PROFESSIONAL GUIDE

association française de la gestion financière

AFG Code of Practice on liquidity risk management in Collective Investment Schemes (CIS)

January 2016

The **Association Française de la Gestion financière** (French Asset Management Association – AFG) represents and promotes the interests of the French asset management industry. Established in 1961, it brings together asset management players from the collective and discretionary portfolio management segments. Its membership consists of portfolio management companies, either independent or subsidiaries of French and foreign banking groups. In 2009, the AFG opened its doors to "correspondent members" (of which it had over 60 at end 2015) representing the investment ecosystem: lawyers, consulting firms, IT services companies, data providers and branches.

The French asset management industry manages total assets worth €3,600 billion (at end 2015), including €1,700 billion in French funds and €1,900 billion in discretionary portfolios and foreign funds. It accounts for over 83,000 jobs, including 26,000 in management companies, and plays a vital role in financing the economy.

AFG mission is to inform, assist and train its members. It provides them with ongoing assistance in the legal, tax, economic, accounting and technical fields. It coordinates reflections in the industry on changes in investment techniques, investor protection, investment strategies, research and training.

The AFG acts as a contact point for French, European and international public authorities and plays an active role in driving regulatory changes. It defines the industry's ethical rules and acts as a driving force in the area of corporate governance.

The Association also helps promote and spread the influence of the French investment management industry – one of the world leaders – among all relevant players, investors, issuers, politicians and media, both in France and internationally.

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AFG Code of Practice

on liquidity risk management

in Collective Investment Schemes (CIS)

January 2016

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Foreword

The topic of liquidity has over the recent years been a major concern for global regulators. European regulations, in particular the AIFM Directive, place liquidity risk management, in normal and stressed situations, at the heart of the risk management process of management companies.

The objective of this Code is twofold:

- Adopt in a single document a series of recommendations aimed at all companies which are AFG members. These recommendations reflect a common approach to good practice in line with regulatory requirements;
- Offer practical methodological guidance.

1. Liquidity risk management process – Objective

The fundamental objective is to ensure that the liquidity of the fund assets allows meeting redemption requests from unit holders and other financial commitments (including financial guarantees hedging an exposure), while preserving the principle of fair treatment of investors.

- The fair treatment of unit holders is the key principle that underpins any liquidity management process.
- The fair treatment of unit holders may be jeopardised, following significant unit redemptions:
  - in case of a significant impact of the liquidation cost on the net asset value (NAV) of the fund;
  - in case of a significant deterioration of the liquidity profile of the fund.
- A deterioration of the liquidity profile of the fund may materialise through a rise in the liquidation cost and/or a lengthening of the period required to wind-up the fund.
- It is the manager's responsibility to take all necessary measures to restore the liquidity profile of the fund in a reasonable delay, by bringing it back to a level similar to that which prevailed prior to the significant unit redemption requests.

Having a robust valuation system is a prerequisite. Indeed, there is a very strong link between the valuation and the liquidity processes. The quality of the former contributing to the robustness of the latter.

- A high quality valuation process implies a strong governance regarding the choice of contributors, of prices which are not provided by a contributor and of forced prices.
- When the valuation is externalised, the management company remains responsible in all cases.

2. Liquidity management process – Key principles

Foreword: Contrary to market risks, there is no standard model or market consensus on models appropriate to liquidity risks; in addition, market data may not be available (in particular on interest-rate markets). Similarly, data on the liability structure of funds is generally not sufficiently available.

As a consequence, assessments may rely on expert estimates.

Principle 1. A process tailored to the fund profile

The liquidity management process within a management company is calibrated in its size and frequency proportionally to the sensitivity of the funds to the liquidity risk.

The assessment of the sensitivity of a fund to the liquidity risk is a key stage which should lead the manager to adopt a proportional approach in the implementation of the liquidity management process. The higher the sensitivity of the funds to the liquidity risk, the more substantial the process deployed.

In this respect, internal limits may be an integral part of the monitoring of the liquidity risk and in this context may be sufficient. For example, limits on market capitalisation for a "large cap" equity fund may constitute a sufficient liquidity management process.

- The sensitivity of a fund should be assessed upstream, at the inception stage of the fund, and then throughout its life on a regular basis, based on a quantitative and/or qualitative approach.
- The sensitivity of a fund to the liquidity risk depends on several factors, including:
  - the strategy of the fund and the investment universe;
  - the level of assets under management of the fund, actual or targeted if more relevant (fund at inception stage);
  - the liability structure (retail investors, institutional investors, insurance...) and its concentration level;
  - obligations relating to unit holders and arising from regulatory documents concerning unit redemptions, including any specific provisions (e.g. notice period and dealing frequency) and any potential limitations on redemptions;
  - the legal status of the vehicle and any regulatory requirements it may be subject to;
  - internal risk limits applicable to the fund.
- Any substantial modification of these factors should lead the manager to reassess the sensitivity of the fund to the liquidity risk.

Principle 2. Global context Assets-Liabilities

The liquidity risk management process should be considered in a global context.

