Co-Authored by:
Houlihan Capital
Richey May & Co.

Published: September 2019

Fair Value

Best Practices & Implementation

Overview

Given the difficulty of valuing illiquid assets and the potential for conflict of interest, hedge funds, private equity firms, and other investment managers and financial institutions (Asset Management Firms) are receiving greater attention from regulators, investors, auditors, politicians, and other industry participants, with the trend toward a well-defined and consistently applied valuation policy that complies with the relevant reporting standards, greater transparency and independence. As the securities held by investors are becoming increasingly complex and continue to rise in number and value, the need for established guidelines, which apply consistent valuation methodologies in determining the fair value of their portfolio investments, is becoming increasingly important. Asset Management Firms should review their valuation policy and related procedures on a periodic basis to ensure compliance with relevant pronouncements and/or guidance set forth by the Securities and Exchange Commission (SEC), the Financial Services Authority (FSA), the Securities and Futures Commission (SFC), the Financial Accounting Standards Board (FASB), American Institute of Certified Public Accountants (AICPA) and other regulatory authorities.

Definition of Fair Value

ASC Topic 820 modifies the GAAP definition, determination, and disclosure of fair value. As such, fair value in accordance with FASB Accounting Standards Classification Topic 820: Fair Value Measurement (ASC Topic 820) is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Further, ASC Topic 820 establishes a framework for measuring fair value under generally accepted accounting principles and expands disclosures about fair value measurements. This statement applies under other accounting pronouncements that require or permit fair value measurements, the FASB having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. In addition, the transaction to sell an asset or transfer a liability is a hypothetical transaction at the measurement date, considered from the perspective of a market participant that holds the asset or owes the liability. Therefore, the definition of ASC Topic 820 focuses on the price that would be received to sell the asset or paid to transfer the liability (i.e. an exit price), not the price that would be paid to acquire the asset or received to assume the liability (i.e. an entry price).

Valuation Inputs and Fair Value Hierarchy

The valuation techniques described in Appendix B and C[1] stress the importance of maximizing the use of observable versus unobservable inputs. Observable inputs are defined as inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that market participants would use when pricing the asset or liability in an orderly transaction. Unobservable inputs are defined as inputs for which market data is not available and that is developed using the best information available about the assumptions that market participants would use when pricing the asset or liability. To clarify the distinction between observable and unobservable inputs and increase consistency and comparability in fair value measurements, the decision trees in Appendix C and D establish a fair value hierarchy that prioritizes valuation inputs into three levels. The Fair Value Hierarchy is described below in further detail.

Level 1 Inputs

Quoted prices (unadjusted) in active markets for identical assets or liabilities. Quoted prices should not be adjusted because of the size of the position relative to trading volume (i.e., blockage discount). Bid (long positions) quotes are preferred, given the exit price concept.

Level 2 Inputs

Inputs other than quoted prices included within Level 1 inputs that are observable for the asset or liability, either directly or indirectly (i.e., quoted prices in inactive or similar markets). Broker quotes can be used if the trade can be executed at that price, though more than one or two quotes is preferred.

Level 3 Inputs

Unobservable inputs for the asset or liability.

Practical Expedient

When investments do not have a readily determinable fair value and the investment is an investment company within the scope of FASB Accounting Standards Classification Topic 946: Investment Companies (ASC Topic 946) or an investment real estate fund fair value is measured using net asset value per share or its equivalent is permitted to measure fair value using the net asset value per share as a practical expedient. Certain factors such as the measurement date of the investment versus the reporting entity and management's commitment to sell the investment need to be considered as described in ASC Topic 820 related to the use of or adjustments to the practical expedient as the fair value.

1 Please see Appendix C and D for decision trees and factors related to Level I, II, and III determination and Valuation Methodology determination.

Appendix A

Generally Acceptable and Preferred Valuation Techniques for Several Investment Types

Publicly Traded Equity

Fair value for publicly traded equity securities (Public Equity) traded in an active market, defined as any market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis, should be based on the closing price reported for the last trading day prior to the valuation date for which such data is available to determine fair value. In cases where unrestricted listed equity is traded in an inactive market, defined as markets in which there are a few transactions for the asset or liability, the price is not current or price quotations vary substantially either over time or among market makers or in which little information is released publicly, the observed price should be adjusted or augmented by other valuation techniques to determine fair value.

