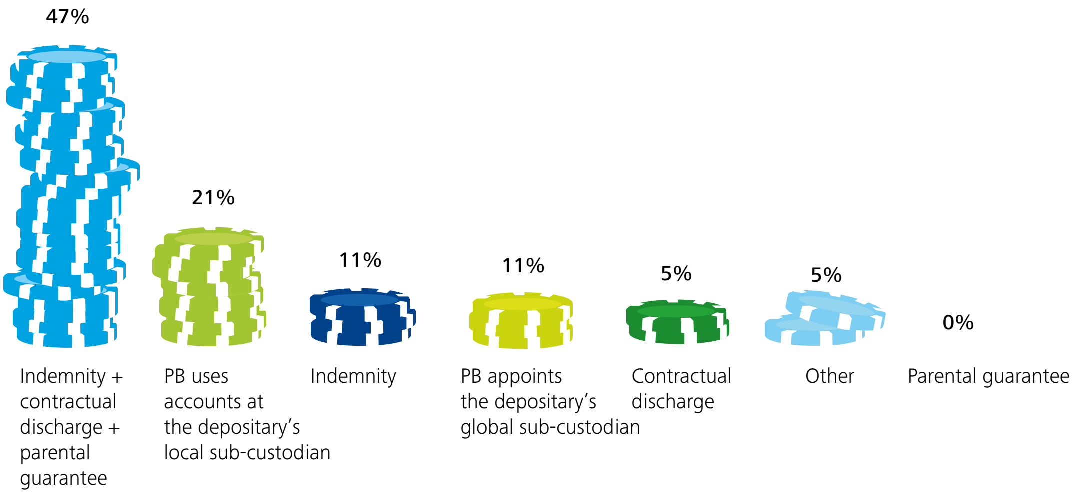
Cash flow monitoring

When it comes to implementing cash flow monitoring requirements, our survey indicates that there are various approaches in place. The extent to which the depositary can rely on information compiled by other parties and the definition of what constitutes an independent depositary "reconciliation" is one of the key matters of interpretation. Just over 30% of respondents rely on the administrator's fund accounting tool while the same proportion conducts a completely standalone depositary reconciliation. The largest share (38%) uses another methodology. Some of these methodologies may also rely on inputs from service providers, e.g. by way of an independent check on the cash balance by reconciling items from the administrator and comparing this line by line to the prime broker cash flows.

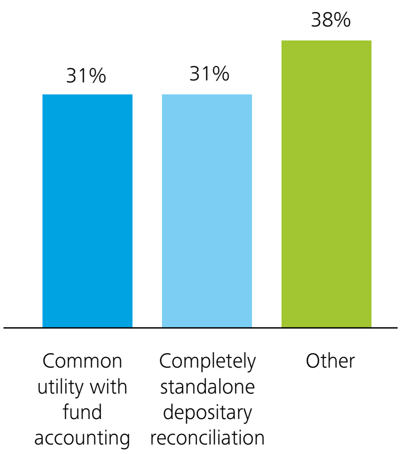
System reporting is also of concern to 8% of respondents, due to the operational realignment involved and risks presented by a lack of automated reporting, including the proliferation of manual processes subject to more frequent errors. Other issues causing concern for depositaries include the application of segregation arrangements, operating in frontier markets (where segregation may be less developed), the number of prime brokers involved (risk multiplication factor and cost/benefit ratio of on-boarding certain prime brokers), as well as the extent to which there is no network overlap. For the latter reason, depositaries prefer to deal with familiar parties or entities within their group. Depositaries will need to build such concerns into their risk profile, pricing and capital models in order to effectively manage risk.

Almost half of respondents are satisfied that contractual arrangements will provide the long term solution to the prime broker model

Which of these models is acceptable to you over the longer term?



How do you plan to address the cash monitoring requirements?



The direction the market will take is still uncertain, but clearly greater network overlap will be in the interest of depositaries and universal solutions involving common facilities may emerge over the longer term

Pricing strategy

Price factors

Setting depositary fees to date have been dependent on:

- **Local market** characteristics are the key driver of depositary fees. Factors such as relative asset safety, local segregation arrangements, the efficiency and cost of using settlement systems have a large bearing on depositary pricing.
- **Volume** will also significantly impact depositary pricing. The larger the amount of assets under custody, the more cost effective the operational oversight will become.
- **Transaction fees** relate to local transaction costs and also the nature of the investment strategy and how many transactions are effected on a regular basis.

Consequently, depositaries need to focus more on risk adjusted pricing, based on individualised scoring in relation to a range of pre-determined risk factors.

While risk-based pricing is widespread in the credit activities of banks and in insurance policies, this kind of approach is less common in fee-driven businesses such as depositary services. However, regulators increasingly expect institutions to adopt a risk-sensitive pricing mechanism that serves as an incentive to effectively allocate their financial resources in accordance with their risk tolerance and the principles of sound and prudent business management.