This process includes all at once:

- a measurement of the liquidity level of the fund assets;
- the structure and concentration level of the fund liabilities;
- any measure of protection of unit holders on the liabilities side of the fund (e.g. swing pricing, gates, redemption frequency, notice period).[1]

Principle 3. Risk management

Liquidity management procedures are an essential component of the risk management policy of a management company.

These procedures should specify:

- the governance, in particular the conditions of escalation to management bodies in case alert thresholds, internal risk limits are exceeded or any liquidity problem is encountered;
- if relevant, the conditions governing the implementation of restrictions on redemptions, of specific measures and anti dilution measures such as swing pricing (including the definition of thresholds). These anti dilution measures allow to fairly spread the cost of reconfiguring the portfolio in extreme situations which should lead the manager to consider the activation of a redemption limitation measure appropriate and authorised by the product regulation, such as redemption suspensions, gates, side pockets, redemptions in securities or even the wind-up of the fund.

Principle 4. Target level of assets under management

When required, the manager should define, at the inception stage of the fund, a target level of assets under management appropriate to its investment universe.

- Such a level represents a limit above which the principle of fair treatment of unit holders may be altered, considering the estimated liquidity of the investment universe.
- Such a target level may be reassessed during the life of the fund in case of a significant evolution of the liquidity of the investment universe.

Principle 5. Measurement on the assets side

The manager should define the methodological approach it deems the most appropriate to measure, on a regular basis, the level of liquidity on the assets side.

Different approaches are proposed in Annex 1 of this Code (page 11).

- Measurement on the assets side generally relies on various approaches such as liquidation cost, liquidation time horizon of the assets or a combination of both.

1) Examples of measures of protection of unit holders on the liabilities side of the fund are provided in Annex 2 of this Code (page 21).

- An approach consists in determining the time required to dispose of the portfolio assuming there is no additional cost to the liquidation. The liquidation cost of an instrument or asset reflects the difference between its liquidation price and its valuation price (bid/mid/ask).
- Another approach consists in calculating the additional liquidation cost depending on the liquidation surface. In such a case, the shorter the liquidation time horizon, the higher the additional cost.

Principle 6. Assumptions for measurement on the assets side

The manager should document the assumptions underlying the measurement of the liquidity on the assets side of the fund.

- These assumptions should be reviewed at least on an annual basis.
- They may in particular concern:
  - the average level on the market of the instrument which represents a fraction of the overall liquidity on the market of the relevant asset. For bond issues or OTC derivatives in particular, such information is not always available. In case such information is not available, assumptions may rely on expert estimates. Such expert estimates should be subject to an internal critical analysis;
  - the participation rate to the overall market liquidity;
  - bid-ask spreads.

Principle 7. Liquidity of global assets

The liquidity level on the assets side of the fund should be considered at a global level.

- This principle is that consequences are assessed at the overall level of the fund, rather than at the level of each individual security.
- The assets of a fund may include securities or instruments which are less liquid, provided this does not compromise at global level its capacity to comply with its regulatory obligations, regarding unit redemptions and other financial commitments.

Principle 8. Understanding the liabilities

The level of understanding of the liabilities should contribute to reinforcing the liquidity risk management process.

- The aim is to understand the typology and dispersion of the unit holders (e.g. institutionals, retail clients, funds of funds). In many cases, such information is not available (for instance funds which are sold through distribution platforms) or not sufficient (for instance funds which collect funds at inception stage), which does not allow management companies to have data of sufficient granularity.
- In such a case, an analysis of other factors (e.g. distribution channels, target market per unit class) may be considered in order to assess the nature of the unit holders and to at least have a breakdown of the portfolio between institutional and retail clients.

Principle 9. Measurement on the liabilities side

The manager should define the most appropriate approach to measure the risk on the liabilities side of the fund.

- The manager should estimate exit scenarios at different dates, including at the subscription/redemption date.
- These scenarios may be based:
  - on historical data (historical subscriptions in/redemptions out of the fund)
    When information on historical data is not available or sufficient (new fund, fund with no outflow period), it is recommended to estimate the risk on the liabilities side by refering to a representative fund or to a sample of representative funds
  - or on hypothetical data (for example, exit of the largest client(s), exit of a category of unit holders).

Principle 10. Alert thresholds

It is the responsibility of the manager to define a system of alert thresholds (soft limits).

- The manager should apply alert thresholds and determine their level, unless the risk profile of the fund does not justify it.
- In case an alert threshold is breached, it is the responsibility of the manager, in compliance with its internal procedure, to determine the appropriate response, taking into account in particular the best interests of unit holders, market conditions and the potential impact on the portfolio.
- For information, an alert threshold may be expressed in the form of a minimum portion of the fund that may be disposed of on a given time horizon with no significant impact on the performance of the fund, or it may for example take the form of a maximum liquidation cost.

