RICHEY MAY & CO

FAIR VALUE MEASUREMENT
BEST PRACTICES FOR IMPLEMENTATION UNDER ASC 820

ALTERNATIVE INVESTMENTS

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Dear Clients and Friends:

We are pleased to present this guide on the Financial Accounting Standards Board's (FASB) Accounting Standards Codification Topic 820, *Fair Value Measurement* ("ASC 820"). This guide represents a practical approach to implementing and complying with the requirements of ASC 820 and fair value initiatives. Our intention is to clarify these requirements and we are confident that you will find this paper informative and helpful; however, the application of fair value remains an art, not a science.

As a leading international professional services firm, Richey May & Co. is proud of our association with the alternative investment community. The U.S. Securities and Exchange Commission and the Public Company Accounting Oversight Board both emphasize management's responsibility in fair value measurements, relying on both quotes from third-party pricing services and broker-dealers, and also for the implementation, documentation, and disclosure of valuation processes and procedures. Richey May takes this responsibility seriously. Such transparency is even more critical as asset flows from institutional investors allow a greater portion of Americans to gain access to the alternative investment industry. The FASB and its requirements have tremendous relevance to the financial services industry, and ASC 820 offers a framework for comparability and consistency that promotes best practices in the global markets across our industry.

If you have any questions while reading this guide or regarding ASC 820, please reach out to Steve Vlasak (svlasak@richeymay.com) or a Richey May professional.

The Richey May & Co. Alternative Investments Team

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Daniel O'Connor joined Richey May in 2014 as an audit partner leading our Alternative Investments Service Line. Daniel focuses on highly complex financial entities such as domestic and offshore hedge funds, fund of funds, REITs, broker dealers, '40 Act funds, commodity pools, and asset/mortgage-backed securities partnerships. His clients include financial institutions, private equity funds and real estate investment groups.

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Rob joined Richey May in 2017 and currently serves as an Audit Partner in the Alternative Investments practice. He has been involved in public accounting since 1996, serving both private and publicly-held companies in an audit and tax capacity. He specializes in serving clients across the financial services industry, including private equity and hedge funds. As a leader in the firm's Transaction Advisory Services team he provides M&A expertise to clients contemplating entity transactions, including mergers, acquisitions, dispositions, and buy/sell side due diligence.

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Travis serves as a Director in the Alternative Investments Practice at Richey May. He has specialized in performing audits for clients in the alternative investments industry since he began his career at Rothstein Kass in 2006, subsequently serving as an Audit Manager for several years at Spicer Jeffries. When he joined the Alternative Investments team at Richey May, Travis reconnected with many of the same practice leaders he had worked with at Rothstein Kass. He specializes in financial operations, accounting, reporting, and valuation for domestic and offshore hedge funds, fund of funds, master feeder structures, venture capital, real estate funds, private equity funds, and cryptocurrency. Travis also advises clients on initial organizational structure, audit processes, and the management of operational matters.

ASC 820 - Fair Value Measurement: Best Practices for Implementation and Compliance for the Alternative Investment Industry

Overview

Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC" or the "Codification") Topic 820, Fair Value Measurement ("ASC 820") is the sole source for authoritative guidance on how entities should measure and disclose fair value in their financial statements under U.S. generally accepted accounting principles ("U.S. GAAP"). This updated white paper provides practical guidance on certain provisions in the Codification that affect the alternative investment industry.

ASC 820 is intended to result in more useful and accurate financial statements and in greater comparability in the financial statements of entities that operate in the global markets.

Key Terms & Concepts

Fair Value

ASC 820 defines fair value 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." It establishes a framework for measuring fair value and expands disclosures. It also applies to other accounting pronouncements that either require or permit fair value measurements.