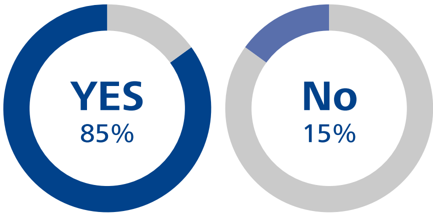
The implementation of AIFMD is indicative of a trend towards risk-based pricing, as depositaries have sought to alert stakeholders to the cost impacts of the changing requirements. However these assertions have rarely included quantifiable evidence. AIFMD pricing could be influenced by three different drivers:

1. **Operational costs:** almost all depositaries needed to upgrade their existing capabilities to respond to AIFMD requirements, albeit to varying degrees. A certain amount of the operational and control realignment will include one-off investment costs which will not be recoverable from clients. These might include IT systems development or process re-engineering. Other recurring costs related to AIFMD, such as increased headcount or new activities will likely need to be considered in future pricing, given that business costs have increased. Our survey indicates that 85% of depositaries have increased (or plan to increase) headcount as a result of AIFMD.

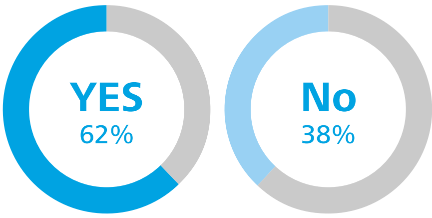
2. **Risk premium:** Depositaries should expect additional return where this involves taking on higher risks, whatever their nature. In classical risk models (such as those applied for credit risk), this additional risk is captured by the “expected loss” methodology (see box overleaf for details). Depositaries may need to build a range of factors into their pricing to adequately capture the risk premium. Our survey suggests further work may need to be done in this area, with 62% of depositaries developing a new pricing matrix to address liability and risk post AIFMD.

3. **Cost of capital:** The additional capital allocated to cover risks borne via the increased liabilities of the depositaries (equivalent to the notion of unexpected loss in the box overleaf) implies a target rate of return that should be equivalent to what could have been earned if the depositary had chosen another investment with equivalent risk (i.e. the opportunity cost). In some cases depositaries may need to bolster their capital reserves to cover the additional level of risk. Our survey suggests that over 60% of depositaries consider that AIFMD requirements impact on their internal capital requirements.

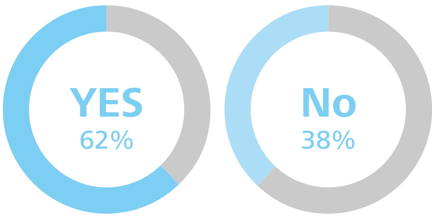
Do you plan to increase headcount as a result of AIFMD?



Have you developed a pricing matrix to take account of the new standard of depositary liability?



Do you consider that AIFMD depositary requirements impact your internal capital requirements to cover risks?



Expected vs. unexpected losses
Ordinarily when financial institutions develop risk models, they seek to predict potential losses. Average (or expected) losses representing the amount that institutions can reasonably expect to experience should be included in the pricing strategy; this is the risk premium. Expected losses are viewed as a cost component of doing business and are managed by a number of means, including through the pricing of products and through provisioning.

Capital serves as a loss absorbency buffer for larger than anticipated (or unexpected) losses, as well as to fund the institution's ongoing activities.

In banking regulations such as Basel/CRD, supervisors require the bank to calculate its regulatory capital requirement as the sum of expected loss (EL) and unexpected loss (UL), unless the bank can demonstrate that it adequately captures EL in its internal business practices (i.e. pricing).

Depositaries need to focus more on risk adjusted pricing, based on individualised scoring in relation to a range of pre-determined risk factors

Commercial reality

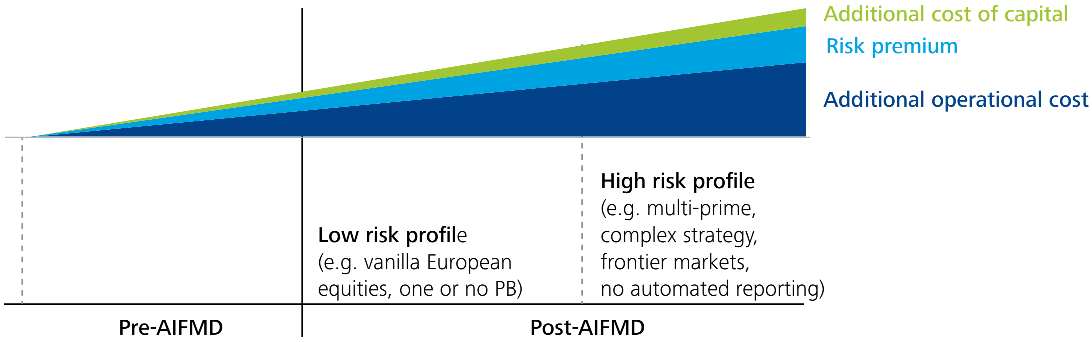
Fully embedding all three elements (operational, risk and capital) into depositary pricing might not be entirely feasible for commercial reasons, combined with the complicated and difficult job of actually measuring risk premium and the level of capital to put aside for covering additional risk.

