MFSA

MALTA FINANCIAL SERVICES AUTHORITY

INVESTMENT SERVICES RULES FOR RETAIL COLLECTIVE INVESTMENT SCHEMES

PART B: STANDARD LICENCE CONDITIONS

Appendix VI

Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS

1.   Introduction

1.01   The supplementary licence conditions on risk management, counterparty risk exposure and issuer concentration applicable to Maltese retail collective investment schemes set up as Maltese UCITS shall be complied with by the Scheme or the Manager on behalf of the Scheme.

2.   Measurement and Management of Risk

2.01   A Scheme shall adopt adequate and effective arrangements, processes and techniques in order to:

a.   measure and manage at any time the risks which it might be exposed to; and

b.   ensure compliance with limits concerning global exposure and counterparty risk in accordance with the provisions of this Appendix.

The arrangements, processes and techniques shall be proportionate to the nature, scale and complexity of the business of the Scheme and be consistent with the Scheme's risk profile.

2.02   For the purposes of SLC 2.01, the Scheme shall take the following actions:

a.   Put in place such risk measurement arrangements processes and techniques as are necessary to ensure that the risks of taken positions and their contribution to the overall risk profile are accurately measured on the basis of sound and reliable data and that the risk measurement arrangements, processes and techniques are adequately documented;

b.   Conduct, where appropriate, periodic back-tests in order to review the validity of risk measurement arrangements which include model-based forecasts and estimates;

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **1** of **31**

c. Conduct, where appropriate, periodic stress tests and scenario analyses to address risks arising from potential changes in market conditions that might adversely impact the Scheme;

d. Establish, implement and maintain a documented system of internal limits concerning the measures used to manage and control the relevant risks of the Scheme taking into account all risks which may be material to the Scheme and ensuring consistency with the Scheme's risk-profile;

e. Ensure that the current level of risk complies with the risk limit system as set out in point (d) for the Scheme; and

f. Establish, implement and maintain adequate procedures that, in the event of actual or anticipated breaches to the risk limit system of the Scheme, result in timely remedial actions in the best interests of unit-holders.

Liquidity Risk Management

2.03 A Scheme shall employ an appropriate liquidity risk management process in order to ensure that it is able to comply at any time with the provisions on repurchase or redemption of units thereby as prescribed in Part BII of these Rules.

Where appropriate, the Scheme shall conduct stress tests which enable assessment of its liquidity risk under exceptional circumstances.

2.04 A Scheme shall ensure that the liquidity profile of its investments is appropriate to the redemption policy laid down in the fund rules or the instruments of incorporation or the prospectus.

3. Calculation of Global Exposure

3.01 The Scheme shall calculate the global exposure as either of the following:

a. The incremental exposure and leverage generated by the Scheme through the use of financial derivative instruments including embedded derivatives pursuant to the provisions of Part BII of these Rules, which incremental exposure and leverage may not exceed the total of the Scheme's net asset value; or

b. The market risk of the Scheme's portfolio.

3.02 The Scheme shall calculate its global exposure at least on a daily basis. The limits on global exposure must be complied with on an ongoing basis. Depending on the investment strategy being pursued and the composition of the portfolio, a Scheme should, where necessary, also carry out intra-day calculations.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **2** of **31**

3.03   The Scheme shall calculate the global exposure by using the commitment approach, the value at risk ("VaR") approach or other advanced risk measurement methodologies as may be appropriate. For the purposes of this Appendix, VaR shall mean a measure of the potential loss to the Scheme due to market risk. More particularly, VaR shall measure the potential loss at a given confidence level (probability) over a specific time period under normal market conditions.

3.04   The Scheme shall select an appropriate methodology to calculate global exposure. More specifically, the selection should be based on the assessment by the Scheme of its risk profile resulting from its investment policy (including its use of financial derivative instruments).

3.05   The Scheme must use an advanced risk measurement methodology such as the VaR to calculate global exposure where:

   a.   the Scheme engages in complex investment strategies which represent more than a negligible part of its investment policy; and/or

   b.   the Scheme has more than a negligible exposure to exotic derivatives; and/or

   c.   the commitment approach doesn't adequately capture the market risk of the portfolio.

3.06   The use of a commitment approach, or VaR approach or any other methodology to calculate global exposure does not exempt the Scheme from establishing appropriate internal risk management measures and limits.

3.07   When a Scheme pursuant to the conditions prescribed in Part BII of these Rules employs techniques and instruments including repurchase agreements or securities lending transactions in order to generate additional leverage or exposure to market risk, it shall take these transactions into consideration when calculating global exposure.

3.08   An index-tracking leveraged Scheme shall comply with the limits and rules on global exposure prescribed in SLC 5.19 of Part BII of these Rules.

3.09   An index-tracking leveraged Scheme shall calculate its global exposure using either the commitment approach or the relative VaR approach according to the rules prescribed in this Appendix. The global exposure limitation also applies to Schemes replicating leveraged indices.

4.   Standard Commitment Approach

4.01   Where the commitment approach is used for the calculation of global exposure, the Scheme shall apply this approach to all financial derivative instrument positions

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **3** of **31**

including embedded derivatives as referred to in Part BII of these Rules whether used as part of the Scheme's general investment policy, for the purposes of risk reduction or for the purposes of efficient portfolio management.

4.02   Where the commitment approach is used for the calculation of global exposure, the Scheme shall convert each financial derivative instrument position into the market value of an equivalent position in the underlying asset of that derivative (standard commitment approach).

4.03   The Scheme may apply other calculation methods which are equivalent to the standard commitment approach.

4.04   A Scheme shall take account of netting and hedging arrangements when calculating global exposure, where these arrangements do not disregard obvious and material risks and result in a clear reduction in risk exposure.

4.05   Where the use of financial derivative instruments does not generate incremental exposure for the Scheme, the underlying exposure need not be included in the commitment calculation.

4.06   Where the commitment approach is used, temporary borrowing arrangements entered into on behalf of the Scheme need not be included in the global exposure calculation.

4.07   The commitment approach is always the market value of the equivalent position in the underlying asset. This may be replaced by the notional value or the price of the futures contract where this is more conservative. For non-standard derivatives, where it is not possible to convert the derivative into the market value or notional value of the equivalent underlying asset, an alternative approach may be used provided that the total amount of derivatives represent a negligible portion of the Scheme's portfolio.