Principle 11. Liquidity stress tests

- **Liquidity stress tests should be performed on all funds, except when the manager does not deem it necessary due to the size, complexity and nature of the fund and subject to regulatory requirements.** The calibration of the level of the liquidity stress tests is decided upon by the management company, which should document the choices it made and the assumptions it selected.
- Liquidity stress tests mainly aim at measuring the capacity of the fund to meet increased liquidity demands without infringing the principle of fair treatment of investors.
- Liquidity stress tests should be performed at predefined frequencies.
- It is recommended to perform two different types of simulations:
  - simulation of atypical redemption requests made in a simulated context of a liquidity dry-up of the fund assets. A liquidity dry-up generally materialises through a rise of the liquidation cost and/or a lengthening of the fund wind-up period.

– simulation of increased liquidity demands, including in particular additional needs to meet margin calls to which funds which significally invest in derivative instruments are exposed to. In such a case, stresses should be made on market parameters which contribute to the valuation of the derivative instruments held in the portfolio.

Principle 12. Process review

The liquidity risk management process should be reviewed on a regular basis.

This review aims at ensuring the efficiency of the liquidity risk management process in terms of measurement and control.

ANNEX 1

Examples of liquidity risk measurement for asset management

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1. Liquidity risk measurement – Main metrics

1.1. Construction of a test portfolio

In order to describe each method of liquidity measurement, it was thought useful to work on numerical examples applied to a test portfolio. The objective of this test portfolio is to allow illustrating the calibration of each method in relation to several types of assets and then comparing the results obtained through these different methods.

This test portfolio was as a consequence built in order to include a wide diversity of liquidity profiles. It is a diversified portfolio including bonds, equities and financial contracts. Among bonds, ranking in terms of increasing liquidity, are included government bonds, short term investment grade bonds, long term investment grade bonds and high yield bonds. Among equities are included large, medium and small (and even micro) cap equities. Simple derivative contracts were also introduced in the portfolio: government bond futures, equity index futures, listed equity index options and index based and single name CDS.

The results presented in this document are relevant for portfolios whose size measured in terms of commitment is between 100 million and 1 billion euros. This allows checking the consistency of the methods outlined and highlighting their comparative strengths and weaknesses.

1.2. Working assumptions

The below assumptions are provided for information and do not aim to be considered as a standard.

Assumptions	Description
Equity Volume	Average daily volume over 3 months
Bond Volume	Equal to 1% of the issuing size
Market participation rate	5% of daily tradable volume
Bond VaR Volume	Equal to 30% of daily tradable volume
Scoring (WARF method)	A 10 factor is used to build an exponential scoring
Liquidation cost	Equal to (Ask-Bid) / Mid

- For reasons of simplification, we decided to consider the bid-ask spreads as symmetrical. Thus, for any given size, the market impact and the liquidation time horizon are identical whether the order considered is a purchase or a sale order. Such an assumption may be very simplistic and the different methods proposed hereafter may be developed by introducing some asymmetry.
- We also assume that the portfolio is valued at a mid price in order to be able to estimate a liquidation impact.

1.3. Scoring approach

- Principle

This method consists in calculating the liquidity score of the portfolio. A rating of the global liquidity of the portfolio is allocated to each given scoring interval.

- Methodology

Each position in the portfolio is rated according to a table. The rating allocated depends on the ratio between the quantity held of this instrument and its daily tradable volume. The table selected in our example is made of 5 ratings (L0, L1, L2, L3, L4 by order of decreasing liquidity).

Quantity / Volume Ratio	Liquidity scoring
<50%	L0
50%-200%	L1
200%-700%	L2
700%-4,000%	L3
>4,000%	L4

A score is allocated to each rating:

- with the linear method, the minimum score is 1 and it increases by 1 units;
- with the exponential method, inspired from the WARF[1] credit rating method, the minimal score is 1. In our example, the following score is calculated by multiplying the previous score by 10.

	Scoring table	
Liquidity score	Linear method	Exponential method
L0	1	1
L1	2	10
L2	3	100
L3	4	1,000
L4	5	10,000

For each position in the portfolio, a liquidity score is calculated by multiplying the notional weight of the relevant position by its score as read in the scoring table. The sum of the scores of each position gives the liquidity score of the portfolio.

$$SCORE_{Ptf} = \sum_{i=1}^{n} W_i \times SCORE_i$$

Note: the notional weight (Wi) is calculated:

- by dividing the market value of the relevant instrument by the value of the portfolio assets, for all cash market products;
- by dividing the notional value of the relevant instrument by the value of the portfolio assets, for all derivative products.

1) "Weighted Average Rating Factor – WARF" *is a measure used by rating agencies in order to determine the creditworthiness of a portfolio.*

1.4. Bucketing approach (AIFMD)

- Principle

The aim of this approach is to calculate the period of time required to dispose fully of 100% of each of the positions, on the basis of assumptions on market participation rates and tradable volumes. All the positions in the portfolio are then assigned to corresponding period buckets.

- Methodology

The liquidity period for each of the positions is calculated by dividing the quantity by the volume tradable in one day.
In our example, we selected 4 liquidity period buckets.

The underlying assumption of this approach is that liquidity regenerates itself and that the capacity to dispose of the positions on any given day does not depend on the quantity disposed of on the previous day.

1.5. Volume-based approach

- Principle

This method consists in calculating the portion of the portfolio that can be disposed of over a given period of time on the basis of assumptions on daily tradable volume and liquidity regeneration. All the positions are thus gradually disposed of on the market at a rate which depends on a liquidity specific to each instrument.