The volume element to depositary services means that profitability can rely on attracting large mandates, with a minimal increase in overhead and expense. While the depositary industry might shift to a more risk-based model over the longer term, our research indicates that depositaries (and their clients) may not yet be ready to fully embark on this journey, notably because of difficulties in assessing the magnitude of associated risks.

Indeed, the lack of historical experience and market quantification standards makes the calculation and pricing of this risk a challenging exercise. Currently, modelling the increased risk profile, capital needs and impact on price remains highly subjective and is still at experimental stage.

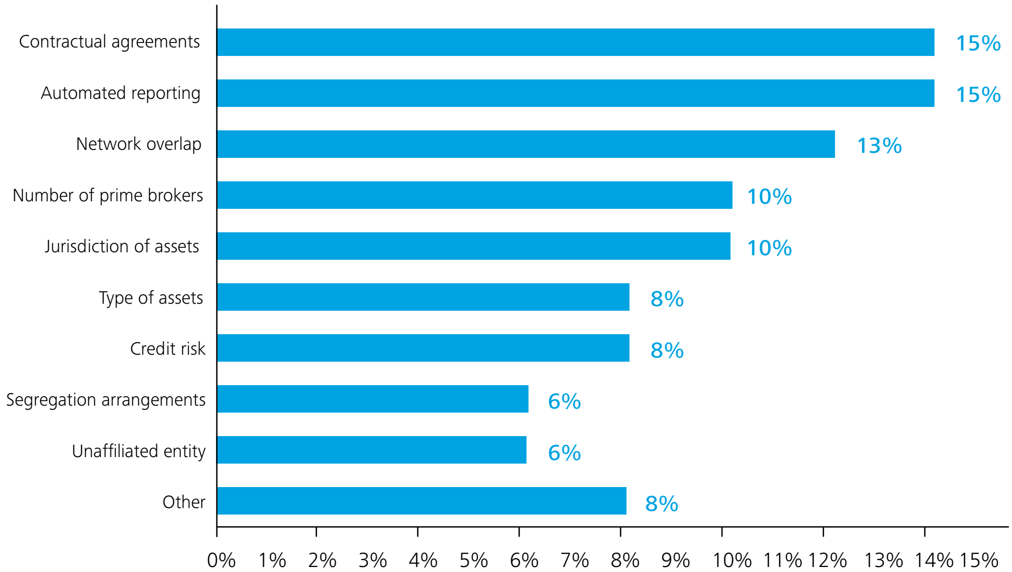
A diverse range of pricing practices and methodologies is apparent across the depositary industry. Survey respondents most frequently indicated contractual agreements, automated reporting, network overlap and number of prime brokers as factors they take into account in pricing, if they have developed risk adjusted pricing model in the first place. Other pricing factors cited include jurisdiction of the assets, type of assets, credit risk and whether the entity is affiliated.

Risk-adjusted pricing (illustrative)



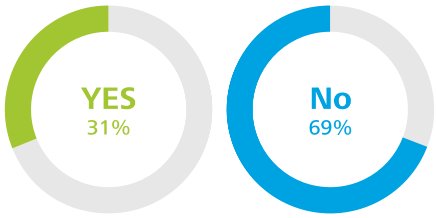
Many of the factors clearly indicate a need to price risk sensitively when it comes to prime broker interaction. However depositaries are mindful of the operational challenges AIFMD creates for prime broker models. Thus, from a commercial perspective, depositaries are not generally seeking to drive operational change through pricing but rather through ongoing dialogue.