4.08   The following steps must be taken by a Scheme when calculating global exposure using the commitment approach:

    a.   Calculate the commitment of each individual derivative (as well as any embedded derivatives and leverage linked to efficient portfolio management techniques).

    b.   Identify netting and hedging arrangements. For each netting or hedging arrangement, calculate a net commitment as follows:

        –   Gross commitment is equal to the sum of the commitments of the individual financial derivative instruments (including embedded derivatives) after derivative netting.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **4** of **31**

- If the netting or hedging arrangement involves security positions, the market value of security positions can be used to offset gross commitment.

- The absolute value of the resulting calculation is equal to the net commitment.

    c.   Global exposure is then equal to the sum of:

- the absolute value of the commitment of each individual derivative not involved in netting or hedging arrangements; and

- the absolute value of each net commitment after the netting or hedging arrangements as described above; and

- the sum of the absolute values of the commitment linked to efficient portfolio management techniques.

4.09   The calculation of gross and net commitment must be based on an exact conversion of the financial derivative position into the market value of an equivalent position in the underlying asset of that derivative.

4.10   The commitment calculation of each financial derivative position should be converted to the base currency of the Scheme using the spot rate.

4.11   Where any currency derivative has 2 legs that are not in the base currency of the fund, both legs must be taken into account in the commitment calculation.

Conversion Methodologies – Standard Derivatives

4.12   The following conversion methods should be applied to the non-exhaustive list of the Standard Derivatives hereunder:

- Futures

– Bond Future
Number of contracts * notional contract size * market price of the cheapest-to-deliver reference bond

– Interest Rate Future
Number of contracts * notional contract size

– Currency Future
Number of contracts * notional contract size

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **5** of **31**

– Equity Future
Number of contracts * notional contract size * market price of underlying equity share

– Index Futures
Number of contracts * notional contract size * index level

• <u>Plain Vanilla Options (bought/sold puts and calls)</u>

– Plain Vanilla Bond Option
Notional contract value * market value of underlying reference bond * delta

– Plain Vanilla Equity Option
Number of contracts * Notional contract size * market value of underlying equity share * delta

– Plain Vanilla Interest Rate Option
Notional contract value * delta

– Plain Vanilla Currency Option
Notional contract value of currency leg(s) * delta

– Plain Vanilla Index Options
Number of contracts * Notional contract size * index level * delta

– Plain Vanilla Options on Futures
Number of contracts * Notional contract size * market value of underlying asset * delta

– Plain Vanilla Swaptions
Reference swap commitment conversion amount (refer hereunder) * delta

– Warrants and Rights
Number of shares/bonds * market value of underlying referenced instrument * delta

• <u>Swaps</u>

– Plain Vanilla Fixed/ Floating Rate Interest Rate and Inflation Swaps
Market value of underlying (the notional value of the fixed leg may also be applied)

– Currency Swap
Notional value of currency leg(s)

– Cross currency Interest Rate Swaps
Notional value of currency leg(s)

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **6** of **31**

– Basic Total Return Swap
Underlying market value of reference asset(s)

– Non-Basic Total Return Swap
Cumulative underlying market value of both legs of the TRS

– Single Name Credit Default Swap
Protection Seller – The higher of the market value of the underlying reference asset or the notional value of the Credit Default Swap.
Protection Buyer – Market value of the underlying reference asset.

– Contract for Differences
Number of shares/bonds * market value of underlying referenced instrument

- <u>Forwards</u>

– FX Forward
Notional value of currency leg(s)

– Forward Rate Agreement
Notional value

- <u>Leveraged exposure to indices or indices with embedded leverage</u>

– A derivative providing leveraged exposure to an underlying index, or indices that embed leveraged exposure to their portfolio, must apply the standard applicable commitment approach to the assets in question.

Conversion Methodologies – Embedded Derivatives

4.13 The following conversion methods should be applied to the non-exhaustive list of the financial instruments which embed derivatives:

– Convertible Bonds
Number of referenced shares * market value of underlying reference shares * delta

– Credit Linked Notes
Market value of underlying reference asset(s)

– Partly Paid Securities
Number of shares/bonds * market value of underlying referenced instruments * delta

Conversion Methodologies – Non-Standard (Exotic) Derivatives

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **7** of **31**

4.14   The following instruments are given as examples of non-standard derivatives with the related commitment methodology to be used.

–   Variance Swaps

Variance swaps are contracts that allow investors to gain exposure to the variance (squared volatility) of an underlying asset and, in particular, to trade future realized (or historical) volatility against current implied volatility. According to market practice, the strike and the variance notional are expressed in terms of volatility. For the variance notional this gives:

$$variance\ notional = \frac{vega\ notional}{2\ x\ strike}$$

The vega notional provides a theoretical measure of the profit or loss resulting from a 1% change in volatility.

As a realised volatility cannot be less than zero, a long swap position has a known maximum loss. The maximum loss on a short swap is often limited by the inclusion of a cap on volatility. However without a cap, a short swap's potential losses are unlimited.

The conversion methodology to be used for a given contract at time t is:

Variance Notional * (current) Variance$_t$ (without volatility cap)
Variance Notional * min [(current) Variance$_t$; volatility cap^2] (with volatility cap)

Whereby: (current) variance$_t$ is a function of the squared realised and implied volatility, more precisely:

$$(current)\ variance_t = \frac{t}{T} * realised\ volatility\ (0, t^2) + \frac{T-t}{T} * implied\ volatility + (t, T)^2$$

–   Volatility Swaps

By analogy with the variance swaps, the following conversion formulae should be applied to volatility swaps:

Vega Notional * (current) Volatility$_t$ (without volatility cap)
Vega Notional * min [(current) Volatility$_t$; volatility cap] (with volatility cap)

Whereby: (current) volatility$_t$ is a function of the realised and implied volatility

–   Barrier (knock-in knock-out) Options

Number of contracts * notional contract size * market value of underlying equity share * maximum delta

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **8** of **31**

Whereby the maximum delta is equal to the highest (if positive) or lowest (if negative) value that the delta of the option may attain taking into account all possible market scenarios.

Financial Derivative Instruments Excluded from the Global Exposure Calculation

4.15   A financial derivative instrument is not taken into account when calculating the commitment if it fulfils all of the following characteristics:

   a.   It swaps the performance of financial assets held in the Scheme's portfolios for the performance of other reference financial assets;

   b.   It totally offsets the market risk of the swapped assets held in the Scheme's portfolio so that its performance (e.g. performance of the net asset value) does not depend on the performance of the swapped assets; and

   c.   It includes neither additional optional features, nor leverage clauses nor other additional risks as compared to a direct holding of the reference financial assets.

