



CSSF Feedback Report Thematic Review – Valuation framework for less liquid and illiquid assets

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I. Definitions and abbreviations

For the purposes of this Thematic Review, the following definitions and abbreviations apply:

AIFs	Alternative investment funds in accordance with Article 1(39) of the AIFM Law.
AIFMs	Authorised alternative investment fund managers pursuant to Chapter 2 of the AIFM Law.
AIFM Directive	Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers, as amended.
AIFM Law	Law of 12 July 2013 transposing into Luxembourg legislation the AIFM Directive, as amended.
CdR	Commission Delegated Regulation (EU) No 231/2013 of 19 December 2012 supplementing the AIFM Directive.
Circular CSSF 18/698	Circular CSSF 18/698 relating to the authorisation and organisation of investment fund managers incorporated under Luxembourg law.
CIS	Collective investment schemes.
Commission Directive 2010/43/EU	Commission Directive 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company, as amended.
CSSF Regulation 10-4	CSSF Regulation 10-4 relating to organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company, transposing into Luxembourg regulation the Commission Directive 2010/43/EU.
<i>Dirigeants</i> of the IFM	Management body as defined in Article 1(26a) of the UCI Law and governing body as defined in Article 1 of CdR.
IFMs	Authorised AIFMs and UCITS management companies.
Part II UCIs	Undertakings for collective investment subject to part II of the UCI Law.
Senior Management of the IFM	Persons who effectively conduct the business of an IFM within the meaning of Article 102(1)(c) of the UCI Law and Article 7(1)(c) of the AIFM Law.
SICARs	Investment companies in risk capital subject to the Law of 15 June 2004 relating to the investment company in risk capital, as amended.
SIFs	Specialised investment funds subject to the Law of 13 February 2007 relating to specialised investment funds, as amended.
UCIs	UCITS, Part II UCIs, SIFs and SICARs.
UCI Law	Law of 17 December 2010 relating to undertakings for collective investment, as amended.
UCITS	Undertakings for collective investment in transferable securities subject to part I of the UCI Law.
UCITS Directive 2009/65/EC	Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities, as amended.

II. Context

Over the past years, the COVID-19 crisis as well as the global geopolitical and economic environment raised some challenges to asset managers for fairly and appropriately valuing certain assets, especially those where observable market prices are not available (e.g. private equity, real estate). In parallel, the assets under management of alternative investment funds investing in less liquid / illiquid assets have increased substantially. Against this backdrop, European and international regulators have intensified their focus and scrutiny on valuation risks within the asset management sector.

In this context, ESMA launched in January 2022 a Common Supervisory Action (“ESMA CSA”) with NCAs on valuation which focused on authorised IFMs of UCITS and open-ended AIFs investing in less liquid and illiquid assets (i.e. unlisted equities, unlisted / unrated bonds, corporate debt, real estate, high yield bonds, emerging markets, listed equities that are not actively traded, bank loans).

Following the publication by ESMA on 24 May 2023 of the results of the ESMA CSA in its [“Final Report on the 2022 CSA on valuation”](#) (the “ESMA Report”) concluding to an overall satisfactory level of compliance of the assessed IFMs with the applicable regulatory requirements and highlighting some shortcomings and vulnerabilities, the CSSF published on 18 July 2023 its own [Feedback Report](#) (“CSSF Feedback Report”) informing market participants about the local findings of its ESMA CSA work. The CSSF Feedback Report concluded, in line with the ESMA Report, to various areas of improvement such as, for instance, the appropriateness of valuation policies and procedures, the valuation under stressed market conditions or the independence of the valuation function and use of third parties. As such, IFMs were requested to assess any gaps in their valuation framework towards the observations of both the ESMA Report and the CSSF Feedback Report as well as to remediate them (if applicable) by 31 December 2023 at the latest. Besides follow-ups with IFMs assessed in the context of the ESMA CSA, the CSSF also carried out checks in 2024 and 2025 at the level of IFMs which were not part of the sample of IFMs scrutinised in the context of the ESMA CSA.

Furthermore, in light of the developments in the CIS sector towards new asset types and the growth of less liquid assets, IOSCO initiated in 2024 a [review](#) of the principles for the valuation of CIS taking also into consideration the outcomes of IOSCO’s work on Liquidity Risk Management in open-ended funds as well as IOSCO’s work on Emerging Risks in Private Finance. On 1st June 2026, IOSCO published its [Final Report on Valuing Collective Investment Schemes \(CIS\)](#), which sets out a comprehensive and updated set of recommendations to further enhance the reliability, consistency and transparency of valuation practices across global investment funds. In particular, the proposed recommendations aim to update IOSCO’s 2007 Principles for the Valuation of Hedge Fund Portfolios and its 2013 Principles for the Valuation of CIS. This IOSCO report notably takes into consideration developments in financial markets such as the rise in funds investing in less liquid and illiquid assets, including private assets, and the increasing participation of retail investors in such funds.

In addition to the above, the CSSF carried out supervisory work of valuation-related aspects through off-site and on-site supervision of IFMs and UCIs (UCITS, Part II UCIs, SIFs and SICARs).

In this context, the CSSF launched at the end of 2023, with review work conducted over 2024 and 2025, an ad-hoc thematic review (“Thematic Review”) at the level of a limited sample of Luxembourg domiciled IFMs, which were not covered by the CSSF in the ESMA CSA, in order to address specific aspects (which, except a few points, were not scrutinised by the ESMA CSA) pertaining to the valuation framework of less liquid and illiquid assets.

More particularly, the **Thematic Review focused primarily on valuation practices for AIFs managed by AIFMs investing in less liquid / illiquid assets, such as private equity, real estate, infrastructure, private debt or fund of funds. On an ancillary basis, it also addressed valuation aspects / risks related to investments of UCITS under Article 41(2) of the UCI Law** (i.e. the so-called “trash ratio” investments), including investments in unlisted equities, unlisted / unrated bonds as well as listed equities and listed bonds which were not actively traded.

For both the AIFs and the UCITS, the **Thematic Review addressed some specific aspects / areas of the valuation policies and procedures of IFMs as well as the valuation controls in place during the life cycle of the investments** (i.e., starting with the controls performed prior to the decision to invest in a given asset (the “pre-investment period”), continuing over the holding period up to the controls carried out during the disposal phase).

For the purpose of the Thematic Review, the CSSF defined a representative sample of IFMs, active in the above-mentioned asset categories, thereby considering also the results of the CSSF’s supervisory work, and asked these IFMs to complete a dedicated ad-hoc questionnaire (the “Questionnaire”) covering the aforementioned aspects / areas.

In accordance with Part I (“Definitions and abbreviations”), the term IFMs is used when referring to both AIFMs and UCITS management companies, while the term AIFMs refers only to the AIFs under management.

The present report sets out in **Part III** (“Observations”) hereafter the **main observations**¹ made by the CSSF in the context of the Thematic Review, together with the **related expectations** and, where applicable, the **recommendations for improvement**². In this respect, the **CSSF hereby asks all IFMs to carry out a benchmarking exercise against these observations and to proceed in a next step, if applicable, to the necessary corrective measures.**

III. Observations

In line with the focus of the Thematic Review, the legal and regulatory provisions underlying the supervisory assessments and observations relate in particular to Article 17 of the AIFM Law, transposing into Luxembourg legislation the AIFM Directive, as further supplemented by Articles 67 to 74 of the CdR.