- Methodology

The disposable portion of each position in the portfolio is calculated for given period of time. In our example, we consider a period of 5 working days. Results are then aggregated and written in terms of percentages of the market value of the portfolio *(VB)*.

$$Liquidation\ Rate\ (5d) = \sum_{i=1}^{n} MIN\left(100\ \%\ ; \frac{5 \times Volume_i}{Qty_i}\right) \times \frac{VB_i}{VB_{total}}$$

3 alternatives may be considered regarding the volume:

- volume observed as of the date of calculation;
- statistical quantile of the historical volume (in our example, we selected a 95% quantile and a historical depth of 1 year);
- a stressed volume.

The underlying assumption of this approach is that liquidity regenerates itself and that the capacity to dispose of the positions on any given day does not depend on the quantity disposed of on the previous day.

1.6. Cost-based approach

- Principle

Any portfolio wind-up generates a liquidation cost. This cost is estimated through the bid-ask spread which applies to the buy-sell transactions that take place on the markets. The LCS (Liquidity Cost Score) estimates the impact of the liquidation cost on the net asset value.

- Methodology

The LCS calculation outlined here does not take into consideration the volumes tradable on the market. It does include the size of the underlyings for derivatives and therefore uses notional weights in the portfolio.

$$LCS_{Ptf} = \sum_{i=1}^{n} \left(\frac{Ask_i \times Bid_i}{Mid_i} \right) \times W_i$$

3 alternatives may be considered regarding the cost:

- bid-ask spread observed as of the date of calculation;
- historical LCS statistical quantile (in our example, we selected a 95% quantile and a historical depth of 1 year);
- an enlarged bid-ask spread.

1.7. Liquidation surface-based approach

- Principle

The aim of the liquidation surface-based approach is to estimate a price impact and a liquidation time horizon depending on the volume held.

- Methodology

Our two working assumptions are the following:

- the larger the volume to be disposed of, the higher the price impact;
- the longer the time horizon, the more limited the price impact.

These assumptions allow us to define for each asset class a linear model of the market impact as a function of the volume traded and the liquidation time horizon.

A more complex and realistic variant consists in setting up an exponential model of the market impact as a function of the volume traded. However, for reasons of simplification, we selected a linear model.

In order to define the curve, 5 parameters are needed for each asset class, defined as follows:

α: bid-ask spread of the test portfolio

β: maximum daily size for which the market impact equals α

γ: multiplying coefficient applicable to α when the volume traded equals 5xβ

δ: maximum size which may be traded in one day

τ: number of days that the market takes to absorb δ (maximum volume which may be traded in one day) and return to standard market conditions

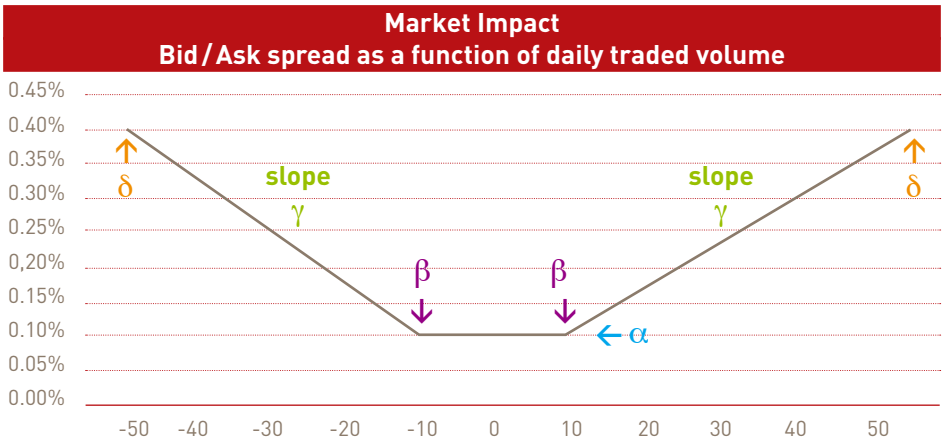
Please find hereafter the example of a linear model applied to the market impact as a function of the volume traded for the Volkswagen Financial Services 1.5% 12/15 (Short Term Corporate IG) security, which is included in our test portfolio:

α = 0.10%

β = 10,000,000 units

γ = 4

δ = 50,000,000 units



Therefore:

- For any order whose size is below β, the market impact will be α.
- For any order whose size is between β and δ, the market impact is calculated as a linear regression between the 2 points (β, α) and (5 x β, γ x α).
- For any order whose size is above δ, the order is split in multiples of δ.
  We first place an order of a maximum daily size of δ, then we wait τ days before we can place a second order of a maximum daily size of δ, etc.

Management companies are responsible for estimating the relevant parameters for their models, based on quantitative market data (average bid-ask spread, average volume over the last 30 days, percentage of issuing size, etc.) or on surveys of market participants (managers, trading desks) which are in the best position to estimate such liquidity data.