4.16   A financial derivative instrument is not taken into account when calculating the commitment if it meets both of the following conditions:

   a.   The combined holding by the Scheme of a financial derivative instrument relating to a financial asset and cash which is invested in risk free assets is equivalent to holding a cash position in the given financial asset; and

   b.   The financial derivative instrument is not considered to generate any incremental exposure and leverage or market risk.

5.   Netting and Hedging

5.01   When calculating global exposure using the commitment approach, netting and hedging arrangements may be taken into account to reduce global exposure.

5.02   Netting arrangements are defined as combinations of trades on financial derivative instruments and/or security positions which refer to the same underlying asset, irrespective – in the case of financial derivative instruments – of the contracts' due date; and where the trades on financial derivative instruments and/or security positions are concluded with the sole aim of eliminating the risks linked to positions taken through the other financial derivative instruments and/or security positions.

5.03   Hedging arrangements are defined as combinations of trades on financial derivative instruments and/or security positions which do not necessarily refer to the same underlying asset and where the trades on financial derivative instruments and/or

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **9** of **31**

security positions are concluded with the sole aim of eliminating the risks linked to positions taken through the other financial derivative instruments and/or security positions.

5.04   If the Scheme uses a conservative calculation rather than an exact calculation of the commitment for each financial derivative instrument, hedging and netting arrangements cannot be taken into account to reduce commitment on the derivatives involved if it results in an underestimation of the global exposure.

5.05   The Scheme may net positions:

a.   between financial derivative instruments, provided they refer to the same underlying asset, even if the maturity date of the financial derivative instruments is different; and/ or

b.   between a financial derivative instrument (whose underlying asset is a transferable security, money market instrument or a collective investment undertaking) and that same corresponding underlying asset.

5.06   Schemes that invest primarily in interest rate derivatives may make use of specific duration-netting rules in order to take into account the correlation between the maturity segments of the interest rate curve.

Duration-Netting Rules

5.07   The duration-netting rules cannot be used if they would lead to an incorrect assessment of the risk profile of the Scheme. Where the Scheme avails itself of these netting rules, it should not include other sources of risk such as volatility in their interest rate strategy. Therefore, for example, interest rate arbitrage strategies may not apply these netting rules.

5.08   The use of duration-netting rules cannot generate any unjustified level of leverage through investment in short term positions. Thus, for example, short dated interest rate derivatives cannot be the main source of performance for a Scheme with medium duration if it makes of this netting methodology.

5.09   A Scheme interest rate derivative should be converted into its equivalent underlying asset position according to the following methodology:

a.   Allocate each interest rate financial derivative instrument to the appropriate range ('bucket') of the following maturity-based ladder:

Bucket	Maturities range
1	0 - 2 years
2	2 - 7 years

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **10** of **31**

3	7 - 15 years
4	> 15 years

b. Calculate the equivalent underlying asset position of each interest rate derivative instrument as its duration divided by the target duration of the Scheme and multiplied by the market value of the underlying asset:

$$Equivalent\ underlying\ asset\ position = \frac{duration_{FDI}}{duration_{target}} \times MtM_{Underlying}$$

where:

- $duration_{FDI}$ is the duration (sensitivity to interest rates) of the interest rate derivative instrument;

- $duration_{target}$ is in line with the investment strategy, the directional positions and with the expected level of risk at any time and will be regularised otherwise. It is also in line with the portfolio duration under normal market conditions; and

- $MtM_{underlying}$ is the market value of the underlying asset as detailed SLC 4.07 to 4.14 of this Appendix.

c. Net the long and short equivalent underlying asset positions within each bucket. The amount of the former which is netted with the latter is the netted position for that bucket.

d. Net the amount of the remaining unnetted long (or short) position in the bucket *(i)* with the amount of the remaining short (long) position remaining in the bucket *(i+1)*.

e. Net the amount of the unnetted long (or short) position in the bucket *(i)* with the amount of the remaining short (long) position remaining in the bucket *(i+2)*.

f. Calculate the netted amount between the unnetted long and short positions of the two most remote buckets.

g. The Scheme calculates its total global exposure as the sum of:

   i.   0% of the netted position for each bucket;

   ii. 40% of the netted positions between two adjoining buckets *(i)* and *(i+1)*;

   iii. 75% of the netted positions between two remote buckets separated by another one, meaning buckets *(i)* and *(i+2)*;

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **11** of **31**

iv.   100% of the netted positions between the two most remote buckets; and

v.   100% of the remaining unnetted positions.

5.10   A Scheme making use of the duration-netting rules, which are optional, can still make use of the hedging framework further to SLCs 5.11 to 5.13 hereunder. However, only the interest rate derivatives which are not included in hedging arrangements can still make use of duration-netting rules.

Hedging

5.11   Hedging arrangements may only be taken into account when calculating global exposure if they offset the risks linked to some assets and, in particular, if they comply with all the criteria below:

    a.   Investment strategies that aim to generate a return should not be considered as hedging arrangements;

    b.   There should be a verifiable reduction of risk at the Scheme level;

    c.   The risks linked to financial derivative instruments, i.e. general and specific if any, should be offset;

    d.   They should relate to the same asset class; and

    e.   They should be efficient in stressed market conditions.

5.12   Notwithstanding the criteria referred to in SLC 5.11, financial derivative instruments used for currency hedging purposes (i.e. that do not add any incremental exposure, leverage and/or other market risks) may be netted when calculating the Scheme's global exposure.

5.13   For avoidance of doubt, no market neutral or long/short investment strategies will comply with all the criteria prescribed in SLCs 5.11 and 5.12.

6.   Alternative Commitment Approach

6.01   Schemes which comply in full with the criteria in SLC 6.02 may calculate global exposure using the commitment approach in the way described in SLC 6.03.