As part of this Thematic Review, and where appropriate for UCITS, the legal and regulatory provisions of the UCI Law, transposing into national legislation the UCITS Directive 2009/65/EC, and the CSSF Regulation 10-4, transposing into Luxembourg regulation the Commission Directive 2010/43/EU, were also considered.

The general valuation requirements in the AIFM Law and the UCI Law are comparable; however, they are set out more granularly in the CdR when compared to the Commission Directive 2010/43/EU.

¹ Based on the limited sample of IFMs underlying the Thematic Review, the information provided cannot be used to establish general conclusions on the results for the full population of IFMs.

² Although the Thematic Review focused on open-ended AIFs and UCITS, this report with the related observations and recommendations also pertain to closed-ended AIFs when applicable based on the regulation in place.

As mentioned in point 526 of the Circular CSSF 18/698, the CSSF recommends IFMs managing UCITS to comply with the provisions of sub-chapter 6.6 of this circular which provides for specific rules concerning the organisation of the valuation function for AIFMs (*“Recommendation applicable to ManCos: Given that the ManCo must also put in place appropriate procedures to ensure the accurate and precise valuation of assets and liabilities of UCITS pursuant to Article 9(3) of CSSF Regulation 10-4, the CSSF recommends that the ManCo comply with the provisions of this sub-chapter.”*).

1. Valuation policies and procedures – specific valuation aspects

Article 17(1) of the AIFM Law requires that *“AIFMs must ensure that, for each AIF that they manage, appropriate and consistent procedures are established so that a proper and independent valuation of the assets of the AIF can be performed in accordance with this Article, the applicable national law and the AIF management regulations or instruments of incorporation”*.

Article 67(1) CdR requires that *“AIFMs shall establish, maintain, implement and review, for each AIF they manage, written policies and procedures that ensure a sound, transparent, comprehensive and appropriately documented valuation process. The valuation policy and procedures shall cover all material aspects of the valuation process and valuation procedures and controls in respect of the relevant AIF”*. (emphasis added)

Article 9(3) of the CSSF Regulation 10-04 mentions that IFMs managing UCITS *“shall establish appropriate procedures to ensure the proper and accurate valuation of the assets and liabilities of the UCITS (...)”*. (emphasis added)

In the context of the Thematic Review, the CSSF observed that the IFMs in the sample had valuation policies and procedures in place covering the valuation of assets and liabilities of the AIFs / UCITS they managed, thereby addressing, in particular, the types and categories of assets held by those AIFs / UCITS. This observation is aligned with the conclusions drawn in the ESMA CSA.

In relation to the valuation policies and procedures, the CSSF also concluded in the context of the ESMA CSA that:

- (i) for most IFMs the valuation policies / procedures were not sufficiently comprehensive and detailed concerning the description of the organisation pertaining to the valuation process, including the allocation of the tasks and responsibilities for each party involved in the valuation process;
- (ii) a number of IFMs rely on policies / procedures from other group entities which are not adapted to the specific circumstances of the Luxembourg IFM; and
- (iii) for some IFMs the review of the valuation policies / procedures was not done at least on a yearly basis.

As a result of its focus **on specific valuation aspects**, as referred to above, **the Thematic Review** showed **the following observations** in relation to **the valuation policies and procedures**:

1.1. Adequate valuation processes for new (sub-)funds and new asset types

Article 67(1) CdR requires that “AIFMs shall establish, maintain, implement and review, for each AIF they manage, written policies and procedures that ensure a sound, transparent, comprehensive and appropriately documented valuation process. (...) The AIFM shall not invest in a particular type of asset for the first time unless an appropriate valuation methodology or methodologies have been identified for that specific type of asset. The policies and procedures setting out valuation methodologies shall include inputs, models and the selection criteria for pricing and market data sources. They shall provide that prices shall be obtained from independent sources whenever possible and appropriate”. (emphasis added)

Article 70(1) CdR further clarifies that “Valuation policies shall provide for a periodic review of the policies and procedures, including of the valuation methodologies. The review shall be carried out at least annually and before the AIF engages with a new investment strategy or a new type of asset that is not covered by the actual valuation policy”. (emphasis added)

The Questionnaire inquired whether the written valuation policies / procedures of the IFMs provide, before the launch of a new (sub-)fund (AIFs and UCITS), respectively before investing in a new type of assets, for specific reviews ensuring notably that:

- (i) the valuation processes and methodologies in place cover the new (sub-)fund, including all the investments that are foreseen by the investment policy / strategy of that (sub-)fund;
- (ii) the valuation of the assets of the new (sub-)fund, respectively the new type of assets, can be performed on an ongoing basis, in accordance with the applicable regulation and the valuation rules laid down in the prospectus / offering document;
- (iii) the valuation inputs and pricing / market data sources (e.g., up-to-date and reliable data, valuation reports, financial information, business plans, audited financial statements (if any) of the underlying companies) deemed necessary by the IFM for the ongoing independent valuation of the investments of the new (sub-)fund, respectively the new type of assets, will be available, at least, according to the applicable NAV calculation frequency of the concerned (sub-)fund.

The CSSF observed in the Thematic Review that the written valuation policies and procedures in place, for the majority of IFMs, did provide for a formalised review process, including specific checks and controls to be executed prior to the launch of a new (sub-)fund, respectively before investing in a new type of assets, that ensure in particular that a proper and independent valuation can be carried out on an ongoing basis (i.e., as from the purchase until the disposal of such investments).

In this context, the CSSF further observed that the majority of the valuation policies / procedures set out specific checks with regard to the sourcing of information and inputs necessary for the valuation of the assets as well as the independence of the information sources / inputs.

However, the CSSF also observed that the valuation policies and procedures of a limited number of IFMs did not provide for a sufficient coverage of the above-mentioned checks and controls.

The CSSF would like to highlight that the existence of such formalised review processes is important considering notably that a vast majority of valuation issues, that the CSSF identified at the level of a limited number of UCIs in the context of its supervisory work, are due to the absence or the lack of appropriate information / documentation and/or, to a lesser extent, to an inappropriate valuation methodology³, supporting the determination of the proper valuation of one or several investment(s) in the UCIs' portfolio.

This resulted in a limited number of cases, as also highlighted in the [CSSF Feedback report on the Self-Assessment Questionnaire, the Separate Report and the Management Letter for Funds, published on 18 December 2024](#) (the "CSSF Feedback report on Circular CSSF 21/790"), in the issuance by the statutory auditor of (i) modified audit opinion(s) on the financial statements of the UCIs concerned (including, in some very rare cases, UCITS) and/or (ii) findings in the management letter of those UCIs.