Exit Price

ASC 820 takes on an "exit price" approach. An entry price cannot be presumed representative of fair value, for example, when the transaction is:

- Between related parties
- Made under duress (a "forced sale")
- When the initial transaction occurs in a market different from the market a fund could access in exiting the investment (as when a broker may transact in an inter-dealer market that is not available to the fund)

Entry prices also include transaction costs that may not be recoverable in an exit price. These principles open the door to potentially recognizing "day one" gains and losses on transactions.

Assumptions used by marketplace participants, such as including the participant's risk assumptions, are used to measure fair value. The measurement itself assumes an orderly transaction and also provides additional guidance to determine fair value under extenuating circumstances.

> *A quoted price in an active market generally provides the most reliable evidence of fair value and should be used without adjustment, whenever available. For illiquid securities where a market may not exist, a fund must develop a fair value approach based on a hypothetical market, including the assumptions made by potential market participants.*

Principal Market

The "principal market" is the market with the greatest volume or level activity for the asset or liability. The market where a fund normally enters into transactions is presumed to be the principal market unless there is evidence to the contrary.

Of course, the principal market must be accessible to the fund. If a fund cannot identify or access a principal market, it should apply the most advantageous market to derive fair value. The "most advantageous market" is the market that would assign the highest fair value to an asset or the lowest fair value in transferring a liability after taking transaction costs into account. The use of the most advantageous market when multiple markets exist goes against the grain of conservatism but is clearly what the FASB intended.

Valuation Techniques

Under ASC 820, measuring fair value requires sufficient data to maximize relevant observable inputs and minimize unobservable inputs. ASC 820 defines three valuation approaches for fair value measurement:

- **Market Approach:** uses prices and other relevant information generated by market transactions involving either similar assets and liabilities or a group of assets and liabilities, such as a business. This approach may use market quotes for exchange-traded securities, matrix pricing and/or the use of market multiples derived from a set of comparable companies in the valuation of a private equity investment.
- **Income Approach:** converts future amounts to a single current amount. With this approach, the fair value measurement reflects current market expectations about those future assets. Using this approach may mean including present value techniques and/or the Black-Scholes-Merton option pricing model.
- **Cost Approach:** reflects the amount required to replace the service capacity of an asset at its measurement date. According to ASC 820, "cost" refers to the current replacement cost of an asset, rather than to its initial transaction cost. Within the context of ASC 820, the cost approach for valuation is intended for nonfinancial assets. For financial assets, the acquisition cost of an investment may approximate a market approach if the acquisition cost is based on the most recent arm's length transaction; however, funds should still apply a valuation approach.

In some cases, a single valuation technique is appropriate while other cases call for multiple valuation techniques. If multiple valuation techniques are used, then the results are evaluated with consideration for the reasonability of the indicated range of values.

If the transaction price is determined to be fair value at initial recognition and a valuation technique that uses unobservable inputs is used to measure fair value in subsequent periods, the valuation technique must be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. After initial recognition, when measuring fair value using a valuation technique that uses unobservable inputs, a fund must ensure that the valuation technique is calibrated to reflect observable market data at the measurement date.

> *Valuation techniques must be applied consistently. A change in valuation technique is only appropriate if the change results in a measurement equally or if it is more representative of fair value given the circumstances. Any change in method must be treated as a change in accounting estimate.*

Observable Inputs vs Unobservable Inputs

Observable inputs are developed using publicly available market data or transactions reflecting the assumptions of market participants. The observable market inputs used must be transparent, reliable, and verifiable; they are typically a by-product of knowledgeable and active sources in a particular market.

When observable inputs are insufficient or not available without undue cost or effort, a fund must use "unobservable" inputs in the valuation. According to ASC 820, unobservable inputs are inputs for which market data are not available and that are developed using the best information available about the assumptions that market participants would use when pricing the asset or liability. Unobservable inputs may be developed by the fund or third parties.