Restricted Securities

Market approach valuation techniques should be used to estimate the fair value of restricted listed equity[2] in the same manner as described for unrestricted listed equity. In such instances, a discount for lack of marketability is often applied to the indicated value derived from the market approach to arrive at a fair value estimate. However, consistent with ASC Topic 820, the discount adjustment should only be applied if the restriction is specific to the security to be transferred. The discount should reflect the amount that market participants would demand for assuming the risk of being unable to access public markets for the security for a specific period. The magnitude of the discount will depend on several factors such as the nature and duration of the restriction, the extent to which buyers and sellers are limited by the restriction and other factors specific to the security and the investors.

Section 144A Stock

For common stock that is acquired via a PIPE (Private Investment in a Public Entity) structure, (generally 144A stock) where the stock purchase agreement calls for the company to register the securities within a specific timeframe (generally 60 to 180 days), the time period and certainty that the company will meet the registration requirement should be considered when determining fair value. As indicated above, an appropriate adjustment may be applied relative to the freely-tradeable, exchange traded common stock to reflect the restriction.

Private Equity

For the immediate time period following a transaction, the determination of fair value for equity securities in which no liquid trading market exists (Private Equity) can generally be approximated based on the transaction price absent any significant developments. Thereafter, (or in the interim, if significant developments relating to such portfolio company or industry occur which may suggest a material change in value) Asset Management Firms should value each investment by applying generally accepted valuation methods including market transaction and comparable

2 Shares that have an attribute for which they are legally restricted from sale, such as an underwriters lookup

public company multiples, which are based on a measurement of the company's historical and projected financial performance (typical metrics include: enterprise value/latest 12 months EBITDA or projected fiscal year EBITDA, enterprise value/ latest 12 months revenue or projected fiscal year EBITDA). Valuation multiples that are relevant to the industry and company in the investments held should be considered and relied upon. Valuation multiples should be assessed and may be adjusted on a go-forward basis based on the business risk associated with the subject company in which the investment is held. In addition, the implied entry multiples should be considered as benchmarks in valuing unlisted equity. In circumstances where no financial performance metrics are available, Asset Management Firms should rely on other non-financial related metrics applicable to relevant progress from the original investment date to the valuation date. An additional methodology is the use of a discounted cash flow analysis whereby forecasted cash flows to be generated by the subject company are discounted to present value at an appropriate discount rate. These methodologies can be utilized to determine an enterprise value (Enterprise Valuation Methodologies) from which net debt is subtracted to determine equity value. If key valuation metrics change over time, that change and reasoning behind that change should be documented in an internal investment memo[3].

Warrants

Warrants may or may not be traded in an active market. In cases where an active market does exist, the quoted price as of the valuation date should be relied upon to estimate fair value. In other circumstances, warrants may be valued using an option pricing model (e.g. the Black-Scholes option pricing model or a binomial option pricing model). Inputs utilized in option pricing models include current stock price, strike price, time to maturity, risk-free rate, and volatility. If the equity of the underlying business is actively traded, the quoted stock price should be relied upon. Otherwise the stock price will be estimated through a valuation analysis, similar to that performed for private equity securities. For companies with complex capital structures (e.g. preferred stock, convertible preferred, etc.), an enterprise value waterfall analysis should be performed, which factors in the rights and privileges of each class of security in front of the common stock. Factors to consider when making a volatility assumption include: the underlying volatility of the option currently being traded, the underlying volatility of traded options for similar publicly traded companies, or the underlying volatility of traded options companies within a similar industry. The length of time utilized to calculate volatility should be applicable to life of the option, but the selection of time will be determined by the deal team and/ or internal pricing committee.

Liquid Debt

Debt securities, such as high yield bonds, in which there exists a liquid trading market should be valued either (i) by using one of the many debt pricing services or (ii) by requesting the current trading prices from one or more investment banks who make a market in such securities, and in either case using the latest actual price if traded on such valuation date (if available), or the average of the bid/ask prices on the last date prior to the valuation date for

3 See Appendix B for a suggested outline of an internal investment memo.

which such data is available.