6.02   The criteria are the following:

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **12** of **31**

a. The Scheme is passively managed and structured to achieve at maturity the pre-defined payoff and holds at all times the assets needed to ensure that this pre-defined payoff will be met;

b. The Scheme is formula-based and the pre-defined payoff can be divided into a limited number of separate scenarios which are dependent on the value of the underlying assets and which offer investors different payoffs;

c. The investor can only be exposed to one payoff profile at any time during the life of the Scheme;

d. The use of the commitment approach as defined in Section 4 to calculate global exposure for the individual scenarios is appropriate taking into account the requirements of SLC 3.04 to SLC 3.06 of this Appendix;

e. The Scheme has a final maturity not exceeding 9 years;

f. The Scheme does not accept new subscriptions from the public after the initial marketing period;

g. The maximum loss the Scheme can suffer when the portfolio switches from one payoff profile to another must be limited to 100% of the initial offer price;

h. The impact of the performance of a single underlying asset on the payoff profile when the Scheme switches from one scenario to another complies with the diversification; and

i. The requirements of Directive 2009/65/EC based on the initial net asset value of the Scheme.

6.03 The calculation method is the commitment approach as described in Section 4 but adjusted in the following way:

a. The formula-based investment strategy for each pre-defined payoff is broken down into individual payoff scenarios;

b. The financial derivative instruments implied in each scenario are assessed to establish whether the derivative may be excluded from the calculation of global exposure under the provisions of SLC 4.15 and SLC 4.16 of this Appendix; and

c. Finally the Scheme calculates the global exposure of the individual scenarios to assess compliance with the global exposure limit of 100% of NAV.

6.04 Schemes which satisfy the criteria set out in SLC 6.02 (a) to (d) above and which were authorised before 1st July, 2011 shall apply the conditions on risk management

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **13** of **31**

and the calculation of global exposure and counterparty risk for Scheme as laid down in the Investment Services Rules for Retail Collective Investment Schemes which applied until 30th June 2011.

6.05   The Scheme which makes use of the approach for the calculation of global exposure outlined in SLCs 6.01 to 6.04 above should ensure that the prospectus:

a.   contains full disclosure regarding the investment policy, underlying exposure and payoff formulas in clear language which can be easily understood by the retail investor;

b.   includes a prominent risk warning informing investors who redeem their investment prior to maturity that they do not benefit from the predefined payoff and may suffer significant losses.

7.   Efficient Portfolio Management Techniques

7.01   If a Scheme is authorised to undertake repurchase transactions or securities lending transactions in order to generate additional leverage through the reinvestment of cash collateral, it must take these transactions into consideration for the determination of the global exposure.

7.02   Any global exposure generated will be added with the global exposure created through the use of derivatives and the total of these must not be greater than 100% of NAV.

7.03   Any further use of cash collateral as part of another repurchase transaction or securities lending transactions must be similarly treated and included in the global exposure calculation.

7.04   In accordance with SLC 5.18 of Part BII of these Rules, Schemes employing efficient portfolio management techniques shall make sure that the risks arising from these activities are adequately captured by the risk management process of the Scheme

7.05   When a Scheme enters into efficient portfolio management transactions it shall take these operations into account when developing its liquidity risk management process in order to ensure it is able to comply at any time with their redemption obligations.

7.06   In accordance with paragraph 24 of the Guidelines on Eligible Assets for Investment by UCITS as transposed in SLC 5.18 of Part BII of these Rules, techniques and instruments relating to transferable securities and money market instruments shall not:

a)   result in a change of the declared investment objective of the Scheme; or

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **14** of **31**

b) add substantial supplementary risks in comparison to the original risk policy as described in its sale documents.

7.07 All the revenues arising from efficient portfolio management techniques, net of direct and indirect operational costs, shall be returned to the Scheme.

8. Calculation of Global Exposure using the VaR Approach

8.01 When calculating the global exposure calculation by using the VaR approach, the Scheme should consider all the positions of its portfolio.

8.02 A Scheme should always set the maximum VaR limit according to its defined risk profile.

VaR Approaches – Relative VaR and Absolute VaR – The Choice

8.03 For the purpose of calculating global exposure, the Scheme can use the relative VaR approach or the absolute VaR approach as laid down hereunder.

8.04 The Scheme is responsible for deciding which VaR approach is the most appropriate methodology given its risk profile and investment strategy.

8.05 The Scheme should be able to demonstrate that the VaR approach it uses is appropriate. The decision and its underlying assumptions should be fully documented.

8.06 As a general rule, there must be consistency in the choice of the type of VaR used for the calculation of the global exposure.

Relative VaR Approach

8.07 Under the relative VaR approach, the Scheme shall calculate its global exposure as follows:

a. Calculate the VaR of the Scheme's current portfolio (which includes derivatives);

b. Calculate the VaR of a reference portfolio;

c. Check that the VaR of the Scheme's portfolio is not greater than twice the VaR of the reference portfolio in order to ensure a limitation of the global leverage ratio of the Scheme to 2. This limit can be presented as follows:

$$\frac{(VaR\ UCITS - VaR\ Reference\ Portfolio)}{VaR\ Reference\ Portfolio} \times 100 \leq 100\%$$

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **15** of **31**

8.08   The reference portfolio and the related processes should comply with the following criteria:

a.   The reference portfolio should be unleveraged and should, in particular, not contain any financial derivative instruments or embedded derivatives, except that;

–   a Scheme engaging in a long/short strategy may select a reference portfolio which uses financial derivative instruments to gain the short exposure;

–   a Scheme which intends to have a currency hedged portfolio may select a currency hedged index as a reference portfolio.

b.   The risk profile of the reference portfolio should be consistent with the investment objectives, policies and limits of the Scheme's portfolio;

c.   If the risk/return profile of a Scheme changes frequently or if the definition of a reference portfolio is not possible, then the relative VaR method should not be used.

d.   The process relating to the determination and the ongoing maintenance of the reference portfolio should be integrated in the risk management process and be supported by adequate procedures. Guidelines governing the composition of the reference portfolio should be developed. In addition, the actual composition of the reference portfolio and any changes should be clearly documented.

Absolute VaR Approach

8.09   The absolute VaR approach limits the maximum VaR that a Scheme can have relative to its Net Asset Value.

Minimum Requirements for VaR Approach

8.10   When assessing the global exposure by means of a relative or absolute VaR approach, the Scheme should comply with the quantitative and qualitative minimum requirements as laid down hereunder.