Key depositary risk pricing factors

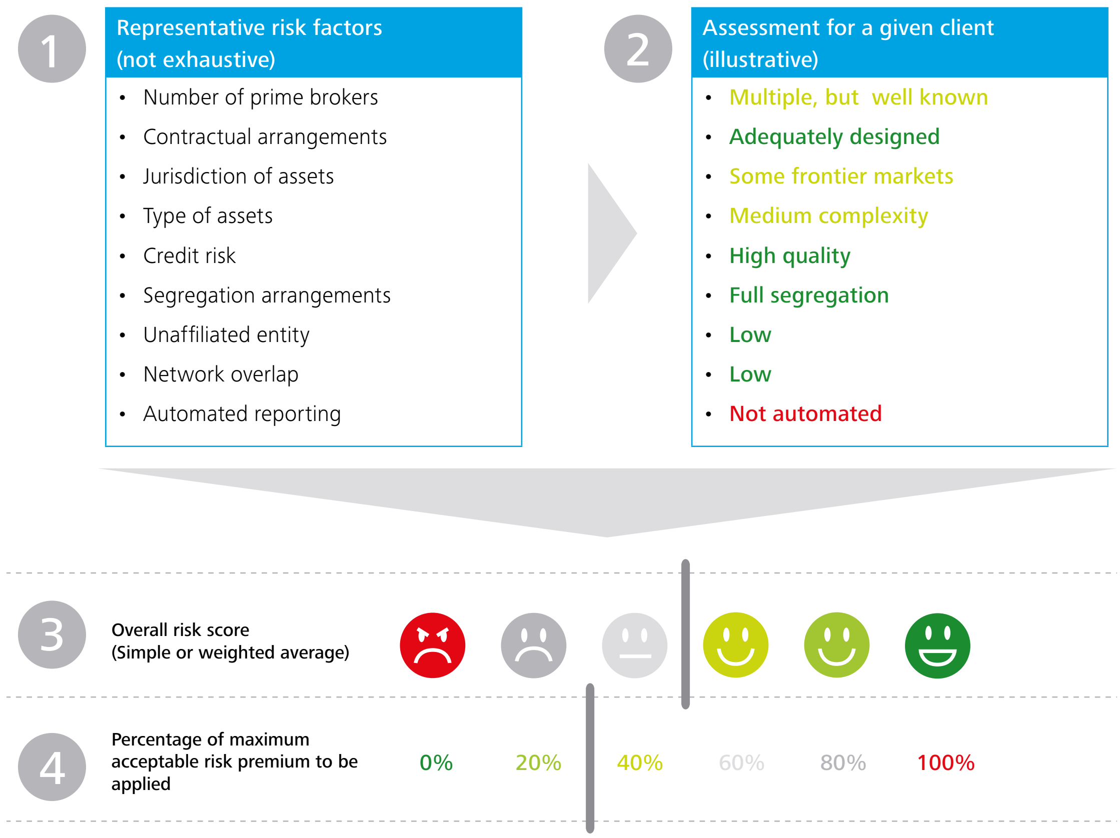


Source: Deloitte AIFMD depositary survey, based on percentage of respondents

Will you use depositary pricing as a means to drive change in prime broker models and incentivise greater operational integration?



Calculating risk premiums: Deloitte’s view



Risk intelligent pricing

While a great range of different practices and methods are observed in the industry, we advocate adopting a risk-intelligent approach to deriving the risk premium, based on a set of key risk factors to differentiate the price applied to different funds.

The approach is illustrated in the diagram ‘calculating risk premium’: once relevant factors have been identified (step 1), risk factors are given a particular risk weighting (such as low, medium, high) to reflect the extent to which the client set-up exposes the depositary to errors or losses and the resultant financial exposure (step 2). Assessments of the risk factors are then aggregated to obtain an individual ‘risk score’ for each client (step 3). Finally this risk score is mapped against the level of maximum acceptable risk premium, so as to apply a price that will reflect the particular risk exposure implied by the operational set-up (step 4).

In the illustrative case presented in the diagram, the lack of automated reporting could be seen as a clear threat to a depositary, as it increases the likelihood of errors on a daily or weekly basis. The absence of automated reporting would therefore trigger a ‘high risk’ assessment for that particular risk factor.

Aside from sound risk management, this approach to depositary pricing will assist in raising awareness among sales functions of the critical risk factors that the depositary needs to address and will provide supporting evidence for justifying higher prices, where warranted by operational arrangements.

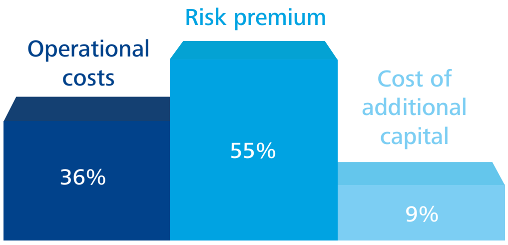
The methodology presented intentionally uses the notion of ‘maximum acceptable risk premium’, as it is evident that competition and market pressure play a central role in setting depositary fees.

Operational synergies

Large multinational institutions offering integrated solutions encompassing sub-custody and depositary services, affiliated prime brokers, fund administration, transfer agency services, cash management and corporate administration are best placed to offer lower risk pricing due to operational synergies across the group. At the other end of the spectrum, niche players in sectors such as real estate and private equity, might also gain market share through aggressive pricing due to lower capital and operational costs from servicing non-custody assets only. Depositaries planning to increase price to reflect the impact of the modified risk profile on operating expenses and their capital base need also to reflect commercial realities and benchmark this decision against the competition and observed market practices.

While the majority of depositaries surveyed have developed a pricing matrix to take the new standard of depositary liability into account, only a few consider encompassing all three price drivers (operational costs, risk premium and cost of capital) in their fees. This is especially true since many AIFMs consider that the so-called AIFMD risks are actually existing risks that, while increasing with greater liability, should nonetheless already be compensated for by the existing control environment. By far the most impacting factor on the depositary fee adjustment was cited as the additional risk premium (55%), followed by operational costs (36%), while only 9% plan to include increased capital costs in their AIFMD pricing.