On that basis, the CSSF expects, in accordance with the applicable regulation, that the written valuation policies and procedures of the IFMs provide for an adequate and formalised review of all material valuation aspects:

- **prior to the launch of new (sub-)funds, including all investments that might be made upon launch of these (sub-)funds; and**
- **before investing in a new investment strategy or new type of assets.**

1.2. Valuation frequency

Article 74 CdR requires the following for AIFMs managing open-ended AIFs:

"1. The valuation of financial instruments⁴ held by open-ended AIFs shall take place every time the net asset value per unit or share is calculated pursuant to Article 72(1).

2. The valuation of other assets⁵ held by open-ended AIFs shall take place at least once a year, and every time there is evidence that the last determined value is no longer fair or proper." (emphasis added)

The Questionnaire inquired whether the valuation policies / procedures of the IFMs provide for specific checks and controls ensuring that the valuation frequency of an investment is appropriate with regard to the NAV calculation frequency of the concerned (sub-)fund (AIF / UCITS).

The CSSF observed in the Thematic Review that the written valuation policies and procedures in place, for the majority of IFMs, did provide for checks and controls that ensure, in particular for (sub-)funds investing in less liquid / illiquid investments, that the valuation frequency of the investments is appropriate with regard to the NAV calculation frequency of the concerned (sub-)fund. For a limited number of IFMs, such checks / controls were not sufficiently foreseen in the valuation policies and procedures.

³ An inappropriate valuation methodology is, generally speaking, a methodology which does not provide for a fairly and appropriately valued asset. For example (without being limited to), an inappropriate methodology would be a methodology that does not consider key variables impacting to a significant extent the value of an asset.

⁴ As per Article 1(51) of the AIFM Law, "financial instrument" means an instrument as specified in Section C of Annex I to Directive 2004/39/EC ([Directive - 2004/39 - EN - mifid - EUR-Lex](#)).

⁵ Other assets, by definition, do not fall within the scope of "financial instrument" and include, for example (without being limited to), private assets such as real estate, private equity, or loans.

This observation is consistent with findings made at the level of a limited number of UCIs in the context of the review of the UCIs' Self-Assessment Questionnaires where the CSSF highlighted in the CSSF Feedback report on Circular CSSF 21/790 notably that *"the importance for **open-ended UCIs** to have in place **appropriate procedures that ensure the proper and accurate valuation of the assets and liabilities of the UCIs for the calculation of each net asset value so as to ensure that the net asset value is accurate and that subscription and redemption orders can be properly executed at that net asset value**, in the best interest of all the investors of the UCIs"* and set out its expectation for *"open-ended UCIs to have an **alignment between the frequency of the net asset value determination and the frequency of the valuation of investments**"*⁶. (emphasis added)

The CSSF further draws attention to the importance of the above-mentioned Article 74(2) CdR concerning the other assets held by AIFs requiring that, in case there is evidence that the last determined value for such assets is no longer fair or proper, the AIFM has to proceed with a (re)valuation of these assets. For complying with this provision, the AIFM has to ensure that the necessary valuation controls are in place for verifying at any NAV calculation date that the last determined value is still fair or proper.

1.3. Valuation methodologies / approaches⁷

Article 59(2) CdR requires that *"AIFMs shall establish, implement and maintain accounting and valuation policies and procedures so as to ensure that the net asset value of each AIF is accurately calculated on the basis of the applicable accounting rules and standards"*. (emphasis added)

Article 67(1) CdR sets out that *"The valuation policies shall identify and the procedures shall implement the valuation methodologies used for each type of asset in which the AIF may invest in accordance with applicable national law, the AIF rules and the instruments of incorporation. (...) The policies and procedures setting out valuation methodologies shall include inputs, models and the selection criteria for pricing and market data sources. They shall provide that prices shall be obtained from independent sources whenever possible and appropriate. The selection process of a particular methodology shall include an assessment of the available relevant methodologies, taking into account their sensitivity to changes in variables and how specific strategies determine the relative value of the assets in the portfolio"*. (emphasis added)

Article 68(1) CdR requires that *"If a model is used to value the assets of an AIF, the model and its main features shall be explained and justified in the valuation policies and procedures. The reason for the choice of the model, the underlying data, the assumptions used in the model and the rationale for using them, and the limitations of the model-based valuation shall be appropriately documented"*. (emphasis added)

Point 530 of the Circular CSSF 18/698, in relation to the use of models, specifies that *"The AIFM using these models for the valuation of assets must also comply with the provisions of Article 68 of Delegated Regulation (EU) 231/2013. The valuation policies and procedures must detail the arrangements for the use of valuation models and include at least details on the following elements:*

- *the description of the types of models (standard model or other);*

⁶ The frequency of valuation of investments has to be understood within the requirements of Article 74 CdR relating to the frequency of valuation of assets held by open-ended AIFs.

⁷ As per the International Valuation Standards (IVS), a valuation approach is defined as *"a generic term for the use of the cost, income or market approach."*

- *the main characteristics of the model (...);*
- *the name of the person(s) who developed each model; (...)*
- *the arrangements to change a price determined via models (such as, for example, the application of a discount) by specifying, for example, the name of the approved persons and the validation process.”.*

For UCITS, as referred to above, point 526 of the Circular CSSF 18/698 recommends that IFMs managing UCITS comply with the provisions of the sub-chapter 6.6 of this circular.

Valuation approaches and methods⁸

The Questionnaire inquired about the valuation approaches and methods of AIFMs most frequently used for the AIFs investing in less liquid / illiquid assets, distinguishing by investment strategy (i.e. real estate, private equity, infrastructure, private debt and fund of funds), when valuing the investments held, thereby ensuring that they comply with the applicable regulation and the provisions of the prospectus / offering document.

It further requested information on the valuation approaches and methods used for the investments held by UCITS in the trash ratio.

On that basis, the Questionnaire referred to the following valuation approaches and methods usually used by IFMs for the valuation of less liquid / illiquid assets:

- *the market approach, which provides “an indication of value by comparing the asset with identical or comparable (that is similar) assets for which price information is available”⁹ (e.g. the use of multiples, industry specific benchmarks or available market prices are commonly used methods in that context);*
- *the income approach, which provides “an indication of value by converting future cash flow to a single current value. Under the income approach, the value of an asset is determined by reference to the value of income, cash flow or cost, savings generated by the asset”¹⁰ (e.g. the discounted cash flow (“DCF”) method is the most commonly used method under the income approach);*
- *the replacement cost approach, which provides “an indication of value using the economic principle that a buyer will pay no more for an asset than the cost to obtain an asset of equal utility, whether by purchase or by construction, unless undue time, inconvenience, risk or other factors are involved. The approach provides an indication of value by calculating the current replacement or reproduction cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence”¹¹ (e.g. the current replacement or reproduction cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence).*

⁸ As per the IVS, a valuation method is defined as “*Within a valuation approach, a specific technique to conclude a value.*”. For instance, the discounted cash flow (DCF) method and the multiples method are valuation methods.

⁹ Please refer notably to IVS 103, paragraph 10.01 and subsequent of the International Valuation Standards (IVS).

¹⁰ Ibid.

¹¹ Ibid.