Illiquid Debt/Preferred Stock

For debt and preferred stock securities for which no liquid trading market exists, Fair value will generally approximate cost[4] unless the borrower's enterprise value, overall financial condition (such as deterioration of financials, missed payments, or falling out of compliance with covenants) or other factors such as divergence of the stated interest rate versus the market rate, lead to a determination of a different value. For debt accruing payment-in-kind (PIK) interest, the interest will be added to the face value for valuation purposes as long as the other indicators determine there is appropriate value in the underlying company to cover the debt plus the PIK.

In such cases, the debt/preferred stock should be valued by applying an appropriate discount rate (which may be higher or lower than the actual interest or dividend rate of the security to be valued) to the expected cash flows from such security, including the anticipated principal value recovery in the event of a sale or liquidation of the issuer. The applicable discount rate applied to the cash flow should be derived based on re-pricing the expected interest rate as of the valuation date using the current capital structure and current market pricing for a particular level of debt/ preferred stock. Metrics that can be used to determine allocation of capital structure include credit rating, debt to EBITDA and other debt covenants at funding. To determine the coverage available to debt/preferred stockholder and the current reallocation of the capital structure, an enterprise value must be determined. The enterprise value can be determined by utilizing the Enterprise Valuation Methodologies discussed in the Private Equity valuations. In addition to reviewing market pricing on debt/preferred stock, an analysis should be performed to ensure the debt/preferred stock has adequate coverage based on an enterprise value waterfall analysis (Waterfall Analysis). The Waterfall Analysis entails allocating claims against enterprise value to the debt and equity of the company, beginning with the most senior debt down to the most junior equity.

Convertible Securities

Debt or preferred stock securities convertible into common stock (Convertible Securities) should be valued using one of the following methods based on a determination of the likely exit for that investment:

I. If the likely exit is determined to be through a sale or liquidation of the company whereby the Convertible Securities are redeemed, the fair value of the investment should reflect the face value or liquidation preference value of the Convertible Securities.

II. If the likely exit is determined to be through a registered public offering whereby the Convertible Securities are to be converted into readily tradable common stock of the company, the Valuation Committee should value the Convertible Securities, including the effect of any accrued dividends, in the same manner as it determines the valuation of Public Equity.

4 Fair Value will only approximate cost if the borrower's enterprise value, overall financial condition or other factors remain unchanged.

III. If the likely exit is determined to be a private sale of the company, Asset Management Firms should value the Convertible Securities, including the effect of any accrued dividends, in the same manner as it determines the valuation of Private Equity giving effect to the conversion of the Convertible Securities into fully diluted common stock.

IV. In addition, if the value of the Convertible Security is not believed to be accurately reflected in the scenarios above, a supplemental analysis can be performed to determine the value of the Convertible Security as combining a straight bond and a call option that allows the investor to exchange the bond for equity. In this scenario, the methodology for Warrant Valuation can be followed to value the call option and the debt/preferred stock valuation to value the debt.

Credit Default Swaps

Since the CDS market is a dealer market, the average of bid/ask quotes from an active dealer in the particular CDS should be used to mark the investment.

For CDS Indices such as the ABX or CDX, the bid/ask average or composite quote from a third-party expert resource should be used to mark positions, with adequate documentation retained.

Appendix B

For Asset Management Firms looking to revise or create an investment memo, the following information should be considered:

Ultimately, a complete valuation should consist of both qualitative and quantitative support for the Fair Value conclusion, including an explanation of the conclusion and support for key assumptions and adjustments. Once a methodology has been established for valuing an investment, the mechanics of the methodology should be allowed to "work" (e.g. value driver times multiple) from quarter to quarter or month to month as a starting point for the analysis. Additional factors should then be considered in arriving at the final conclusion of fair value and should be documented and supported, in particular where the conclusion deviates from the initial indication of fair value provided by the agreed methodology.