Factor with the greatest impact on the depositary fees adjustment implied by AIFMD



Source: Deloitte AIFMD depositary survey, based on percentage of respondents

Large multinational institutions offering integrated solutions encompassing a range of services are best placed to offer lower risk pricing due to operational synergies across the group

Capturing AIFMD within internal capital requirements

Overview

Capital serves as a loss absorbency buffer for larger than anticipated (or unexpected) losses, as well as to fund the ongoing activities of the institution. The level of capital is a crucial market indicator for potential investors as well as rating agencies and other interested parties (including the general public). As a consequence, most financial institutions are required by their regulators to hold minimum amounts of capital.

Banks and investment firms in particular are subject to the Basel framework, named after the Basel Committee on Banking Supervision, the body that acts as the primary global standard-setter for the prudential regulation of banks. This Basel framework is transposed into the EU legislative framework through the Capital Requirements Directive (or CRD).

The Basel/CRD framework requires institutions to hold a statutory minimum amount of capital to cover three types of risks:

- **Credit risk**
- **Market risk**
- **Operational risk**

Aside from the minimum capital requirements imposed by regulators (also called 'Pillar I measures'), institutions are also requested to perform a regular internal assessment of the amount of capital they need to hold to cover all the risks they face (or could face). The assessment therefore extends beyond the three types of risks listed above. This process, called the Internal Capital Adequacy Assessment Process (or ICAAP), is forward-looking and should encompass the expected evolution of activities (and associated risks) over the business plan cycle. The ICAAP is expected to paint a complete picture of the financial institution's risk profile. It is reviewed at least once a year by the senior management, approved by the board of directors and submitted to the national regulator for review.

AIFMD risks and the Basel/CRD framework

There is a market consensus that depositary liability under AIFMD is best viewed in the context of operational risk, given the broad oversight responsibilities inherent in the new framework. A failure concerning one of the key new requirements relating to either safekeeping, oversight or cash monitoring, would be of an operational nature, i.e. lack of adequate processes to ensure these obligations are met.

Depositary liability would therefore be covered by an operational risk capital charge under the CRD regime and subject to Pillar I minimum requirements. Among the three approaches available to calculate these regulatory minimum requirements, the two simpler methods (the 'Basic Indicator Approach' and the 'Standardised Approach') are solely driven by the institution's gross income and as a result do not reflect the specific operational risk profile of the institution. Only the Advanced Measurement Approach (or AMA), based on internally developed models, is expected to offer sufficient granularity to reflect the impact of AIFMD.

However, this does not mean that only AMA institutions should be concerned about the capital implications of AIFMD. As seen above, new risks arising from changing regulatory requirements should be reflected in the ICAAP calculation, thereby impacting all depositaries subject to CRD.

Assessing the internal capital needed to cover increased operational risk exposures borne by AIFMD calls for an update and review of current operational risk and control mapping as well as the stress test scenario analysis in place.

The delta method: pre- and post-AIFMD assessment

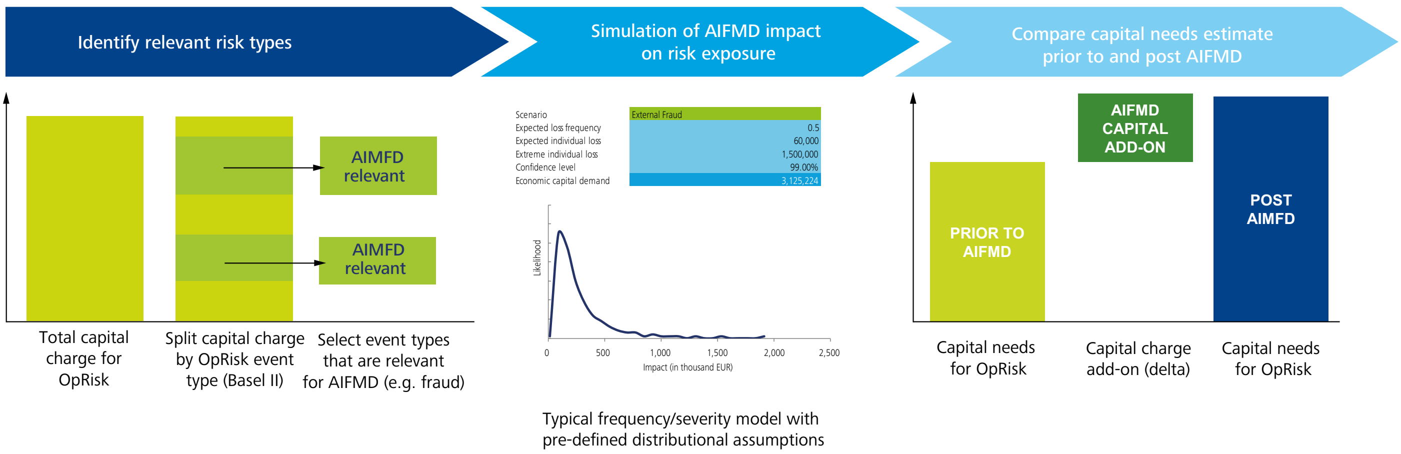
Operational risks related to the depositary function are clearly nothing new and an intuitive approach to assessing the impact of AIMFD could work as follows: the operational risk profile would be assessed before and after application of the new rules (taking into account additional mitigation techniques such as strengthened controls for instance). If significant, the difference could be translated into dedicated additional capital needs. This approach is referred to as the 'delta method' since it focuses on the variation (or 'delta') of the operational risk profile when considering increased responsibilities under AIFMD.