In the context of our test portfolio, we made the following assumptions:

Asset class	α	β	γ	δ	τ
Bond Future	0.01%	5% x Volume 30D	3	50% x Volume 30D	1
Short Term Govies	0.02%	1% x Emission size	3	5 % x Emission size	1
Long Term Govies	0.05%	1% x Emission size	3	5 % x Emission size	1
Short Term Corporate IG	0.10%	1% x Emission size	4	5 % x Emission size	2
Long Term Corporate IG	0.50%	1% x Emission size	4	5 % x Emission size	2
Corporate HY	0.75%	1% x Emission size	5	5 % x Emission size	4
Index CDS HY	4.00	10,000,000	3	50,000,000	1
Single Name CDS IG	4.00	6,000,000	3	30,000,000	2
Equity Index Future	0.01%	5% x Volume 30D	3	50% x Volume 30D	1
Listed Equity Index Option	1.00%	1% x Nb Open Positions	5	10% x Nb Open Positions	2
Large Cap Equity	0.01%	5% x Volume 30D	2	50% x Volume 30D	1
Small/Mid Cap Equity	0.20%	5% x Volume 30D	4	50% x Volume 30D	3
Micro Cap	0.50%	5% x Volume 30D	5	50% x Volume 30D	5

2. Analysis of the results

2.1. Scoring approach

Category	Scoring interval (linear method)	
	Score = 1.99	
	Minimum	Maximum
Highly liquid	1	2
Liquid	2	3
Quite illiquid	3	4
Illiquid	4	5

Category	Scoring interval (WARF method)	
	Score = 28.13	
	Minimum	Maximum
Highly liquid	1	10
Liquid	10	100
Quite illiquid	100	1,000
Illiquid	1,000	10,000

We observe that the category is different depending on the approach selected. Indeed, our portfolio belongs to the "highly liquid" category based on the linear method and to the "liquid" category based on the WARF method.

2.2. Bucketing approach

	Bucket full liquidation / Average Volume			
Instrument type	**O/N**	**2d-7d**	**7d-30d**	**>30d**
Bond Future	0.0%			
Cash	2.9%			
Corporate HY		3.5%	3.3%	
Equity Index Future	0.0%			
Index CDS HY			0.9%	
Large Cap Equity	18.0%			
Listed Equity Index Option		0.4%		
Long Term Corporate IG			12.9%	
Long Term Govies	12.9%	11.3%		
Micro Cap		0.3%		2.6%
Short Term Corporate IG			8.8%	
Short Term Govies	11.5%			
Single Name CDS IG			0.0%	
Small/Mid Cap Equity			10.7%	
Total	**45.3%**	**15.5%**	**36.6%**	**2.6%**

	Bucket full liquidation / VaR Volume			
Instrument type	**O/N**	**2d-7d**	**7d-30d**	**>30d**
Bond Future	0.0%			
Cash	2.9%			
Corporate HY			3.5%	3.3%
Equity Index Future	0.0%	0.0%		
Index CDS HY				0.9%
Large Cap Equity		18.0%		
Listed Equity Index Option			0.4%	
Long Term Corporate IG				12.9%
Long Term Govies		12.9%	11.3%	
Micro Cap			0.3%	2.6%
Short Term Corporate IG				8.8%
Short Term Govies		11.5%		
Single Name CDS IG				0.0%
Small/Mid Cap Equity				10.7%
Total	**2.9%**	**42.3%**	**15.6%**	**39.2%**

The VaR approach, which uses the 5% quantile, delivers results which are more conservative in terms of liquidation time horizon.

2.3. Volume/Cost/Liquidation surface-based approaches

Net Assets	€100,000,000			€500,000,000			€1,000,000,000		
Approaches	**Standard**	**Quantile**	**Liquidity surfaces**	**Standard**	**Quantile**	**Liquidity surfaces**	**Standard**	**Quantile**	**Liquidity surfaces**
Liquidation time horizon									
1 day Liquidity	54.2%	34.5%	94.9%	21.5%	9.6%	89.0%	12.2%	6.4%	82.0%
2 day Liquidity	63.1%	50.9%	0.0%	40.1%	15.8%	0.0%	21.5%	9.6%	4.3%
3 day Liquidity	67.8%	53.7%	0.0%	50.5%	22.0%	0.0%	30.8%	12.7%	0.7%
5 day Liquidity	75.0%	59.0%	2.7%	54.2%	34.5%	1.4%	46.4%	18.9%	1.9%
Liquidity > 5 days	100.0%	100.0%	2.4%	100.0%	100.0%	9.6%	100.0%	100.%	11.1%
Nb days full liquidation	798	33,226	386	3,988	166,132	1,946	7,976	332,264	3,896
Liquidation cost									
Total cost liquidation	0.48%	0.66%	0.6%	0.48%	0.66%	0.96 %	0.48%	0.66%	1.29%