Fair Value Hierarchy

One of the most significant elements of ASC 820 is the use of a three-level fair value hierarchy for the classification of inputs in fair value measurement. The three levels of the fair value hierarchy and the significant valuation inputs under ASC 820 are:

Level 1 Inputs are the most observable inputs to arrive at fair value (e.g. liquid investments), including unadjusted quoted prices for identical assets or liabilities in active markets (e.g. exchange-traded securities). *ASC 820 defines an "active market" as a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.*

Level 2 Inputs are observable inputs other than quoted prices used to value Level 1 securities, such as quoted prices for identical assets and/or liabilities in markets that are inactive, quoted prices for similar assets and/or liabilities, private investments in public companies, or market inputs other than the directly observable quoted price. These "other market inputs" are often used in conjunction with valuation models and generally include interest rates and yield curves observable at commonly quoted intervals, implied volatilities, and other market-corroborated inputs.

Level 3 Inputs are those not currently observable, as when there is historical volatility in an option-pricing model or a fund's own data or assumptions.

> *ASC 820 emphasizes the need to prioritize the use of observable inputs whenever possible. However, the more illiquid an investment, the greater the need to use multiple valuation techniques to arrive at fair value.*

The level designation in the fair value hierarchy is based on the lowest level input that is significant to the fair value measurement.

Funds must consider the sensitivity of the financial instrument's fair value when assessing the significance of an input. Assessing the significance of an input requires consideration of factors specific to the financial instrument being valued. Funds should be conservative when assigning level designations to securities with unobservable inputs. Ultimately, determining the significance of an input is a matter of judgment. Consequently, two unrelated funds assigning level designations to the same investment using similar unobservable inputs may reach different conclusions.

For a matrix of the levels and examples of securities that typically fall within each level, please refer to Exhibit 1.

Considerations When Determining Fair Value

Determining Fair Value When a Market is Inactive or Transactions Are Not Orderly

When determining fair value, funds should consider whether factors exist that indicate a significant decrease in the volume and level of activity for an asset or liability by comparing those levels to normal levels of market activity. Those factors include, but are not limited to, situations where:

- There are few recent transactions
- Price quotations are not developed using current information
- Price quotations vary substantially, either over time or among market makers
- Indices that used to highly correlate with the fair value of either the asset or liability are demonstrably uncorrelated with recent indication of fair value for that particular asset or liability
- There is a significant increase in implied liquidity risk premiums, yields or performance indicators for observed transactions or quoted prices when compared with the fund's estimate of expected cash flows
- There is a wide bid-ask spread or significant increase in the bid-ask spread
- There is a significant decline in the activity of, or an absence of a primary market for new issuances for the asset or liability or similar assets or liabilities
- Little information is publicly available (as when transactions take place in a principal-to-principal market)

- There is limited public float for an investment closely held by a fund or by a syndicate of investors in which the fund participates

Thoughtful judgment is required to determine if there is a significant decrease in the volume and level of activity for an asset or liability. When the market is less or no longer active, there is an increased likelihood of distressed or forced transactions underlying market transactions. Therefore, quoted prices become less reliable indicators of fair value. In circumstances where there is significant decrease in the volume and level of activity for an asset or a liability in relation to normal market activity, other valuation techniques and inputs may be required to determine fair value.

Transactions in an inactive market may, in fact, be orderly. If there is a significant decrease in the volume and level of activity for the asset or liability, the fund should consider whether or not the transactions associated with the quoted prices are orderly. Such circumstances include, but are not limited to, when:

- There was not adequate exposure to the market for a period before the measurement date
- There was a usual and customary marketing period, but the seller marketed the asset or liability to a single market participant
- The seller is in or near bankruptcy, receivership or is required to sell to meet regulatory or legal requirements
- The transaction price is an outlier when compared with other recent transactions for the same or similar asset or liability

The challenge for most funds is obtaining sufficient market intelligence to evaluate whether a transaction is orderly or if it is a distressed/forced sale. In situations where funds do not have enough information to conclude one way or the other, the fund should still consider the transaction price as an input in estimating fair value. However, it should not be the sole basis to arrive at fair value. The best practice is to employ multiple valuation techniques with the use of transparent sources.