VaR approach: Quantitative requirements

8.11   Calculation Standards

8.11.1 The absolute VaR of a Scheme cannot be greater than 20% of its NAV.

8.11.2 The Scheme shall carry out the calculation of the absolute and relative VaR in accordance with the following parameters:

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **16** of **31**

a. One-tailed confidence interval of 99%;

b. Holding period equivalent to 1 month (20 business days);

c. Effective observation period (history) of risk factors of at least 1 year (250 business days) unless a shorter observation period is justified by a significant increase in price volatility (for instance extreme market conditions);

d. Quarterly data set updates, or more frequent when market prices are subject to material changes; and

e. At least daily calculation.

8.11.3 A confidence interval and/or holding period differing from the default parameters in SLC 8.11.2 (a) and (b) may be used by the Scheme provided the confidence interval is not below 95% and the holding period does not exceed 1 month (20 days).

8.11.4 In the case where the Scheme uses an absolute VaR approach, the use of other calculation parameters goes together with a rescaling of the 20% limit to the particular holding period and/or confidence interval. The rescaling can only be done under the assumption of a normal distribution with an identical and independent distribution of the risk factor returns by referring to the quantiles of the normal distribution and the square root of time rule.

8.12   Risk Coverage

8.12.1 The VaR model used for global exposure calculation purposes should take into account, as a minimum, general market risk and, if applicable, idiosyncratic risk. The event (and/or default) risks to which a Scheme is exposed following its investments should be taken into account, as a minimum, in the stress testing program. If the proposed risk measurement framework should prove inadequate, the MFSA reserves the right to require stricter measures for such Scheme.

8.13   Completeness and Accuracy of the Risk Assessment

8.13.1 The choice of the appropriate model remains the responsibility of the Scheme. When selecting the VaR model, the Scheme should ensure that the model is appropriate with regard to the investment strategy being pursued and the types and complexity of the financial instruments used.

8.13.2 The VaR model should provide for completeness and it should assess the risks with a high level of accuracy. In particular:

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **17** of **31**

a.   all the positions of the Scheme's portfolio should be included in the VaR calculation;

b.   the model should adequately capture all the material market risks associated with portfolio positions and, in particular, the specific risks associated with financial derivative instruments. For that purpose, all the risk factors which have more than a negligible influence on the fluctuation of the portfolio's value should be covered by the VaR model;

c.   the quantitative models used within the VaR framework (pricing tools, estimation of volatilities and correlations, etc.) should provide for a high level of accuracy; and

d.   all data used within the VaR framework should provide for consistency, timeliness and reliability.

8.14   Back Testing

8.14.1   The Scheme should monitor the accuracy and performance of its VaR model (i.e. prediction capacity of risk estimates), by conducting a back testing program.

8.14.2   The back testing program should provide for each business day a comparison of the one-day value-at-risk measure generated by the Scheme's model for its end-of-day positions to the one-day change of the Scheme's portfolio value by the end of the subsequent business day.

8.14.3   The Scheme should carry out the back testing program at least on a monthly basis, subject to always performing retroactively the comparison for each business day in SLC 8.14.2.

8.14.4   The Scheme should determine and monitor the 'overshootings' on the basis of this back testing program. An 'overshooting' is a one-day change in the portfolio's value that exceeds the related one-day value-at-risk measure calculated by the model.

8.14.5   If the back testing results reveal a percentage of 'overshootings' that appears to be too high, the Scheme should review the VaR model and make appropriate adjustments.

8.14.6   The senior management of the Scheme should be informed at least on a quarterly basis (and where applicable the Scheme's regulatory authority should be informed on a semi-annual basis), if the number of overshootings for the most recent 250 business days exceeds 4 in the case of a 99% confidence interval. This information should contain an analysis and explanation of the sources of 'overshootings' and a statement of what measures if any were taken to improve the accuracy of the model. The MFSA may take measures and apply stricter criteria to the use of VaR if the 'overshootings' exceed an unacceptable number.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **18** of **31**

8.15   Stress Testing

8.15.1 Where the Scheme uses the VaR approach, it should conduct a rigorous, comprehensive and risk adequate stress testing program in accordance with the qualitative and quantitative requirements set out hereunder.

8.15.2 The stress testing program should be designed to measure any potential major depreciation of the Scheme value as a result of unexpected changes in the relevant market parameters and correlation factors. Conversely where appropriate, it should also measure changes in the relevant market parameters and correlation factors which could result in major depreciation of the Scheme's value.

8.15.3 The stress tests should be adequately integrated into the Scheme's risk management process and the results should be considered when making investment decision for the Scheme.

8.15.4 The stress tests should cover all risks which affect the value or the fluctuations in value of the Scheme to any significant degree. In particular, those risks which are not fully captured by the VaR model used, should be taken into account.

8.15.5 The stress tests should be appropriate for analysing potential situations in which the use of significant leverage would expose the Scheme to significant downside risk and could potentially lead to the default of the Scheme (i.e. NAV <0).

8.15.6 The stress tests should focus on those risks which, though not significant in normal circumstances, are likely to be significant in stress situations, such as the risk of unusual correlation changes, the illiquidity of markets in stressed market situations or the behaviour of complex structured products under stressed liquidity conditions.

8.15.7 Stress tests should be carried out on a regular basis, at least once a month. Additionally, they should be carried out whenever a change in the value or the composition of the Scheme or a change in market conditions makes it likely that the test results will differ significantly.

8.15.8 The design of the stress tests should be adapted in line with the composition of the Scheme and the market conditions that are relevant for the Scheme.

8.15.9 The Scheme should implement clear procedures relating to the design of, and ongoing adaptation of the stress tests. A program for carrying out stress tests should be developed on the basis of such procedures. It should be explained why the program is suitable for the Scheme. Completed stress tests together with their results should be clearly documented. Reasons should be given if it is intended to deviate from the program.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **19** of **31**

VaR Approach: Qualitative Requirements

8.16   Tasks to be carried out by the risk management function

8.16.1 The risk management function should be responsible for:

   a.   sourcing, testing, maintaining and using the VaR model on a day-to-day basis;

   b.   supervising the process relating to the determination of the reference portfolio if the Scheme reverts to a relative VaR approach;

   c.   ensuring on a continuous basis that the model is adapted to the Scheme's portfolio;

   d.   performing continuous validation of the model;

   e.   validating and implementing for each Scheme a documented system of VaR limits consistent with its risk profile that is to be approved by Senior Management and the Board of Directors;

   f.   monitoring and controlling the VaR limits;

   g.   monitoring on a regular basis the level of leverage generated by the Scheme; and

   h.   producing on a regular basis reports relating to the current level of the VaR measure (including back testing and stress testing) for Senior Management.