The Thematic Review showed for the surveyed AIFMs and AIFs concerned the following:

- The market approach constitutes the most widely applied valuation approach, particularly for investments in real estate and private equity.
- The income approach is predominantly applied for investments in infrastructure and private debt. Some AIFMs also mentioned the income approach for certain investments in private equity and real estate.
- The replacement cost approach is the least frequently valuation approach applied.

For the surveyed IFMs managing UCITS, the Thematic Review also indicated on an ancillary basis for the investments included in the trash ratio that, depending on the investment type, the valuation is established on the basis of the market or the income approach, subject to valuation haircuts when warranted.

The CSSF further observed that certain AIFMs combine multiple approaches for the valuation of the less liquid / illiquid assets of AIFs, including notably the combination of the outcome of two valuation approaches / methods (e.g. market approach and income approach).

Another observation made is that the written valuation policies and procedures of the IFMs, globally speaking, specify the valuation approaches and methods used for the different types of investments of the AIFs / UCITS managed. For a limited number of the IFMs surveyed, it was nevertheless observed that the valuation approaches and methods used to determine the proper valuation of the different types and categories of assets were not sufficiently described in the valuation policies and procedures as required by the applicable regulation, notably concerning the use of models.

On that basis, the CSSF expects, in accordance with the applicable regulation, that the written valuation policies and procedures of the IFMs provide for an adequate description and documentation of the valuation approaches and methods applied to the various types and categories of assets. This includes, where valuation models are used, a clear explanation and justification of the models and their main features, such as the underlying data, the assumptions on which they rely, the rationale for their use, and the limitations inherent in model-based valuations etc.

International recognised valuation standards and/or guidelines

The Questionnaire further inquired whether the valuation policies and procedures for AIFs investing in less liquid / illiquid assets, managed by the AIFMs, referred to international recognised valuation standards and/or guidelines for the determination of the valuation of these assets.

In this respect, the CSSF observed that the valuation policies and procedures of some AIFMs surveyed provide for the application of such standards, such as the International Valuation Standards (IVS) or the Royal Institution of Chartered Surveyors (RICS) standards, and/or valuation guidelines, such as the International Private Equity and Venture Capital Valuation (IPEV) guidelines.

More particularly, the CSSF observed that the valuation standards / guidelines most frequently referred to in the sample of AIFMs are the RICS standards for the investments in real estate and the IPEV guidelines for the investments in private equity.

Other valuation standards / guidelines were more rarely mentioned by the AIFMs, such as the guidelines of the European Association for Investors in Non-Listed Real Estate Vehicles (“INREV”), the Accounting and Valuation Guide of the American Institute of Certified Public Accountants (“AICPA”), the European Valuation Standards (EVS) from the European Group of Valuers Associations (“Tegova”).

The CSSF considers on that basis that the application of internationally recognised valuation standards and/or guidelines by AIFMs is a good market practice as a basis to promote sound and consistent valuation standards and practices. In this context, the CSSF expects, in case such valuation standards / guidelines are provided for in the AIFs offering documents / disclosure to investors, that they should consistently be applied in order to ensure a reliable valuation on an ongoing basis in accordance with the information disclosed to investors.

1.4. Use of valuation models and related approvals / reviews

Article 68(1) CdR requires that *“If a model is used to value the assets of an AIF, the model and its main features shall be explained and justified in the valuation policies and procedures. The reason for the choice of the model, the underlying data, the assumptions used in the model and the rationale for using them, and the limitations of the model-based valuation shall be appropriately documented”*. (emphasis added)

Article 68(2) CdR stipulates that *“The valuation policies and procedures shall ensure that before being used a model is validated by a person with sufficient expertise who has not been involved in the process of building that model. The validation process shall be appropriately documented”*. (emphasis added)

Article 68(3) CdR requires that *“The model shall be subject to prior approval by the senior management of the AIFM”*. (emphasis added)

Article 70 CdR requires that *“1. Valuation policies shall provide for a periodic review of the policies and procedures, including of the valuation methodologies. The review shall be carried out at least annually (...)” and “2. The valuation policies and procedures shall outline how a change to the valuation policy, including a methodology, may be effected and in what circumstances this would be appropriate. Recommendations for changes to the policies and procedures shall be made to the senior management, which shall review and approve any changes”*. (emphasis added)

Point 530 of the Circular CSSF 18/698, in relation to the use of models, specifies that *“(...) The valuation policies and procedures must detail the arrangements for the use of valuation models and include at least details on the following elements: (...)”*

- *the name of the person(s) empowered to validate the model in accordance with Article 68(2) of Delegated Regulation (EU) 231/2013 who must have sufficient expertise and who should not have been involved in the process of building that model;*
- *the process applied to change the existing models or to make a change of model (including the name of the person(s) approving these changes); (...)*”.

In view of the large use of models¹² for the valuation of less liquid / illiquid investments of AIFs as well as their important role for the determination of an appropriate valuation of the assets held, the Questionnaire inquired in relation to AIFMs about the prior approval of each model by senior management and the periodic review, after an initial approval by the senior management, of the valuation models used.

The CSSF observed, in limited cases, that (i) the senior management of AIFMs did not proceed to a prior approval (i.e. before being used) of the valuation models and (ii) the AIFMs did not have adequate periodic review processes in place concerning the valuation models for ensuring their ongoing appropriateness and adequate design. Such periodic review shall also aim at preventing any anomalies and inaccuracies in the formulas and data used therein. Supervisory experience shows that IT backed models may be subject to errors in formulas compromising the accuracy of the calculations.

In this context, the CSSF emphasises that, in case of changes of the main features to a model¹³, these changes should be reflected in the valuation policies and procedures of the AIFMs and they should, in accordance with the regulation mentioned above, be (i) subject to an independent validation and (ii) brought to the attention and approved by the senior management of the AIFM.

The CSSF further expects, in accordance with the applicable regulation, that the valuation policies and procedures of the AIFMs (including valuation methodologies) shall be subject to, at least annual, reviews and that these reviews (including the involvement of the senior management) are subject to an adequate documentation.

For UCITS, as referred to above, point 526 of the Circular CSSF 18/698 recommends that IFMs managing UCITS comply with the provisions of the sub-chapter 6.6 of this circular relating, amongst others, also to the use of models for the valuation of assets.

1.5. Valuation in exceptional situations / stressed market conditions

Article 10 of the AIFM Law sets out that *"AIFMs are responsible for the proper valuation of AIF assets, the calculation of the net asset value and the publication of that net asset value"*.

Article 17(1) of the AIFM Law requires that *"AIFMs must ensure that, for each AIF that they manage, appropriate and consistent procedures are established so that a proper and independent valuation of the assets of the AIF can be performed in accordance with this Article, the applicable national law and the AIF management regulations or instruments of incorporation"*. (emphasis added)

Article 71(1) CdR requires that *"An AIFM shall ensure that all assets held by the AIF are fairly and appropriately valued"*. (emphasis added)

¹² For assisting IFMs in applying the provisions concerning the use of models, the CSSF wishes to refer to the IVS which define under paragraph 10.01 a valuation model as *"a tool used for the quantitative implementation of a valuation method in whole or in part. A valuation model converts inputs into outputs used in the development of a value, whereas a valuation method is a specific technique to develop a value"*.