3. Composition of the TEST portfolio

ISIN	NAME	INSTRUMENT TYPE	QUANTITY	NPV AS OF 2015/02/23	NPV / AUM
	Cash	Cash	2,879,622	2,879,622	2.9%
RXH5	Euro Bund Mar15	Bond Future	-72.00	-	0.0%
ES00000121A5	Kingdom of Spain 4.1% 08/18	Short Term Govies	5,759,243	6,474,138	6.5%
IT0005030504	Republic of Italy 1.5% 14/19	Short Term Govies	4,799,369	4,986,689	5.0%
US912828G385	T 2 ¼ 11/15/24	Long Term Govies	14,398,108	12,905,781	12.9%
FR0012517027	FRTR 0 ½ 05/25/25	Long Term Govies	11,518,486	11,339,604	11.3%
XS0794238583	Volkswagen Financial Services 1.5% 12/15 (EMTN)	Short Term Corporate IG	4,799,369	4,835,077	4.8%
DE000A1MA9V5	Daimler 2% 12/17 (EMTN)	Short Term Corporate IG	3,839,495	3,990,772	4.0%
FR0011401751	Électricité de France 5.375% 13/49 (EMTN)	Long Term Corporate IG	6,719,117	8,037,744	8.0%
FR0010014845	Peugeot SA 6% 03/33	Long Term Corporate IG	3,839,495	4,814,343	4.8%
XS1028956222	Numericable Group 5.375% 14/22 (REGS)	Corporate HY	3,359,559	3,512,922	3.5%
XS0779246478	Europcar Groupe 11.5% 12/17 (REGs)	Corporate HY	2,879,622	3,254,692	3.3%
	CDS Itraxx XO S22 5Y 12/2019 – Buy Protection	Index CDS HY	9,598,739	922,177	0.9%
	CDS VOLKSWAGEN 5Y 12/2019 – Sell Protection	Single Name CDS IG	-2,879,622	28,743	0.0%
VGH5	EUROSTOXX50 03/15	Equity Index Future	480	-	0.0%
SXOH5	STOXX600 03/15	Equity Index Future	288	-	0.0%
SX5E 06/19/15 C3400	Call SX5E 3400 jun-15	Listed Equity Index Option	240	414,905	0.4%
FR0000120271	Total SA	Large Cap Equity	191,975	8,886,512	8.9%
DE000BAY0017	Bayer AG	Large Cap Equity	71,991	9,092,405	9.1%
FR0000184798	Orpea	Small/Mid Cap Equity	95,987	5,633,500	5.6%
FR0000054900	TF1	Small/Mid Cap Equity	335,956	5,076,293	5.1%
FR0004036036	Solucom	Micro Cap	8,639	361,536	0.4%
FR0000074759	Fleury Michon	Micro Cap	43,194	2,256,903	2.3%
FR0004025062	Soitec	Micro Cap	335,956	295,641	0.3%
	Total Asset			**100,000,000**	**100.0%**

ANNEX 2

Examples of investor protection measures concerning liquidity management on the liabilities side

Aim of this annex:

This annex proposes to provide management companies with an overview of different examples of liquidity management measures on the liabilities side which aim to ensure the best possible protection for investors, in particular in situations of deteriorated liquidity. It also intends to carry out a first comparison of European and national regulations regarding the practical implementation of these measures in particular for UCITS.

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1. Examples of investor protection measures concerning liquidity management on the liabilities side in particular in situations of deteriorated liquidity

1.1. Gates (or deferred redemptions)

In the same way as exit fees payable to a fund may be spread out, the implementation of gates may allow deferring redemptions over several NAVs as soon as the latter reach a certain threshold. This measure allows establishing a precise forecast of maximum expected redemptions over a certain period of time and therefore anticipating, in better conditions, the required portfolio reconfigurations. The delay obtained may thus be exploited to organise communication with clients, which may stop/slow down the redemption dynamics.

When implementing gates, particular care should be given to order processing: when a management company decides to activate gates, a pro rata calculation should be put in place so that some orders are not treated more favourably than others. In some countries, the balance of orders which could not be executed is automatically deferred to the following NAV and their execution is given priority. However, there is a risk that such an automatic deferral scheme might encourage unit holders to anticipate their redemptions requests in order to "get ranked" in the waiting line. Moreover, the activation of a gate is in most cases triggered by a large institutional order, even though all small retail orders will also be impacted by the pro rata calculation. A measure allowing to apply gates only to significant orders may potentially be justified.

Regardless of the type of order processing selected, the technical capacity of the centralising agent to manage the relevant measure (pro rata calculation, order prioritisation...) should be ascertained. Last, it should be possible to promptly inform unit holders about the gate activation so that they can defer their orders in compliance with the relevant cut-off times.

1.2. Side pockets

Ring fencing the assets allows creating, by splitting the initial fund, two new funds:

- one designed to receive the assets whose immediate sale would not be in line with the best interests of unit holders (side pocket),
- the other designed to receive the remaining assets of the split fund (called "replicate fund").

After the split, the side pocket is closed to subscriptions/redemptions and is subject to a winding-up management.

Such a measure is well suited to cope with an exceptional but limited crisis i.e. impacting only certain assets of the fund representing a small portion of the assets. It allows preserving the open-ended nature of the initial fund without resorting to forced sales which would be contrary to the best interests of unit holders.

When setting up a side pocket, particular attention should be paid to the formal justification of the perimeter of assets to be ring fenced. It should be noted that the AMF allows this exceptional measure for UCITS but forbids taking up the historical performance of the split fund.