8.17   Use of the VaR model

8.17.1 The VaR model and the related outputs should represent an integral part of the daily risk management work. In addition, they should be integrated in the regular investment process lead by the investment managers as part of the risk management program to keep the Scheme's risk profile under control and consistent with its investment strategy.

8.18   Model validation

8.18.1 Following initial development, the model should undergo a validation by a party independent of the building process for ensuring that the model is conceptually sound and captures adequately all material risks. This validation process must also be carried out following any significant change to the model. A significant change could relate to the use of a new product by the Scheme, the need to improve the model following the back testing results, or a decision taken by the Scheme to change certain aspects of the model in a significant way.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **20** of **31**

8.18.2 The risk management function should perform ongoing validation of the VaR model (this includes, but is not limited to back testing as laid down SLCs 8.14.1. to 8.14.6. of this Appendix in order to ensure the accuracy of the model's calibration. The review should be documented. Where necessary, the model should be adjusted.

8.19 Documentation and procedures

8.19.1 The documentation requirements referred to in SLC 2.02 above should be taken to include an adequate documentation of the VaR model and the related processes and techniques, thereby covering, among others:

  a. the risks covered by the model;

  b. the model's methodology;

  c. the mathematical assumptions and foundations;

  d. the data used;

  e. the accuracy and completeness of the risk assessment;

  f. the methods used to validate the model;

  g. the back testing process;

  h. the stress testing process;

  i. the validity range of the model; and

  j. the operational implementation.

VaR Approach: Additional Safeguards and Disclosure

8.20 Additional Safeguards

8.20.1 The Scheme should regularly monitor the leverage if it calculates its global exposure using a VaR methodology.

8.20.2 The Scheme should supplement the VaR / Stress Testing framework, where appropriate by taking into account the risk profile and the investment strategy being pursued, with other risk measurement methods.

8.21 Disclosure: Prospectus and Annual Reports

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **21** of **31**

8.21.1 The Scheme shall disclose in the prospectus and annual report the method used to calculate the global exposure (i.e. commitment approach, relative VaR or absolute VaR).

8.21.2 The Scheme using VaR approaches should disclose the expected level of leverage and the possibility of higher leverage levels in the prospectus.

8.21.3 Leverage should be calculated as the sum of the notionals of the derivatives used.

8.21.4 When using the relative VaR approach, information on the reference portfolio should be disclosed in the prospectus and the annual report.

8.21.5 The VaR measure of the Scheme should be published in the annual report. In this respect, the information provided should at least include the lowest, the highest and the average utilization of the VaR limit calculated during the financial year. The model and inputs used for calculation (calculation model, confidence level, holding period, length of data history) should be displayed.

9.   Counterparty Risk and Issuer Concentration

9.01   The Scheme shall ensure that the counterparty risk arising from an over-the-counter ("OTC") financial derivative instrument is subject to the limits prescribed in Part BII of these Rules.

9.02   When calculating the Scheme's exposure to a counterparty within the limits prescribed in Part BII of these Rules, the Scheme shall use the positive mark-to-market value of the OTC derivative contract with that counterparty.

9.03   The risk exposures to a counterparty arising from the OTC financial derivative transactions and efficient portfolio management techniques shall be combined when calculating the counterparty risk limits prescribed under SLCs 5.6 to 5.10, 5.12, 5.14, 5.35 and 5.36 of Part BII of these Rules

9.04   A Scheme may net its derivative positions with the same counterparty, provided that they are able to legally enforce netting agreements with the counterparty on behalf of the Scheme. Netting shall only be permissible with respect to OTC derivative instruments with the same counterparty and not in relation to any other exposures the Scheme may have with the same counterparty.

9.05   The Scheme may reduce its exposure to a counterparty of an OTC derivative transaction through the receipt of a collateral. Collateral received shall be sufficiently liquid so that it can be sold quickly at a price that is close to its pre-sale valuation.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **22** of **31**

9.06   The Scheme shall take collateral into account when calculating exposure to counterparty risk when it passes collateral to OTC counterparty. Collateral passed may be taken into account on a net basis only if the Scheme is able to legally enforce netting arrangements with this counterparty.

9.07   The Scheme shall calculate issued concentration on the basis of the underlying exposure created through the use of financial derivative instruments pursuant to the commitment approach.

9.08   With respect to the exposure arising from arising from OTC derivatives transactions, the Scheme shall include in the calculation any exposure to OTC derivative counterparty risk.

9.09   The risk exposure of a Scheme to a counterparty to an OTC derivative may not exceed 5% of assets. This limit is raised to 10% in the case of credit institutions. The following exposure must also be calculated within the OTC counterparty limits:

- Initial margin posted to and variation margin receivable from a broker relating to exchange-traded or OTC derivatives which is not protected by client money rules or other similar arrangements to protect the Scheme against the insolvency of the broker.
- The risk exposures to a counterparty arising from efficient portfolio management techniques.

9.10   The following exposure must also be included when calculating the issuer concentration limit of 20%:

- Any net exposure to a counterparty generated through a stock-lending or repurchase agreement, net exposure being understood as the amount receivable by the Scheme less any collateral provided to the Scheme. Exposures created through the reinvestment of collateral must also be taken into account in the issuer-concentration calculations.

9.11   When calculating exposure, a Scheme must establish whether its exposure is to an OTC counterparty, a broker or a clearing house.

9.12   Position exposure to the underlying assets of financial derivative instruments (including embedded financial derivative instruments) in transferable securities such as money market instruments or collective investment undertakings, combined where relevant with positions resulting from direct investments, may not exceed the limits prescribed in Part BII of these Rules.

9.13   When calculating issuer-concentration risk, the financial derivative instrument (including embedded financial derivative instruments) must be looked through in

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **23** of **31**

determining the resultant position exposure. This position exposure must be taken into account in the issuer concentration calculations. It must be calculated using the commitment approach when appropriate or the maximum potential loss as a result of default by the issuer if more conservative. It must also be calculated by all Schemes, regardless of whether they use VaR for global exposure purposes.

9.14   This provision does not apply in the case of index-based financial derivative instruments provided the underlying index is one which meets with the criteria prescribed in Part BII of these Rules.