¹³ An illustrative change of a main feature to a model would be a change of the method of the discount rate (as per the IVS, a discount rate means *"a rate of return used to convert a monetary sum, payable or receivable in the future, into a present value"*).

Article 25(3) of the CSSF Regulation 10-04 stipulates that "(...) *management companies shall ensure that fair, correct and transparent pricing models and valuation systems are used for the UCITS they manage, in order to comply with the duty to act in the best interests of the unitholders. Management companies must be able to demonstrate that the UCITS' portfolios have been accurately valued*". (emphasis added)

The Questionnaire inquired whether the written valuation policies / procedures in place at the level of IFMs cover specifically the valuation of the AIF / UCITS (sub-)funds under exceptional situations¹⁴ (including idiosyncratic issues affecting individual assets / issuers) and stressed market conditions¹⁵, including aspects such as (for illustration purposes) the valuation methodologies to be used in these circumstances and the related valuation processes (including allocation of responsibilities).

It aimed, in particular, to follow-up on findings of past supervisory work carried out notably by ESMA, together with NCAs, in the context of the COVID-19 crisis and the ESMA CSA respectively, where the following observations were made:

- In the ESMA report "Recommendation of the European Systemic Risk Board (ESRB) on liquidity risk in investment funds" issued in the context of the recommendation dated 6 May 2020 by the European Systemic Risk Board (ESRB) to address liquidity risk in investment funds, where ESMA mentioned amongst others that "*fund managers authorised under UCITS and AIFM Directives should enhance their preparedness to potential future adverse shocks that could lead to a deterioration in financial market liquidity and valuation uncertainty (valuation procedures, alignment of the liquidity profile and redemption policy, use of special arrangements, stress tests)*".

More particularly, ESMA identified as one of the priority areas for ensuring the preparedness of investment funds to potential future adverse shocks that "*Priority area 5 – Supervision of valuation processes in a context of valuation uncertainty. As part of their ongoing supervision of management companies, NCAs should carry out further supervisory activities to ensure that management companies valuation procedures cover all market situations including valuation approaches for stressed market conditions*". (emphasis added)

- In the CSSF Feedback Report in relation to the ESMA CSA, the CSSF outlined that "*The CSSF noted that the valuation policies and procedures describe the methodologies used to value the different types of assets. However, they do not generally make an explicit distinction between normal and stressed market conditions*". (emphasis added)

The CSSF observed, for a limited number of IFMs, that the valuation policies and procedures in place, including the valuation methodologies / approaches used for the different types of assets, did not yet specifically address the valuation processes applicable under exceptional situations / stressed market conditions. Most of the concerned IFMs were, however, according to the information received in the final stages of revising their valuation framework / valuation policies and procedures in order to integrate these elements.

¹⁴ An illustrative example of exceptional circumstances is typically when there is a need to change the valuation methodology by passing from a transaction-based valuation for real estate to an income model-based valuation due to an ad-hoc event that had not been foreseen in the valuation policies and procedures.

¹⁵ Stressed market conditions can arise as a result of a range of factors including, for instance, geopolitical, macroeconomic, and/or other significant global or local events as well as asset specific conditions.

The CSSF hereby reminds the importance of valuation policies and procedures addressing the valuation processes applicable under exceptional situations / stressed market conditions. This means, in particular, ensuring that the valuation policies / procedures in place allow IFMs to determine reliable valuations for the assets held in all market circumstances (including exceptional situations / stressed market conditions).

This does not mean that the CSSF expects specific / separate valuation policies and procedures to be in place covering these circumstances nor that a different valuation methodology is automatically required, in particular for the less liquid / illiquid assets which are already valued based on a model.

Further, the CSSF acknowledges that exceptional situations / stressed market conditions have wider effects on markets, funds and assets held and are thus not directly comparable to idiosyncratic events affecting individual assets. However, the overarching principle in these circumstances is that the IFM should give due account to the specificities of the assets concerned and their key valuation inputs. For instance, the standard valuation process might need to be adapted in certain situations (e.g. need to change the valuation methodology by passing from a transaction-based valuation for real estate to an income model-based valuation) and thus other / additional information / data for supporting the valuation process might be required.

On that basis, the CSSF expects internal governance arrangements of IFMs, including the allocation of tasks and responsibilities at IFMs (including at third-party expert / third party valuation service provider level if applicable), to provide for an adequate preparedness for performing valuation under exceptional situations / stressed market conditions. This includes the valuation processes (including valuation methodologies) that enable IFMs to react swiftly to changing circumstances and to ensure, on an ongoing basis, that the investments are fairly and appropriately valued. In that context and being part of the periodic review of valuation policies and procedures, the IFMs shall give due account to past episodes that provided important insights / lessons learnt with regard to the valuation risks to which an IFM was or might be exposed to, given the range of UCIs managed and the investments held.

1.6. Escalation process in case of significant valuation issues

Article 67(2) CdR requires that "(...) *The valuation policies and procedures shall address at least the following: (...) (d) the escalation channels for resolving differences in values for assets (...)*". (emphasis added)

Article 71(4) CdR requires that "*The valuation policies and procedures shall include appropriate escalation measures to address differences or other problems in the valuation of assets*". (emphasis added)

Point 529 of the Circular CSSF 18/698, in relation to the escalation process, specifies that "*In the event of a difference in asset values or any other problem of valuation of the AIFs' assets, appropriate escalation measures to address these problems must be described in the valuation policies and procedures in accordance with Article 71(4) of Delegated Regulation (EU) 231/2013. (...)*".

Sub-chapter 6.1. of Circular CSSF 18/698 further specifies under paragraph 417 "*Among the activities which cannot be delegated to third parties and which must be performed by an IFM the following tasks are noteworthy: (...) in the absence of a representative price, assurance that the management body/governing body of the UCI has taken a decision relating to the determination of the probable realization value estimated with care and in good faith for illiquid assets and to give the Board of Directors of funds the necessary support for this kind of decision; (...)*".

The Questionnaire inquired whether the written valuation policies / procedures in place at the level of IFMs provide, in case of material valuation issues / problems, for an escalation process to the senior management / *dirigeants* of the IFM as well as to the *dirigeants*¹⁶ of the AIF / UCITS.

The CSSF observed in the Thematic Review that the valuation policies and procedures, for a limited number of IFMs, did not provide for an escalation process to both the senior management and the *dirigeants* of the IFM as well as the *dirigeants* of the AIF / UCITS in case of important valuation issues / problems.

This finding is in line with the observations mentioned in the CSSF Feedback report on Circular CSSF 21/790 which highlighted notably *“The SAQ review showed that a very limited number of UCITS, respectively a limited number of non-UCITS, stated that their organisation did not provide for an escalation process to the dirigeants of UCIs (e.g. escalation by the IFM if any) in case of significant valuation issues which may impact investors’ interest”*.

In this respect, the CSSF hereby reminds that the awareness of the *dirigeants* of the AIF / UCITS is particularly important regarding significant valuation issues / problems (such as a crisis event impacting to a significant degree the valuation of the assets held by an AIF / UCITS or a single idiosyncratic event affecting an individual issuer representing an important position in the AIF / UCITS portfolio and providing for valuation uncertainty) that might impact the AIF / UCITS and its investors given their ultimate responsibility for the functioning of the AIF / UCITS. Accordingly, IFMs have to proactively inform the *dirigeants* of the AIF / UCITS thereof.