The following is a suggested outline for quarterly investment memos:

V. Transaction Overview

1. Description of original transaction (including implied valuation metrics e.g., multiple of EBITDA, etc.)
2. Description of each security, including key terms (e.g. restrictions, priority, rate, maturity, conversion features, etc.)
3. Capital structure at entry, including ownership percentages of each security
4. Current capital structure (pro-forma for acquisitions), including ownership percentages of each security

VI. Financial Overview

1. Narrative overview of key financial metrics
2. Discussion of current performance relative to budget/expectations
3. Detailed consolidated historical financials

VII. Summary of Recent Significant Events

1. Economic (macro events impacting industry and company)
2. Industry (industry issues)
3. Company-specific issues (i.e. operational, management, financial)

VIII. Valuation Analysis

1. Detailed valuation support for each investment position using generally accepted valuation methodologies and consistent with stated valuation policy
    i. Mechanical calculations (i.e. value driver multiple)
    ii. Net debt as of valuation date (as applicable)
    iii. Fully diluted ownership

2. Support for adjustments (e.g. discounts)
3. Comparison to original investment cost

IX. Valuation Narrative

1. Valuation overview
2. Narrative update for each investment position
3. Detailed description of key valuation parameters
   i. Comparable company and transaction set (as applicable)
   ii. Value driver
   iii. Adjustments
4. Validation/explanation of conclusion that ties out to the conclusion indicated in the Valuation Analysis above