Collateral

9.15   All assets received by the Scheme in the context of efficient portfolio management techniques shall be considered as collateral for the purpose of these SLCs and shall comply with the criteria laid down in SLC 9.16.

9.16   Where a Scheme enters into OTC financial derivative transactions and efficient portfolio management techniques, all collateral used to reduce counterparty risk exposure shall comply with the following criteria at all times:

- Liquidity – any collateral received other than cash shall be highly liquid and traded on a regulated market or multilateral trading facility with transparent pricing in order that it can be sold quickly at a price that is close to pre-sale valuation. Collateral received shall also comply with SLCs 5.44 to 5.46 of Part BII of these Rules.

- Valuation – collateral received shall be valued on at least a daily basis and assets that exhibit high price volatility shall not be accepted as collateral unless suitably conservative haircuts are in place.

- Issuer credit quality – collateral received shall be of high quality.

- Correlation – the collateral received by the Scheme shall be issued by an entity that is independent from the counterparty and is required not to display high correlation with the performance of the counterparty.

- Collateral diversification (asset concentration) – the collateral shall be sufficiently diversified in terms of country, markets and issuers. The criterion of sufficient diversification with respect to issuer concentration shall be considered to be respected if the Scheme receives from a counterparty of efficient portfolio management and over-the-counter financial derivative transactions a basket of collateral with a maximum exposure to a given issuer of 20% of its net asset value. When the Scheme is exposed to different counterparties, the different

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1ˢᵗ July 2011
Latest Update: 13ᵗʰ August 2014

Page **24** of **31**

baskets of collateral shall be aggregated to calculate the 20% limit of exposure to a single issuer.

By way of derogation from this sub-paragraph, the Authority may allow the Scheme to be fully collateralised in different transferable securities and money market instruments issued or guaranteed by a Member State, one or more of its local authorities, a third country, or a public international body to which one or more Member States belong, provided that such a Scheme shall:

i.   receive securities from at least six different issues, but securities from any single issue should not account for more than 30% of the Scheme's net asset value;

ii. disclose the consent granted by the Authority in its prospectus; and

iii. disclose in its prospectus the names of the Member States, local authorities, or public international bodies issuing or guaranteeing securities which they intend to accept as collateral for more than 20% of their net asset value.

• Risks linked to the management of collateral, such as operational and legal risks, shall be identified, managed and mitigated by the risk management process.

• Where there is a title transfer, the collateral received shall be held by the depositary of the Scheme. For other types of collateral arrangement, the collateral can be held by a third party custodian which is subject to prudential supervision, and which is unrelated to the provider of the collateral.

• Collateral received shall be capable of being fully enforced by the Scheme at any time without reference to or approval from the counterparty.

• Non-cash collateral received shall not be sold, re-invested or pledged.

• Cash collateral received can only be:

-   placed on deposit with entities prescribed in SLC 4.1(vi) of Part BII of these Rules;

-   invested in high-quality government bonds;

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **25** of **31**

- used for the purpose of reverse repo transactions provided the transactions are with credit institutions subject to prudential supervision and the Scheme is able to recall at any time the full amount of cash on accrued basis;

- invested in short-term money market funds as defined in Appendix VII to these Rules.

9.17 Re-invested cash collateral shall be diversified in accordance with the diversification requirements applicable to non-cash collateral.

9.18 A Scheme receiving collateral for at least 30% of its assets shall have an appropriate stress testing policy in place to ensure regular stress tests are carried out under normal and exceptional liquidity conditions to enable the Scheme to assess the liquidity risk attached to the collateral. The liquidity stress testing policy shall at least prescribe the following:

a) design of stress test scenario analysis including calibration, certification and sensitivity analysis;

b) empirical approach to impact assessment, including back-testing of liquidity risk estimates;

c) reporting frequency and loss tolerance thresholds; and

d) mitigation actions to reduce loss including haircut policy and gap risk protection.

9.19 The Scheme shall have in place a clear haircut policy adapted for each class of assets received as collateral.

9.20 When devising the haircut policy, the Scheme shall take into account the characteristics of the assets such as the credit standing or the price volatility, as well as the outcome of the stress tests performed in accordance with SLC 9.18. This policy shall be documented and shall justify each decision to apply a specific haircut, or to refrain from applying any haircut, to a certain class of assets.

10. Transactions in Financial Derivative Instruments

10.01 A Scheme should, at any given time, be capable of meeting all its payment and delivery obligations incurred by transactions involving financial derivative instruments.

10.02 Monitoring to ensure that financial derivative transactions are adequately covered should form part of the risk management process.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **26** of **31**

10.03   Where a Scheme enters into a total return swap or invests in other financial derivative instruments with similar characteristics, the assets held by the Scheme shall comply with the investment limits set out in SLCs 5.6 to 5.12, 5.14, 5.35 to 5.41 and 5.43 to 5.45 of Part BII of these Rules. For example, when a Scheme enters into an unfunded swap, the investment portfolio that is swapped out shall comply with the aforementioned investment limits.

10.04   In accordance with SLC 5.19 of Part BII of these Rules and SLC 9.06 in this Appendix, where a Scheme enters into a total return swap or invests in other financial derivative instruments with similar characteristics, the underlying exposures of the financial derivative instruments shall be taken into account to calculate the investment limits laid down in SLCs 5.6 to 5.10, 5.12, 5.14, 5.35 and 5.36 of Part BII of these Rules.

10.05   Where the counterparty has discretion over the composition or management of the Scheme's investment portfolio or of the underlying of the financial derivative instrument, the agreement between the Scheme and the counterparty shall be considered as an investment management delegation arrangement and shall comply with the requirements on delegation

Procedures for the Assessment of the Value of OTC Derivatives

10.06   The Scheme's exposure to OTC derivatives must be assigned fair values that do not rely only on market quotations by the counterparties of the OTC transactions and which fulfil the criteria set out in Article 8(4) of Directive 2007/16/EC. In this regard, the Scheme shall establish, implement and maintain arrangements and procedures which ensure appropriate, transparent and fair valuation of the its exposures to OTC derivatives.

10.07   The Scheme shall ensure that the fair value of OTC derivatives is subject to adequate, accurate and independent assessment.

10.08   The valuation arrangements and procedures shall be adequate and proportionate to the nature and complexity of the OTC derivatives concerned.