In this context, the CSSF emphasises, as already set forth in the CSSF Feedback report on Circular CSSF 21/790, *“the importance of such escalation process in the context of the oversight work performed by the dirigeants of UCIs concerning the valuation of the investments and expects significant valuation issues (i.e. UCI-specific or market-driven) to be escalated on a timely basis, whether or not these issues are managed by the IFM of the AIF / UCITS or by a dedicated valuation committee. As a result, the CSSF expects the dirigeants of UCIs, in the context of their oversight duties, to be aware of the significant valuation issues affecting UCIs and to perform the necessary follow-ups in view of remediation (if necessary).”*.

On that basis, the CSSF expects that the valuation policies and procedures of the IFMs shall provide for specific provisions ensuring a timely and appropriate escalation process of the valuation issues / problems (i.e. fund-specific or market-driven) to both the senior management / *dirigeants* of the IFM and the *dirigeants* of the AIFs / UCITS.

¹⁶ The *dirigeants* of UCIs as referred to in Article 129(5) of the UCI Law, Article 42(3) of the SIF Law and Article 12(3) of the SICAR Law (e.g. the board of directors, the board of managers of the UCIs).

2. Valuation Controls

In relation to the policies and procedures for the valuation of the assets of the AIF, the CdR mentions the following general requirements in relation to valuation controls (emphasis added):

- Article 67(1) CdR requires that "(...) *The valuation policy and procedures shall cover all material aspects of the valuation process and valuation procedures and controls in respect of the relevant AIF. (...)*" (emphasis added)
- Article 67(2) CdR specifies that "*The valuation policies and procedures shall address at least the following: (...) (c) the controls over the selection of valuation inputs, sources and methodologies*". (emphasis added)
- Article 71(2) CdR requires that "*The valuation policies and procedures shall set out a review process for the individual values of assets, where a material risk of an inappropriate valuation exists (...)*". (emphasis added)

Considering the applicable regulatory framework and the focus of the Thematic Review, this section 2 ("Valuation Controls") deals primarily with AIFMs managing AIFs investing in less liquid / illiquid assets. However, taking into account, in particular, the provisions of point 526 of the Circular CSSF 18/698, the CSSF recommends IFMs to also consider the observations and recommendations set out in this section for the investments included in trash ratio of the UCITS under their management.

In this context, the Questionnaire sought, among others, input on the valuation checks and controls in place at the level of the AIFMs during the life cycle of the investments from the pre-investment period to the disposal stage.

2.1. Pre-investment valuation checks / controls

Article 67(1) CdR requires notably that "*AIFM shall ensure that fair, appropriate and transparent valuation methodologies are applied for the AIFs it manages. (...) The AIFM shall not invest in a particular type of asset for the first time unless an appropriate valuation methodology or methodologies have been identified for that specific type of asset*". (emphasis added)

Article 70(1) CdR further specifies that "*Valuation policies shall provide for a periodic review of the policies and procedures, including of the valuation methodologies. The review shall be carried out at least annually and before the AIF engages with a new investment strategy or a new type of asset that is not covered by the actual valuation policy*". (emphasis added)

The Questionnaire inquired whether the valuation policies / procedures of AIFMs provide for specific checks / controls prior to the acquisition of investments by AIFs in less liquid / illiquid assets in order to ensure that they can be valued, post-acquisition, in accordance with the applicable regulations, the prospectus / offering document and the valuation policies / procedures in place for the type of investments being contemplated.

The CSSF observed that most of the surveyed AIFMs referred in this context to the existence of pre-investment checks / controls pertaining to the risks related to the targeted transactions, including specifically on valuation aspects (e.g. availability of the necessary data / information, availability of an adequate valuation methodology).

In this context, the CSSF considers that the pre-investment valuation checks / controls in place at the level of AIFMs should give due account to the valuation risks posed by the targeted acquisitions and should thus be carried out by the AIFM in accordance with a risk-based approach. There is not a one-size-fits-it-all approach towards such checks / controls, including in terms of allocation of responsibilities at pre-investment stage. The valuation function might be involved in individual transactions at pre-investment stage, depending on the nature of the targeted investments and risk-based approach considerations.

On that basis, the CSSF expects that the written valuation policies and procedures of AIFMs provide, in accordance with a risk-based approach, for the necessary specific and appropriate checks and controls prior to the acquisition of investments by AIFs in less liquid / illiquid assets. The CSSF recommends AIFMs in this context to set out in their valuation policies / procedures the allocation of responsibilities concerning these checks and controls and, in particular, the role / contribution of the valuation function of the AIFMs to the execution of these checks and controls, when deemed necessary in accordance with a risk-based approach.

2.2. Valuation controls / reviews during the investment period until disposal

2.2.1. Material risk of inappropriate valuation and related checks / controls of individual values of assets

Article 71(1) CdR specifies that *"An AIFM shall ensure that all assets held by the AIF are fairly and appropriately valued. (...) The AIFM shall at all times be able to demonstrate that the portfolios of AIFs it manages are properly valued."* (emphasis added)

Article 71(2) CdR requires that *"The valuation policies and procedures shall set out a review process for the individual values of assets, where a material risk of an inappropriate valuation exists, such as in the following cases (...)".* (emphasis added)

Article 71(3) CdR requires that *"The valuation policies and procedures shall describe the review process including sufficient and appropriate checks and controls on the reasonableness of individual values. Reasonableness shall be assessed in terms of the existence of an appropriate degree of objectivity (...)".* (emphasis added)

Point 529 of the Circular CSSF 18/698, in relation to the review process, specifies that *"(...) In accordance with Article 71 of Delegated Regulation (EU) 231/2013, the valuation policies and procedures of the AIFM must set out a review process for the individual values of assets where a material risk of an inappropriate valuation exists"*.

The Questionnaire inquired whether AIFMs considered being exposed, for the AIFs managed, to a material risk of inappropriate valuation as referred to in Article 71 CdR and, if applicable, to report the three main risks, based on the list provided in Article 71(2) CdR under points (a) to (f), identified by the AIFM for the AIFs managed.

The Questionnaire also inquired whether AIFMs faced any specific valuation difficulties over the past financial years.

Overall, the CSSF observed that the majority of the AIFMs did not consider themselves being exposed to a material risk of inappropriate valuation for the AIFs under management as referred to under Article 71(2).

For the AIFMs considering being exposed to a material risk of inappropriate valuation, the 3 main risks reported by these IFMs based on the list provided in Article 71(2) CdR were the following:

- the valuation is based on prices only available from a single counterparty or broker source;
- the valuation is influenced by parties related to the AIFM;
- the valuation is influenced by other entities that may have a financial interest in the AIFs' performance.