The 'delta method' is divided into three steps (also see the diagram below):

1. Identify operational risk event types that can be considered relevant from an AIFMD perspective
2. Assess the impact of AIFMD on both the likelihood of a given scenario occurring and the potential economic impact in case of such an occurrence
3. Aggregate results and compare internal capital requirements estimates pre- and post-AIFMD

This approach requires the depositary to have an existing set of identified (and, ideally, quantified) operational risk scenarios to act a starting point.

Overview of the 'delta method'



Step 1: Identification

The first step is to identify which of the seven operational risk event types defined by the Basel Committee may be impacted by the requirements of AIFMD (see table below). For instance, 'external fraud' is evidently a factor to be considered from a depositary liability perspective, while "employment practices and workplace safety" would not be impacted by new rules under AIFMD.

Most of these scenarios do not actually relate to 'new' risk exposures but rather to 'increased' risk exposures. For instance, failure of a sub-custodian is not a 'new' risk faced by depositaries, but the obligation to return assets 'without undue delay' to clients and the reversal of the burden of proof in the event of an issue lead to an overall increase in exposure to possible losses, penalties and charges. Consequently, there is an increased likelihood of an advance pay-out and the incident having greater economic impact resulting from dispute costs, inflation, market price fluctuations etc.

Relevant operational risk categories in an AIFMD context

Loss event types (Basel Level 1)	Relevant for AIFMD?	Examples of applicable operational risk categories (Basel Level 2)
Internal fraud	√	Transactions not reported (intentional)
External fraud	√	External theft and fraud
Employment practices and workplace safety	X	n/a
Clients, products and business practices	√	Suitability, disclosure and fiduciary Selection, sponsorship and exposure Improper business or market practices
Damage to physical assets	X	n/a
Business disruption and system failures	X	n/a
Execution, delivery and process management	√	Transaction capture, execution and maintenance Customer intake and documentation Customer or client account management

Step 2: Assessment

The second step involves undertaking an assessment of relevant risk scenarios and should account for management actions and new mitigation techniques (such as new or modified controls) implemented to address AIFMD requirements. This means that various end results are possible, including no change to the net risk profile if additional controls neutralise additional risk exposure.

In the 'sub-custodian failure' case described above, the impact on model parameters could be considered as follows:

- The likelihood that a failure of a sub-custodian results in an obligation to pay client claims increases
- The total economic impact of the scenario (including an advance pay-out and amplification of the impact due to dispute costs, inflation, market price fluctuations, etc.) is considered greater than pre-AIFMD

Quantification of the selected scenarios should then be performed by applying the classical frequency/severity model widely used in the financial sector (Appendix 2 provides further details for selected risk scenarios). In smaller or less complex organisations, such modelling techniques might not be available to adequately quantify those scenarios. We believe that even with simpler approaches, this exercise remains a worthwhile contribution to an improved risk management process. Indeed, the key objective is for the outcome to be directionally correct, transparent to all stakeholders and consistent with regulatory requirements.

Step 3: Comparison

Whichever model is deployed, the last step of the process consists of comparing the outcome of the 'pre-AIFMD' assessment with the 'post-AIFMD' situation. The difference between both cases will form the basis for assessing the impact of AIFMD on capital adequacy.

There is an increased likelihood of an advance pay-out and the incident having greater economic impact resulting from dispute costs, inflation, market price fluctuations, etc.

Case study: example of a typical depositary bank

In order to provide a practical illustration of the approach described above, a typical EU depository bank has been constructed based on operational risk data gathered by the Basel Committee, the ORX consortium, Pillar III disclosures and internal experiences. Key figures and the operational risk profile for this example bank are reported below. These figures reflect a realistic order of magnitude observed among market participants.

It is worthwhile noting that depositaries under AIFMD do not necessarily have to be credit institutions and that consequently the depositary market in some countries includes different types of legal entities. The case study presented here nonetheless remains relevant for non-bank depositories as the approach can be used both to comply with regulatory requirements set out by the Basel/CRD framework and to conduct an internal assessment of the capital needed to cover the operational risk profile.