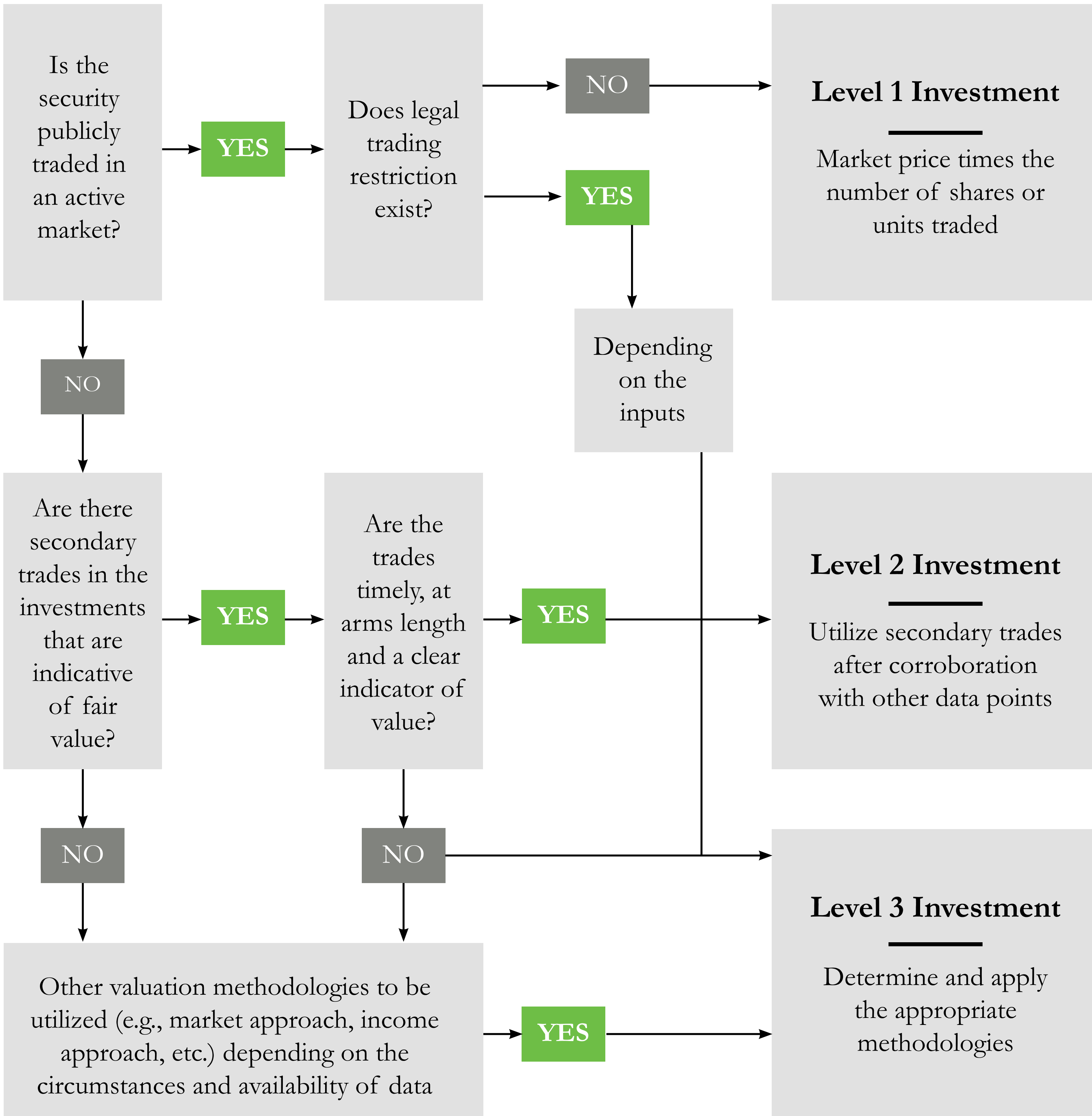
Additional Data

In addition to the above, the following documents should be incorporated as part of a complete valuation package:

1. Investment committee memo from initial deal approval (or similar documentation)
2. Letter/summary provided to investors describing the investment
3. Historical financials, quarterly and any monthly/flash reports that may be available as of or close to the valuation date.

Appendix C

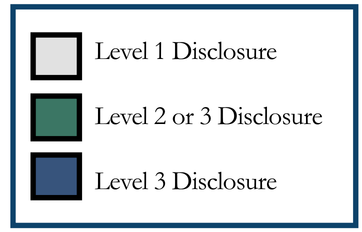
Decision Tree – Level 1, 2, 3 Determination