Based on both the responses provided to the Questionnaire and its supervisory work, the CSSF understands that some surveyed AIFMs, which considered not being exposed to a material risk of inappropriate valuation, had significant valuation issues / difficulties, as also reported by the statutory auditors in the funds' closing documents (including in particular the findings raised by the funds' statutory auditors in their audit reports on the funds' annual financial statements and/or in the funds' management letters) of some of the funds managed by those AIFMs.

Therefore, the CSSF observed that some AIFMs did not consider in their assessments as well as in their valuation policies and procedures in place all the information available at fund level.

Furthermore, the Questionnaire inquired, for AIFMs considering being exposed to a material risk of inappropriate valuation in relation to the AIFs managed, to report the three most important checks and controls performed to assess the reasonableness of individual values based, among others, on the list provided in Article 71(3) CdR under points (a) to (i).

The concerned AIFMs indicated, in particular, the following checks and controls based, among others, on the list provided in Article 71(3) CdR:

- the testing for stale prices and implied parameters;
- the review of the inputs used in model-based pricing, in particular of those to which the model's price exhibits significant sensitivity; and
- the validation of values by comparison of realised prices with recent carrying values (so-called "backtesting").

Other controls in place mentioned by these AIFMs related to "*highlighting and researching any differences that appear unusual or vary by valuation benchmark established for the type of asset*" (see point f) of Article 71(3) CdR).

Following the above, the CSSF expects, in accordance with the applicable regulation, AIFMs to perform a comprehensive assessment whether, for the AIFs they manage, they are exposed to a material risk of inappropriate valuation. This assessment must, among others, take into account the illustrative elements listed under Article 71(2) CdR, but also other elements such as, more generally, the type/nature and complexity of assets / AIFs managed (e.g. less liquid / illiquid assets) as well as all other information impacting the assessment aiming to assess the existence of a material risk of inappropriate valuation (e.g. fund closing documents with in particular the findings raised by the statutory auditors in their audit reports on the annual financial statements and/or in the management letters).

For the AIFMs exposed to such a risk, the CSSF also expects AIFMs, in accordance with the applicable regulation, to define appropriate checks and controls concerning the reasonableness of individual values in the sense of Article 71(3) CdR and to implement such controls in accordance with an appropriate risk-based approach.

2.2.2. Controls in relation to valuation models and their output

As mentioned above, Article 71(1) CdR requires that *“An AIFM shall ensure that all assets held by the AIF are fairly and appropriately valued. The AIFM shall document by type of asset the way the appropriateness and fairness of the individual values is assessed. The AIFM shall at all times be able to demonstrate that the portfolios of AIFs it manages are properly valued”*.

In addition to the controls detailed in the section 2.2.1. above in relation to Article 71(2) and (3) CdR in case a material risk of an inappropriate valuation exists, the Questionnaire also inquired more generally whether AIFMs managing AIFs perform regular and/or specific checks / controls to mitigate the risk of inappropriate valuation and thereby to ensure that the valuation of the less liquid/illiquid assets is reliable.

The Questionnaire covered more specifically the following aspects:

- whether the valuation policies and procedures of the AIFMs, more generally, provided for controls in relation to the different valuation methodologies / approaches used;
- whether the AIFMs are cross-checking / corroborating the valuation resulting from one valuation methodology / approach with one or more other valuation methodology/approach;
- whether backtesting¹⁷ controls are in place at the level of AIFMs.

Furthermore, the questionnaire inquired whether the calibration¹⁸ technique is used by the AIFMs for model-based valuations.

The responses to the above-mentioned questions yielded the following results:

Regular / specific check, controls and review in relation to valuations for less liquid / illiquid assets

Globally speaking, the CSSF observed that all AIFMs confirmed having implemented regular checks and controls, formalised in their valuation policies and procedures, in relation to the valuation approaches and the inputs used. In this respect, the Thematic Review showed more particularly that the following specific checks and controls were set out in the responses (only illustrative):

- a secondary valuation approach to verify and ascertain the valuation obtained with the main valuation methodology (e.g., in case of use of a market approach as primary valuation approach, an income approach is used to corroborate the valuation derived from the market approach);
- periodic reviews of the inputs, sources and assumptions used in the valuation methods, including the review of the information provided by the investee companies / target funds and in particular also the financial statements of investee companies / target funds (e.g. review of the entity's

¹⁷ The IPEV also provide for this case under section 2.7 mentioning that *“Valuers should seek to understand the substantive differences that legitimately occur between the exit price and the previous Fair Value assessment. This concept is known as Backtesting.”*.

¹⁸ For ensuring a uniform understanding of the concept of calibration, the IPEV define calibration as follows: *“When the price of the initial Investment in an Investee Company or Instrument is deemed Fair Value, which is generally the case if the entry transaction is considered an Orderly Transaction, then the Valuation Techniques that are expected to be used to estimate Fair Value in the future should be evaluated using market inputs as of the date the Investment was made. This process is known as Calibration. Calibration validates that the Valuation Techniques using contemporaneous market inputs will generate Fair Value at inception and therefore that the Valuation Techniques using updated market inputs as of each subsequent Measurement Date will generate Fair Value at each such date. (...) Techniques expected to be used at subsequent valuation dates, using input data at inception to ensure that the Valuation Techniques result in an initial Fair Value estimate equal to the entry price (Note: at subsequent Measurement Dates the calibrated Valuation Techniques should be used with then current market inputs reflecting then current market conditions). Calibration is a powerful tool that can assist in capturing the impacts of control and Liquidity, among other inputs, on a Fair Value measurement”*.

equity; the type of audit opinion issued; the going concern of the entity; the (fair) valuation rules of the assets; any significant events concerning debt instruments such as for instance the credit ratings, the repayment patterns or the defaults; etc.), the review of peer groups used, the review of the key assumptions including, if any, changes over time (capex, discounted factors, terminal value etc.);

- periodic reviews of the files and calculations supporting the valuation approaches (e.g. review of the historic data used; the completeness and appropriateness of the data / inputs; the factual correctness and completeness of the formulas encoded; the review of any manual inputs / interventions; the reconciliation of asset level valuation throughout the structure).

In addition, and as referred to above under section 2.2.1., the CSSF also observed that certain AIFMs implemented so-called backtesting controls which aim to ascertain the valuation of the less liquid / illiquid assets determined by the valuation models. This technique is used in the context of periodic checks on recent transactions prices of the investment covered by backtesting or comparable peers to corroborate the reliability of the valuation derived from the valuation methodology. More particularly, backtesting controls aim to identify any material difference on an ex-post basis between the exit price realised and the last valuation performed, and on that basis, assess material differences and draw the necessary conclusion, including, if deemed required, the review of the valuation process for such assets.

The responses also showed that the AIFMs checked in the context of sale transactions whether the (intended) sale prices align with the model-based valuation, with significant differences triggering assessment / investigations.

The AIFM responses further indicated that valuation controls may also consist, where the necessary information is available, in comparing the accuracy / reasonableness of the intermediate (non-audited) financial information used for the ongoing valuation of investments (e.g. the monthly or quarterly capital account statements of the investments in funds) with the audited annual financial statements of the investments.