Furthermore, it may be difficult to transfer certain assets into a side pocket: it is for example the case of OTC contracts, for which an agreement of the counterparty may be required.

1.3. Redemptions "in kind" or "in specie"

Redemptions in securities (rather than in cash) transfer the liquidity risk from the fund to the investor. The principle is to transfer securities held in the portfolio to the investor proportionally to its holdings in the fund, the corresponding shares thus being cancelled. This measure should be accompanied by warnings clarifying in particular this risk transfer; it may therefore only apply to investors that are willing to bear that risk.

This measure is attractive in particular to qualified investors which find themselves immobilised in case of a suspension (or side pocket) and which may then take over the direct management of the relevant securities according to their own objective and investment horizon.

1.4. Temporary suspension of redemptions

The decision to temporarily suspend redemptions may only be made in exceptional circumstances and provided it ensures the protection of the best interests of unit holders. This extreme solution should only be considered as a last resort in particular after assessing other redemption restriction measures. However, in a situation of extreme crisis whereby liquidity has dried up for a large portion of the fund assets, this solution may be the only option to preserve the best interests of unit holders.

Some regulators (for example in Ireland) sought to define the scope of "exceptional circumstances". However, as the latter are by definition unpredictable, it may be preferable to leave this appreciation up to management companies.

Management companies should ensure, during the suspension period, a continuation of the valuation of the assets at mark-to-model prices if required. Moreover, liquidity conditions should be regularly reviewed in order to allow a re-opening as promptly as possible.

In case of an enduring crisis, it is not desirable to maintain the suspension beyond a certain period of time (a few weeks maximum). Then arises the issue of the disposal of the assets. However, it would be preferable that such a decision should not be imposed on unit holders.

The latter should have a choice between:

- a liquidation at a given time horizon and
- a holding to a longer maturity depending on their objectives and their investment horizon.

1.5. Overview of protection measures on the liabilities side

Overview of protection measures on the liabilities side		
	ADVANTAGES	POINTS FOR ATTENTION
Gate	• Allows spreading redemptions over several NAVs. • Predictability of the coming redemptions.	• What order processing: automatic deferral? pro rata calculation? prioritisation? • The technical capacity of the centralising agent should be ascertained. • Unit holders should be rapidly informed about the activation. • In some cases, applying gates only to significant orders (institutionals) may be allowed. • The possibility to resort to this measure should be included in the fund prospectus.
Side pocket	• Allows preserving the open-ended nature of the initial fund, without resorting to forced sales contrary to the best interests of unit holders.	• Formal justification of the perimeter of the assets to be ring-fenced. • Measure well suited to cope with an exceptional crisis impacting certain assets of the fund representing a small portion of the fund assets. • It may be difficult to transfer some assets into a side pocket: it is for example the case of OTC contracts, for which an agreement of the counterparty may be required. • The possibility to resort to this measure should be included in the fund prospectus.
Redemption in securities	• Allows transferring the liquidity risk from the fund to the investor.	• The valuation of the transferred portfolio may require a certification by a third party. • This measure may apply to investors that wish to bear the risk. • The possibility to resort to this measure should be included in the fund prospectus.
Temporary suspension of redemptions	• In a situation of extreme crisis whereby liquidity has dried up for a large portion of the fund assets, this solution may be the only option to preserve the best interests of unit holders.	• Continuation of a valuation of the assets at mark-to-model prices if required. • Suspension should be cleared as soon as liquidity conditions allow. • This solution should preferably be considered as a last resort in particular after assessing other redemption restriction measures. • In case of an enduring crisis, it might not be desirable to maintain the suspension beyond a certain period of time (a few weeks maximum). Then arises the issue of the disposal of the assets and of the choice given - or not - to unit holders between a liquidation at a given time horizon and a holding to a longer maturity depending on their objectives and their investment horizon.

2. European regulation

2.1. UCITS

Suspensions of redemptions are the only measure laid out in the UCITS Directive (Article 84).

The conditions attached to this measure are the following:

- exceptional circumstances (not defined);
- the suspension should be made in the best interests of unit holders;
- immediate disclosure to the national regulator as well as to the regulators of the countries where the fund is marketed.

Member States may authorise their competent authorities to require the suspension of a fund in the best interests of its unit holders or of the general public.

Suspension modalities are in general described in the fund prospectus and sometimes accompanied by examples of situations considered as "exceptional".

National regulators may allow other restriction measures on redemptions for UCITS (side pockets, gates...) with large discrepancies among countries (please see page 28).

2.2. AIFM

The Directive remains rather unclear regarding restriction measures on redemptions.

A clarification was however introduced in the Delegated Regulation (EU) N°231/2013 of 19 December 2012 (*explanatory memorandum* para.3.2.6):

> *"This Delegated Regulation specifies that the liquidity management systems and procedures should allow AIFMs to apply tools and arrangements necessary to cope with illiquid assets in order to respond to redemption requests. Such arrangements may include 'special arrangements' such as 'side-pockets'."*

A large room for manoeuvre is therefore allowed for national regulators to define these "special treatments".