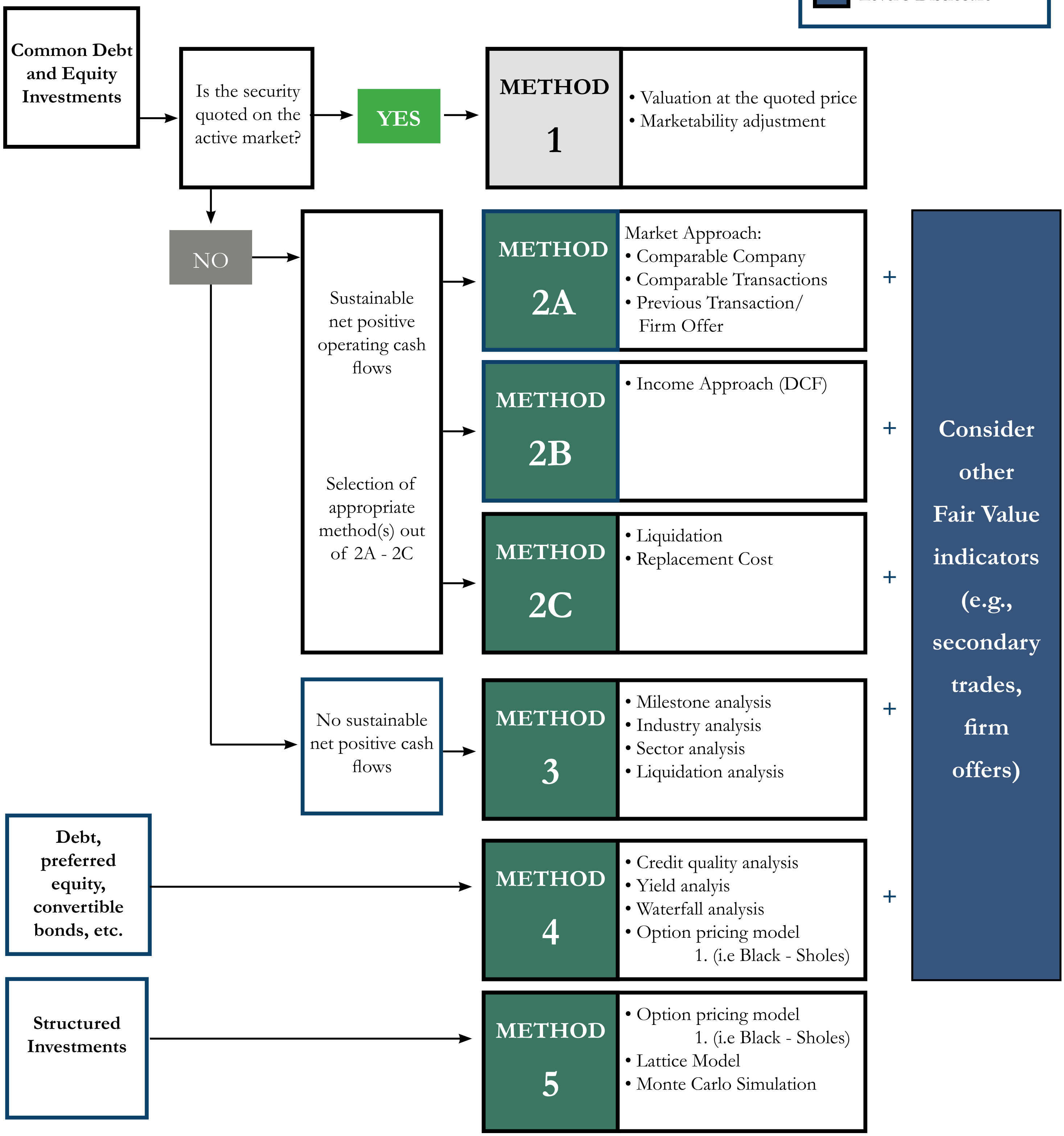


Appendix D

Direct Investment & Co-Investment Decision Tree

Determination of Valuation Method[5]





5 See AICPA Private Equity And Venture Capital Accounting and Valuation Guide. This guide provides nonauthoritative guidance and illustrations regarding the accounting for and valuation portfolio company investments held by investment companies within the scope of ASC Topic 946.

Appendix E

Fair Value Measurement Disclosures, Executive Summary Including Accounting Standards Update No. 2018-13 – Fair Value Measurement (Topic 820) Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13")

Fair value measurement disclosures are needed to help users of financial statements to understand the nature and risks of the investments and whether the investments can be sold, at amounts different from the reported value.

The following disclosure requirements are effective prior to the adoption of amendments in ASU 2018-13 for Alternative Investment Funds:

For investments that are within the scope of this discussion and that are measured at fair value at the measurement date, a reporting entity should disclose at a minimum, the following information for each investment.

1. An accounting policy footnote note regarding the fair value measurement policy of the reporting entity, including fair valuation hierarchy per ASC Topic 820 and how the net risk exposures are measured. This should include a description of the valuation techniques and inputs used in the fair value measurement of investments categorized in Level 2 and 3.
2. A tabular presentation of the fair valuation hierarchy of investments at the reporting date classified into the fair value levels and practical expedient, if applicable.
3. Additionally, a tabular representation of the roll-forward for Level 3 fair value measurement as at the reporting date should be disclosed, including the changes in unrealized gains and losses included in earnings for the period.
4. If applicable, the amount and reasons of transfers between the Levels (if any) and the policy of timing of transfers between levels should be disclosed.
5. For nonpublic entities, unrealized appreciation or depreciation related to Level 3 investments still held on the reporting date.
6. A tabular presentation of the quantitative information regarding the significant unobservable inputs. Fully diluted ownership used by the reporting entity to determine the fair value of Level 3 investments held as of the reporting date should be disclosed. The table may include the investment type, fair value, valuation technique used (for instance, discounted cash flows/market approach, etc.), unobservable input (like yield-to-maturity or EBITDA multiples) and the range (weighted average) of the unobservable input.
7. If there are investments held by the reporting entity as of the reporting date, that cannot be redeemed, then the reporting entity's estimate of the time during which the underlying assets are expected to be liquidated by

the investees (if applicable). This should be disclosed for each class of investments which cannot be redeemed. Additional disclosures should include the amount of the reporting entity's unfunded commitments related to investments in the class and a general description of the terms and conditions upon which the investor may redeem investments in the class (e.g. quarterly redemption with 60 days notice).