Finally, the CSSF also observed that the AIFMs surveyed also used the calibration technique, which aims to use the input data and assumptions at the acquisition date to ensure that the valuation methodology results in a fairly and appropriately valued asset equal to its acquisition price. At subsequent valuation dates, the calibrated inputs of the originated acquisition are then updated with the current market inputs reflecting the current valuation of the investment and thereby the differences with the acquisition price. This technique is also used to review the appropriateness and accuracy of the valuation methodology.

Checks / controls in relation to multiples method and discounted cash flow method

The CSSF observed that all AIFMs confirmed having implemented regular checks and controls in relation to the valuation methodologies / approaches used, including notably also documented controls in place in relation to the multiples valuation method and the discounted cash flow method (DCF) which are, as indicated under section 1.3. above, the most commonly used methods as referred to by the surveyed AIFMs for AIFs investing in real estate, private equity, infrastructure and private debt.

For illustration purposes only, the following specific checks and controls were set out by the surveyed AIFMs when using the multiples and discounted cash flow method:

Multiples valuation method

- the review of the plausibility of the comparable companies/peers selection according notably to the sector/industry, the company size, the geographical region, the lifecycle and the stage of development of the company;
- the review of the appropriateness of the multiples selection;
- the review of the enterprise value and equity value calculations;
- the review of the calibration.

Discounted cash flows method

- the review of the significant assumptions (e.g. growth rates, margins, terminal value, etc.) and the sensitivity analysis;
- the plausibility checks of the discount rate against market conditions/data;
- the comparison of the cash flows and costs with the underlying agreements or sectorial / independent data and historical track records;
- the comparison of the inflation rate with public sources / information.

In light of the above-mentioned results and observations, the CSSF wishes to emphasise that the implementation of dedicated valuation checks and controls for assets valued through valuation models is a cornerstone to ensure a robust and sound valuation framework. Such checks, controls and reviews are necessary to ensure that less liquid / illiquid assets remain fairly and appropriately valued, on an ongoing basis, in accordance with the applicable regulation.

On that basis, the CSSF expects that the valuation policies and procedures of the AIFMs provide for specific and appropriate valuation checks and controls of the valuations derived from valuation models by applying an adequate risk-based approach and that the AIFMs duly consider the results of these checks and controls in order, in particular, to identify any potential limitations or issues in the valuation models (i.e. assumptions, inputs and approach), and thereby properly assess whether any adjustments to the valuation approaches in place would be required in such circumstances.

2.2.3. Valuation models - review of valuation reports from third-party experts

Article 17(4) of the AIFM Law requires that "AIFMs must ensure that the valuation function is either performed by:

(a) an external valuer, which must be a legal or natural person independent from the AIF, the AIFM and any other persons with close links to the AIF or the AIFM; or

(b) the AIFM itself, provided that the valuation task is functionally independent from the portfolio management and the remuneration policy and other measures ensure that conflicts of interest are mitigated and that undue influence upon the employees is prevented". (emphasis added)

Article 67(4) CdR specifies that *“Where the valuation is performed by the AIFM itself, the policies shall include a description of the safeguards for the functionally independent performance of the valuation task in accordance with point (b) of Article 19(4) of Directive 2011/61/EU. Such safeguards shall include measures to prevent or restrain any person from exercising inappropriate influence over the way in which a person carries out valuation activities”*. (emphasis added)

Circular CSSF 18/698 provides under point 534 that *“When performing the valuation function internally, the AIFM may use third-party experts. However, the liability of the AIFM towards the AIF and its investors is not affected”*. (emphasis added)

Article 71(2) CdR provides that the *“valuation policies and procedures shall set out a review process for the individual values of assets, where a material risk of an inappropriate valuation exists (...)”*.

In the Thematic Review, the CSSF observed that the use of third-party experts / third party valuation service providers, which support the internal valuation function of the AIFMs in their valuation tasks, is a common practice. The review further showed that the delegated portfolio managers and investment advisors can also contribute information / inputs supporting the valuation of the investments. In this respect, some AIFMs also reported being exposed in these circumstances to the existence of a material risk of inappropriate valuation.

With regard to the controls in place at the level of the AIFMs concerning the valuations (including valuation reports) received from third-party experts / valuation service providers and the information received from portfolio managers and investment advisors as an input / basis for the valuation of less liquid / illiquid investments, the CSSF observed that, in some limited cases, the valuation policies and procedures of the AIFMs surveyed did not provide for sufficiently documented controls / reviews of the valuation inputs / information and reports provided by third-party experts / third party valuation service providers, including inputs from the portfolio management / investment advisors.

In accordance with the regulatory provisions above, the AIFMs should be able to demonstrate that the controls / reviews in place provide for an adequate and independent valuation process as well as that the possible conflicts of interest are appropriately managed.

In this context, we want to remind the feedback given by the CSSF in the context of the CSSF Feedback Report stating notably the following:

- In relation to the independent valuation process, *“When the valuation function is performed internally, the CSSF observed that in some cases, the valuation policies/procedures did not clearly demonstrate the independence of the valuation function from the portfolio management function and did not sufficiently disclose the safeguards for the functionally independent performance of the valuation task. (...) the CSSF expects all IFMs to: • verify and formalise in the valuation policies/procedures the independence of the valuation function, particularly from the portfolio management function. (...)”*

*As outlined in the ESMA report on the CSA on Valuation, the **conflict-of-interest situations also have to be managed where valuation-related functions are performed by third parties** (including other group entities), especially if they perform multiple potentially conflicting functions on a delegation basis with fee structures linked to the Net Asset Value (“NAV”).”*

- In relation to controls / reviews, *“(...) For direct RE and unlisted equities, the IFMs mostly apply mark-to-model valuation (either based on a model developed internally or based on the model-based valuation provided by external appraisers/valuers).*

In this context, we noted that a few IFMs in the sample did not have sufficient controls in place to ensure the quality of data and models used and/or the reasonableness of individual values, especially for the mark-to-model prices.

*On that basis, the CSSF expects that all IFMs (...) have in place valuation policies and procedures that: (...) • describe **the controls performed on the prices of the assets** in the portfolio, especially on less-liquid assets. As reminder, the ESMA report on the CSA on Valuation notably emphasises that "(...) pricing methodologies and outputs should be challenged and regularly back tested in order to ensure their accuracy and robustness under all market conditions" and that "internal valuation models could be used to challenge the prices provided by the external data providers (...)".*

Based on the above, in performing the valuation function internally, the AIFMs may rely on the expertise of third-party experts / third-party valuation service providers who are not considered to be external valuers within the meaning of Article 17(4)(a) of the AIFM Law.

In this context, the CSSF expects that the valuation policies and procedures of the AIFMs provide for the necessary specific and appropriate checks and controls, carried out in accordance with a risk-based approach, over the inputs / information received from third-party experts / third party valuation service providers for the valuation (including, for instance, valuation reports). These checks and controls should ensure and provide for the reliability and reasonableness of the data / inputs and elements feeding the valuation methodologies / approaches applied to the relevant less liquid / illiquid assets, thereby ensuring that these assets are properly and fairly valued on an ongoing basis.

In addition, the AIFMs are required to conduct thorough due diligence and maintain ongoing oversight of such third-party experts / third-party valuation service providers.