Key figures for a typical depositary institution (in € millions)

Business indicators for depositary activities	
Total assets under custody	106,250
AIF under custody	31,550
Total balance sheet	4,250
Fees and commissions	85
Other revenues	15
Internal capital requirements for operational risk before AIFMD	13.28

Sources: Basel Committee, EFAMA, Deloitte analysis

Operational risk profile of the typical depositary

Based on this initial set-up, the loss event types that were identified as 'relevant' for AIFMD are analysed and the impact on both frequency and severity is estimated (see Appendix 2 for further details). As indicated above, this impact is dependent on (at least) two key dimensions:

1. **Degree of sub-custodian network integration**
   Depositaries that rely heavily on third party agents in various markets with limited capacity to impose liability discharge on the sub-custodian network used by their clients (limited integration) are undoubtedly more exposed to AIFMD risks. Fully integrated service providers that offer one-stop shop services across the whole value chain and have a global footprint in all markets and asset classes are comparatively less exposed (strong integration).
2. **Strengthening of the internal control framework**
   Changes in regulatory requirements implied by AIFMD call for a review of current processes and related controls. Institutions that have upgraded their control activities to cope with the specific features of the various alternative asset classes ('mitigate' response to risk) are considered to have reduced the likelihood of failing to meet their obligations because of incomplete or incorrectly designed controls compared to the status quo ('accept' response to risk).

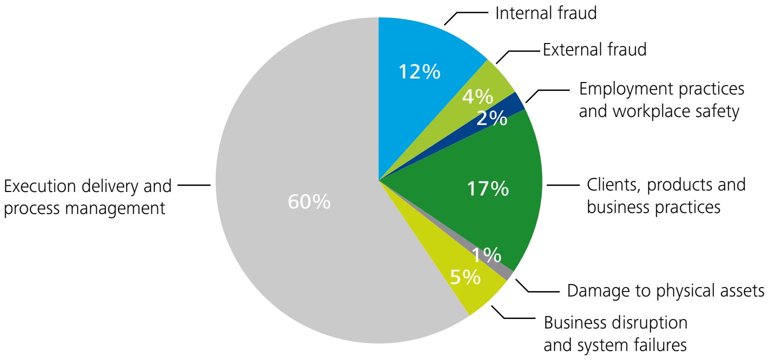
In our case study, we assessed the sensitivity of the potential capital charge add-on to these dimensions, gradually increasing frequency and/or severity of relevant operational risk scenarios. Results from these three cases are provided in the graph overleaf.

Our simulations indicate a potential increase of capital requirements ranging from 30% to 38% for a 'moderately integrated' depositary bank. Such an increase of internal capital needs for operational risk could prove to be problematic, especially in institutions with a limited capital surplus.

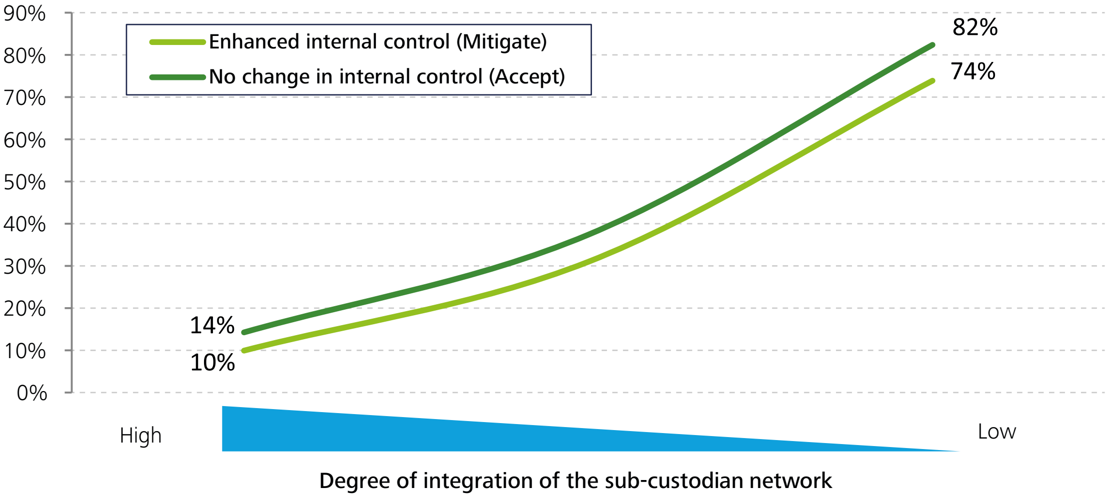
This is particularly true for depositaries with limited sub-custodian network integration as our results indicate a high sensitivity to the operating model, with a potential increase in capital needs exceeding 70%. Weaker internal controls would also lead to expanded capital needs but to a much lesser degree than the operating model, with an estimated increase of 4% to 9% in capital needs depending on the case.

From a pricing point of view, however, conclusions differ. Assuming a cost of capital of 7%, the potential impact on the depositary pricing model is likely to be insignificant in most cases, never exceeding 1% of the depositary fees in our simulations. The commercial reality is that this would not be considered relevant in any fee negotiation.