8. If applicable, the reporting company should also disclose the circumstances in which an otherwise redeemable investment in the class, or a portion thereof, might not be redeemable (e.g. investments subject to a lockup or gate). Also, for those otherwise redeemable investments that are restricted from redemption as of the reporting entity's measurement date, the reporting entity should disclose its estimate of when the restriction from redemption might lapse. If an estimate cannot be made, the reporting entity should disclose that fact and how long the restriction has been in effect.

The following changes to the disclosure requirements noted above are effective after the adoption of amendments in ASU 2018-13 for Alternative Investment Funds:

ASU 2018-13[6] will be effective for all entities for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019, early adoption is permitted.

Disclosure items that are removed from the ASC Topic 820 disclosure requirements:

1. The amount and reasons for transfers between Level 1 and Level 2 investments in the fair value hierarchy
2. The accounting policy related to the timing of transfers between the Levels in the fair value hierarchy
3. The valuation policies for Level 3 fair value measurements
4. For nonpublic entities, unrealized appreciation or depreciation related to Level 3 investments still held on the reporting date.

ASC Topic 820 disclosure requirements that are modified due to ASU 2018-13:

1. In lieu of a tabular representation of the rollforward for Level 3 fair value measurement as at the reporting date, a nonpublic entity is required to disclose transfers in and out of Level 3 of the fair value hierarchy and purchases and issues of Level 3 assets and liabilities.
2. For investments in certain entities that calculate net asset value, an entity is required to disclose the timing of liquidation of a reporting entity's assets and the date when restrictions from redemption might lapse only if the reporting entity has communicated the timing to the entity or announced the timing publicly.
3. ASU 2018-13 also clarifies that the measurement uncertainty disclosure is to communicate information about the uncertainty in measurement as of the reporting date.

Public entities are subject to additional reporting requirements.

6 FASB Accounting Standards Update No. 2018-13, August 2018

Some Additional Considerations with Valuation

1. The use of a valuation model to determine fair value is acceptable under ASC Topic 820 only when quoted prices representing orderly transactions in active markets are not available.
2. Multiple valuation techniques can be combined to value an investment.
3. Typically, the fair value disclosures in ASC Topic 820 are not required for feeder funds whose sole investment is in a master fund.
4. If a fund's internal controls are not adequate to assign the correct levels to its investments under ASC Topic 820 the fair value footnote disclosures may be materially misstated. The resulting deficiency may be deemed to be a significant deficiency or material weakness which would require a comment in an internal control deficiencies letter.
5. Management should obtain sufficient information to determine whether a broker-dealer quote is observable or unobservable for the purpose of assigning a level designation under the fair value hierarchy of ASC Topic 820. A best practice is to utilize a back testing program to validate the indicative broker-dealer quotes.

Level 1 Considerations:

1. For securities traded in multiple markets, the market where a fund normally enters into transactions is presumed to be the principal market for the purpose of valuation under ASC Topic 820, unless there is evidence to the contrary.
2. Repurchase agreements are investments at fair value and should be included in the fair value hierarchy level disclosure. In the absence of a fair value option election, reverse purchase agreements are considered to represent a fixed, determinable obligation of a fund, and would need to be presented at face value, therefore, not to be included in the fair value hierarchy level disclosure.

Level 2 Considerations:

1. Managers should develop a policy defining active and inactive markets when investing in thinly-traded securities, which will be subject to auditor review.
2. Investments in digital assets that are traded on multiple exchanges and/or over the counter should generally be considered Level 2 investments. The reason for this is that since most of the digital assets are traded continuously and simultaneously in multiple active markets, they are often valued using a weighted average price based on the volume of trading at those different markets.

Level 3 Considerations:

1. Disclosure on valuation processes for Level 3 investments:
    a. Although ASU-2018-13 eliminates the requirement to disclose the policy related to the timing of transfers between levels in the fair value hierarchy, funds are still required to set and consistently follow a policy on the timing of transfer.

b. With regards to the disclosure modification under ASU 2018-13 for transfers into and out of Level 3 of the fair value hierarchy, and purchases and issues of Level 3 assets and liabilities, the reasons for transfers into or out of level 3 must also be disclosed.

c. Additionally, both public and non-public entities are required to disclose the quantitative information on significant Level 3 inputs in tabular format.