3. Discrepancies among national practices

Note: the following data was compiled by members of the Working Committee as of the date of writing this Annex based on the practices found in particular in the wording of national prospectuses. This data is not set in stone and may change over time.

3.1. France

The AMF Position-Recommendation *"Guide du suivi des OPC – DOC-2011-25"* specifies the conditions required for the implementation of gates and side pockets.

- **Gates:** application limited to real estate investment funds (OPCI), funds of hedge funds and professional funds (therefore forbidden for UCITS). The document specifies the minimum information to be included in the prospectus, the acceptable thresholds, the different types of order processing...
- **Side pockets:** the ring fencing of illiquid assets is a measure authorised in exceptional circumstances, including for UCITS. The document specifies the modalities of disclosure to the AMF, the information to unit holders, the status of the replicate CIS and of the split CIS.
- **Redemptions in securities** seem only authorised in case of suspensions and with prior agreement of the unit holders. A large majority of French prospectuses merely include the legal possibility of suspending redemptions.
- **Exit fees payable to the fund** (equivalent to anti dilution levies) are allowed but rarely implemented in practice by French funds (except "dated funds").

3.2. Luxembourg

- **Gates** or "deferred redemptions" are authorised including for UCITS. The triggering threshold should be above 10%. Modalities should be described in the fund prospectus. It should be noted that UCITS should allow redemptions at least twice a month: gates do not allow overriding this principle.
- **Side pockets** are allowed for UCITS in exceptional circumstances; in practice, split assets should not exceed 30%.
- **Redemptions in kind** are possible at any time with the agreement of the unit holder(s). The value of redemptions in kind should be certified by an external auditor.
- **Exit fees payable to the fund** are authorised but seem rarely implemented in practice (except for "dated funds"[1]).

Luxembourg prospectuses (UCITS) almost systematically include (in addition to cases of suspensions) provisions on gates and on redemptions in kind. In particular, provisions on gates generally specify a triggering threshold, a maximum period of time for deferrals and measures on the processing of the relevant orders.

1) "Dated funds" or "defined maturity funds" are either invested in corporate bonds all reaching maturity before a set date or structured with a predetermined formula having a fixed maturity date.

3.3. Ireland

- **Gates** are authorised for UCITS and their practice is regulated: the triggering threshold is set at a minimum 10%. Beyond this threshold, management companies may defer redemption requests: a pro rata calculation of the orders should be performed and the balance should be deferred to the following NAV and should be executed as a priority.
- However, **side pockets** are not allowed for UCITS funds and are strictly regulated for AIFs in order to avoid any excessive ring fencing which would seek to preserve the performance of the main fund.
- **Redemptions in securities** are possible at any time with the agreement of the unit holder(s) provided the fair treatment of the unit holders remaining in the fund can be justified.
  Irish prospectuses (UCITS) almost systematically include provisions on gates and redemptions in securities. Anti dilution levy provisions are also very frequent.
- **"Anti dilution levy"** provisions are allowed for a maximum amount of 3% of the net assets: the amount of the commission payable to the fund is determined by the manager in order to cover the cost of liquidation and to preserve the performance of the remaining unit holders.

3.4. United Kingdom

- In the UK, the decision to **suspend redemptions** may be triggered upon request of a trustee. In any case, the management company should get the agreement of the latter.
- **Gates** are allowed only for daily NAV UCITS: the threshold is set at 10% or any other "reasonable" level disclosed in the prospectus.
- However, **side pockets** are not to our knowledge part of the tools set out in UCITS prospectuses.
- **"Anti dilution levy"** provisions are authorised. The amount of commission payable to the fund is determined by the manager in order to cover the liquidation cost and to preserve the performance of the remaining unit holders.
- Management companies may decide to perform **redemptions in securities** (in theory without prior agreement of the client), including for UCITS, provided the trustee (depositary) performed the required diligences to ensure that such a transfer of securities does not represent a material prejudice to the redeeming or to the remaining unit holders.
  British prospectuses (UCITS) almost systematically (in addition to cases of suspensions) include provisions on **redemptions in securities**. Anti dilution levy provisions and gates seem rather frequent.

3.5. Germany

- Neither gates nor side pockets are allowed for UCITS funds in Germany.
- German prospectuses (UCITS) only set out the legal possibility to suspend redemptions.

3.6. USA

- Since the recent reform on money market funds (summer 2014), most money market funds have the possibility (upon decision of the Board) to adopt liquidity fees (payable to the fund, up to a maximum of 2%) or a **temporary suspension of redemptions** (up to 10 days maximum) when the assets liquid under one week fall under the threshold of 30%.

3.7. Overview of national practices

	France		Luxembourg		Ireland		United Kingdom		Germany	
	UCITS	AIF	UCITS	AIF	UCITS	AIF	UCITS	AIF	UCITS	AIF
Anti dilution levy									?	?
Gates							Only for daily NAV funds			
Side pockets										
Redemptions in securities	Only in case of suspensions and with prior agreement of unit holders						With agreement of the trustee		?	?
Redemptions suspensions							With agreement of the trustee			

Authorised Forbidden

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