Operational risk profile of the typical depositary



Impact on internal capital requirements of new liability regime imposed by AIFMD relative to situation pre-AIFMD



Conclusion

European depositaries face an increased cost and risk profile as a result of AIFMD. Inevitably, some of this cost will be passed on to clients through pricing. Risk will be the biggest factor in determining pricing, followed by operational costs, while the capital impact on the price could be very limited. The scale of the price increase should depend on a range of risk factors and depositaries need to develop more risk-sensitive pricing mechanisms to address this. The biggest open issue remains the prime broker operating model.

Pricing must take into account a range of risk factors which could expose depositaries to financial loss. These risk factors need to be weighted in importance in alignment with the organisation's risk appetite/policy. Each client needs to be assessed via the pricing model to give an accurate risk score and price. Failure to implement such a pricing model could lead to significant future losses and exposure to a riskier client base over the longer term.

Ongoing operational costs will also likely be reflected in the depositary pricing model to some extent, depending on the level of automation achieved and the increase in overheads, such as staffing costs.

Depositaries may only be willing to work with fund administrators within their group or may need to price more risk sensitively for conducting duties such as cash monitoring or depositary lite with other non-affiliated entities.

The key outstanding issue to be fully resolved remains depositary interaction with prime brokers. Depositaries remain concerned about prime broker due diligence, reporting and information flows. Depositaries are, however, most concerned about how to fulfil obligations for in-custody financial assets passed to the prime broker and the associated operation of liability and contractual arrangements to transfer that liability. For a significant proportion of depositaries, contractual discharge of liability to the prime broker is seen as a sustainable long-term solution. However, many depositaries would like to achieve an operational solution based on greater network integration over the longer term.

Combined with other regulatory initiatives (UCITS V, UCITS VI, EMIR, Target2 Securities, CSDR, MiFID II) focussing on custody/depositary services, clearing, settlement and reporting, further operational solutions that enhance data flows and mitigate risk will develop over time. Operational integration and the provision of data solutions are undoubtedly the business challenges but also the opportunities of the future.

Appendix 1 - discharging depositary liability

In order for a depositary to prove that it is not liable for the loss of a financial instrument held in custody, it must demonstrate that the loss was due to an external event beyond its reasonable control rather than a failure within the custody network. This involves a three-step process:

1. The loss must be external, i.e. not the result of any act or omission by the depositary or its delegate
2. The depositary could not have reasonably prevented the occurrence of the event
3. Despite 'rigorous and comprehensive' due diligence, the depositary could not have prevented the loss

The above test would appear to exclude all but force majeure events, and to avoid any doubt, the Commission's Level 2 Regulation has clarified certain instances to be regarded as 'internal'. The depositary has an obligation to continually assess the risk of external events occurring, informing the AIFM of these risks and taking appropriate action to mitigate the risk of loss where necessary.

Internal versus external events

AIFMD leaves open the possibility of the depositary contracting a discharge of its liability, subject to strict requirements based on 'objective reasons' for the contractual discharge. The objective reasons must be:

- Limited to precise and concrete circumstances characterising a given activity
- Consistent with the depositary's policies and decisions
- Established each time the depositary intends to discharge itself of liability

Only two examples of where a contractual discharge of liability is warranted are given by the Commission Level 2 Regulation. These include situations where local laws require the financial instruments to be held locally and where the AIFM insists on maintaining an investment in a particular jurisdiction despite warnings by the depositary as to the increased risk this presents.

Internal event	External event
• Accounting error • Operational failure • Fraud • Failure to apply the asset segregation requirements	• Natural events beyond human control or influence • Actions by governments or other authorities which impact the financial instruments held in custody, e.g. nationalisation • War, riots or other major upheavals

Appendix 2 – operational risk events applicable to depositaries in an AIFMD context

Basel loss event type	Frequency?	Severity?	Rationale
Internal fraud	X	X	While 'internal fraud' could be considered as applicable in an AIFMD context (e.g. **fraudulent cash flow transfers**), such events were already covered by the existing internal control framework, meaning that both the likelihood and severity are considered unchanged.
External fraud	√	√	A **fraud event at a sub-custodian** or other third party entity is considered to be under the reasonable control of the depositary, meaning that while the risk of external fraud taking place is not changed by the implementation of AIFMD, the likelihood of the depositary having to pay out in the event of a claim increases. The amount at stake could also be additionally increased when extra costs (incl. legal expenses) are included.
Clients, products and business practices	√	√	Additional operational obligations arising from regulatory requirements increase the risk of non-compliance due to inadequate processes and procedures (which fall into this category). More importantly, if a **sub-custodian default takes place**, an operational failure in the due diligence and/or monitoring of the network would fall under the reasonable control of the depositary, thereby increasing the risk of lawsuits against the depositary in such a situation.
Execution, delivery and process management	√	X	A new or modified control framework requires **new operational processes** previously not performed by the depositary and that could lead to a higher number of operational errors in the initial stages of implementation. The potential impact is however considered to be marginally altered by the new rules because the volume and size of the transactions are not affected by the AIFMD rules.

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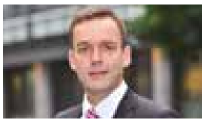

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