10.09   The Scheme shall comply with the following requirements when arrangements and procedures concerning the valuation of OTC derivatives involve the performance of certain activities by third parties:

(a)   It shall retain the necessary resources and expertise so as to effectively monitor the activities carried out by third parties on the basis of an arrangement with the Scheme especially with regards to the management of the risk associated with those arrangements;

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **27** of **31**

(b) The Scheme shall exercise due skill, care and diligence when entering into, managing or terminating any arrangements with third parties in relation to the performance of risk management activities. Before entering into such arrangements, the Scheme shall take the necessary steps in order to verify that the third party has the ability and capacity to perform the risk management activities reliably, professionally and effectively. The Scheme shall establish methods for the ongoing assessment of the standard performance of the third party.

10.10 For the purposes of SLCs 10.03 to 10.06, the risk management function shall be appointed with specific duties and responsibilities.

10.11 The valuation arrangements and procedures referred to in SLC 10.03 to 10.06 shall be adequately documented.

Reports on Derivative Instruments

10.12 The Scheme shall deliver to the MFSA at least on an annual basis, reports containing information which reflects a true and fair view of all the types of derivative instruments used, the underlying risks, the quantitative limits and the methods which are chosen to estimate the risks associated with the derivative transactions.

10.13 The MFSA shall review the regularity and completeness of the information referred to in SLC 10.09 and shall have the opportunity to intervene where appropriate.

11.   Financial Indices

11.01 A Scheme shall not invest in commodity indices that do not consist of different commodities. Subcategories of the same commodity (for instance, from different regions or markets or derived from the same primary products by an industrialised process) should be considered as being the same commodity for the calculation of the diversification limits. For example, WTI Crude Oil, Brent Crude Oil, Gasoline or Heating Oil contracts should be considered as being all sub-categories of the same commodity (i.e. oil).

11.02 Sub-categories of a commodity should not be considered as being the same commodity if they are not highly correlated. With respect to the correlation factor, two components of a commodity index that are sub-categories of the same commodity should not be considered as highly correlated if 75% of the correlation observations are below 0.8. For that purpose the correlation observations should be calculated:

a.   on the basis of equally-weighted daily returns of the corresponding commodity prices; and

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **28** of **31**

b.   from a 250-day rolling time window over a 5-year period.

11.03   A Scheme shall demonstrate that an index satisfies the index criteria in SLCs 5.37 and 4.14 of Part BII of these Rules, including that of being a benchmark for the market to which it refers. For that purpose:

    a)   an index should have a clear, single objective in order to represent an adequate benchmark for the market;

    b)   the universe of the index components and the basis on which these components are selected for the strategy should be clear to investors and competent authorities;

    c)   if cash management is included as part of the index strategy, the Scheme shall demonstrate that this does not affect the objective nature of the index calculation methodology.

11.04   An index shall not be considered as being an adequate benchmark of a market if it has been created and calculated on the request of one, or a very limited number of, market participants and according to the specifications of those market participants.

11.05   A Scheme shall not invest in the following financial indices:

    a.   a financial index which has a single component that has an impact on the overall index return which exceeds the relevant diversification requirements i.e. 20%/35%.

     In the case of a leveraged index, the impact of one component on the overall return of the index, after having taken into account the leverage, should respect the same limits.

    b.   a financial index whose rebalancing frequency prevents investors from being able to replicate the financial index. Indices which rebalance on an intra-day or daily basis do not satisfy this criterion.

     For the purpose of these Rules, technical adjustments made to financial indices (such as leveraged indices or volatility target indices) according to publicly available criteria shall not be considered as rebalancing in the context of this SLC.

    c.   financial indices for which the full calculation methodology to, *inter alia*, enable investors to replicate the financial index is not disclosed by the index provider. This includes providing detailed information on index constituents, index calculation (including effect of leverage within the index), re-balancing methodologies, index changes and information on any operational difficulties

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **29** of **31**

in providing timely or accurate information. Calculation methodologies should not omit important parameters or elements to be taken into account by investors to replicate the financial index.

This information shall be easily accessible, free of charge, by investors and prospective investors, for example, via the internet. Information on the performance of the index shall be freely available to investors.

d. financial indices that do not publish their constituents together with their respective weightings.

This information shall be easily accessible, free of charge, by investors and prospective investors, for example, via the internet. Weightings may be published after each rebalancing on a retrospective basis. This information shall cover the previous period since the last rebalancing and include all levels of the index.

e. financial indices whose methodology for the selection and the rebalancing of the components is not based on a set of pre-determined rules and objective criteria.

f. financial indices whose index provider accepts payments from potential index components for inclusion in the index.

g. financial indices whose methodology permits retrospective changes to previously published index values ('backfilling').

11.06 The Scheme shall carry out appropriate documented due diligence on the quality of the index. This due diligence should take into account whether the index methodology contains an adequate explanation of the weightings and classification of the components on the basis of the investment strategy and whether the index represents an adequate benchmark. The due diligence shall also cover matters relating to the index components.

11.07 The Scheme shall also assess the availability of information on the index including:

a) whether there is a clear narrative description of the benchmark;

b) whether there is an independent audit and the scope of such an audit;

c) the frequency of index publication and whether this will affect the ability of the Scheme to calculate its net asset value.

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
Date of Issue: 1st July 2011
Latest Update: 13th August 2014

Page **30** of **31**

11.08   The Scheme shall ensure that the financial index is subject to independent valuation.

12.   Further Information

12.01   The following documents issued by the European Securities and Markets Authority ('ESMA') include further information and explanations on the different approaches that can be used by Schemes in order to monitor, measure and manage risk:

–   Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS [CESR/10-788], (available from: http://www.esma.europa.eu/system/files/10_788.pdf).

–   Guidelines to competent authorities and UCITS management companies on risk measurement and the calculation of global exposure for certain types of structured UCITS [ESMA/2012/197], (available from: http://www.esma.europa.eu/system/files/2012-197.pdf).

–   Guidelines to competent authorities and UCITS management companies on ETFs and other UCITS issues [ESMA/2014/937], (available from: http://www.esma.europa.eu/system/files/esma-2014-0011-01-00_en.pdf).

Investment Services Rules for Retail Collective Investment Schemes
Part B: Standard Licence Conditions
Appendix VI: Supplementary Licence Conditions on Risk Management, Counterparty Risk Exposure
and Issuer Concentration applicable to Maltese Retail Collective Investment Schemes set up as Maltese UCITS
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Page **31** of **31**