2. Pre-ICO (Initial Coin Offerings) or SAFT (Simple Agreements for Future Tokens) are generally considered Level 3 investments as typically, there would be no observable markets and modelling would be used to value the investments.
3. If a fund invests in a private investment company, which reports under IFRS, the practical expedient under ASC Topic 820 can be applied to measure the fair value of investments that report under IFRS or other accounting basis different from U.S. GAAP. The reporting entity, is required to consider whether an adjustment to the net asset value of the investee entity is needed or not.

4. If a fund invests in a private investment company which has a portion of its investments held in a side-pocket, then the fair value level hierarchy designation for the investment in a private investment company may be divided between the general class or liquid portion of the investment and the side-pocket portion of the investment.

According to ASU 2018-13 to ASC Topic 820, the disclosure framework project's objective and primary focus are to improve the effectiveness of disclosures in the notes to financial statements by facilitating clear communication of the information required by generally accepted accounting principles (GAAP) that is most important to users of each entity's financial statements.

Appendix F

Negative Assurance

Valuation advisor reviews client valuation and states that nothing has come to the attention of the valuation firm of an adverse nature and that the procedures, basis of valuation and calculations undertaken do not appear unreasonable. Valuation advisor opines that the procedures used to derive the company's internally generated valuation do not deviate from industry standards. The valuation provider does not perform its own valuation.

Not an independent valuation. Only reviews the valuation methodology used by the fund.

Positive Assurance

Valuation advisor reviews client valuation and confirms that the procedures, basis of valuation and the calculations undertaken by the client are reasonable.

Valuation advisor opines that the company's internally generated valuation has been prepared using procedures and assumptions that conform to industry standards. The valuation provider does not perform its own valuation.

Not an independent valuation. Only reviews the valuation methodology used by the fund.

Independent Valuation

Valuation advisor performs a full independent valuation of the specific investment utilizing appropriate methodologies for the type of investment (e.g. debt v. equity).

Valuation advisor undertakes a full analysis including selecting the valuation methodology and comparable companies, identifies the cash flows and appropriate discount rate, and provides a final value range to the client.

Valuation advisor independently values the asset and provides analyses to support methodology and calculations used to generate results.

Questions?

If you have questions regarding the topics discussed in this whitepaper or have any valuation needs, please contact:

Jules Pomerantz
Chief Financial Officer
jpomerantz@houlihancapital.com | **312.450.8607**

Jules Pomerantz, CPA is Chief Financial Officer at Houlihan Capital. As CFO and CCO of the firm, Mr. Pomerantz is responsible for providing leadership in the development and execution of short and long-term strategic financial objectives. Mr. Pomerantz has extensive experience in hedge fund investing, including financing, valuation and due diligence.

About Houlihan Capital

Houlihan Capital is a leading, solutions driven, valuation, financial advisory and boutique investment banking firm. We pride ourselves on being thought leaders in an ever-changing landscape. In short: *Value. Added.*

Houlihan Capital is a FINRA and SIPC member, committed to the highest levels of professional ethics and standards.

Valuation & Financial Advisory

- Portfolio Valuation (ASC 820)
- Complex & Illiquid Securities (Level 3)
- Enterprise Valuations
- Fairness & Solvency Opinions
- Estate and Gift Valuations
- Purchase Price Allocation (ASC 805)
- Goodwill Impairment Testing (ASC 350)
- Stock-based Compensation (ASC 718, IRC 409A)

Our Clients

We serve a vast clientele from small market companies to large corporate organizations.

- Hedge Funds
- Private Equity Funds
- Fund of Funds
- Fund Administrators
- Law Firms
- Public & Private Corporations
- Business Owners
- Sovereign Wealth Funds

Our Industries

- Asset Management
- Banking
- Blockchain
- Cannabis
- Cryptoassets
- Energy
- Financial Services
- Food & Beverage
- Healthcare & Pharmaceuticals
- Hotels, Restaurants & Leisure
- Media & Entertainment
- Oil & Gas
- Power & Utilities
- Technology
- **And More**

Click here to access our Firm Overview