Application of Fair Value Measurement to Liabilities

Fair value for liabilities is determined by the amount agreed upon in an orderly transaction between market participants transferring the liability from one party to another. They assume that the nonperformance risk is the same before and after the transfer.

If a quoted price in an active market for an identical liability is available, then the quoted price should be used and would represent a Level 1 measurement. However, the availability of relevant observable inputs to determine the fair value of a liability can be limited.

When a quoted price in an active market for the identical liability is not available, a fund measures fair value by:

a. Using the quoted prices in an active market for an identical liability held by another party
b. Using other observable inputs, such as the quoted price in an inactive market where another party holds an identical item
c. Using another valuation technique such as an income approach

Funds should only adjust the quoted price of a liability held by another party if there are factors specific to the asset that are not applicable to the fair value measurement of the liability. Any adjustment to the quoted price when traded as an asset would preclude Level 1 classification. Some factors that could indicate a need for price adjustment include:

a. The quoted price for the asset relates to a similar (but not identical) liability traded as an asset
b. The unit of account for the traded asset is different from that of the liability

Funds must consider the effect of their own nonperformance risk when determining the fair value of liabilities. This can result in a seemingly counterintuitive valuation result. Decline in a fund's creditworthiness would result both in a lower fair value measurement for a liability and also the recognition of an unrealized gain. However, the fair value of the instrument must also be considered from the perspective of a market participant creditor since the credit impairment of the debtor would result in a reduction of value to the creditor. Master netting arrangements must also be considered when determining the fair value of financial liabilities transacted with counterparties.

Measuring the Fair Value of Financial Instruments Managed Within a Portfolio

Financial assets and liabilities are typically valued on a stand-alone basis based on their individual unit of account, and not in combination with other assets and liabilities held in a group. However, a fund may determine the fair value of a group of financial assets and liabilities on the basis of the exit price that would be received to sell a net long (asset) position or to transfer a net short (liability) position, provided that it does all of the following:

1. The group of financial assets and liabilities is managed on the basis of its net exposure to a particular market risk (or risks) or the credit risk of a particular counterparty, in accordance with the fund's documented risk management or investment strategy. Market risks include interest rate risk, currency risk and other risks related to price volatility, such as the price risk of equities or commodities.
2. Information on the financial instruments is provided to management on a group basis.
3. The financial assets and liabilities are measured at fair value at the end of each reporting period.

Permitting valuations within a portfolio based on net exposure to market and/or credit risk is designed to reduce asymmetry in the pricing of asset and liability positions.

The market risks being offset must be substantially similar to use the exception. For example, a fund is not permitted to combine exposures attributed to interest rate risk and those of commodity price risk for determining fair value. Additionally, the duration of the fund's exposure to a particular risk should be substantially the same. For example, a fund may measure the exposure of a three-month futures contract against a substantially similar three-month future contract on a net basis, but not against a 12-month futures contract. When using this exception, funds should use the price within the bid-ask spread that is most representative of fair value for the net exposure to the market risks (as a practical expedient, they may use the mid-price).

Under ASC 820, when market participants incorporate arrangements to mitigate risk during a credit event, a fund may include the effect of its net exposure to credit risk when determining fair value. Evidence of an arrangement that mitigates credit risk exposures can be established via a binding master netting agreement that is supported by initial and/or variation collateral posting. Master netting arrangements make it possible to net multiple positions with a particular counterparty. They also enable the reporting entity to assess credit risk more clearly based on net amounts rather than on the gross value of individual assets and liabilities. This exception can help determine the appropriate fair value adjustments.

Reducing risk through offsetting positions and binding master netting agreements may often result in meeting the requirements for this exception. Once adopted, the exception must be applied consistently from period to period. The application of this exception does not change the guidance on either the "right of offset" that applies to financial statement presentation, or the criteria for disclosing investments on the condensed schedule of investments (SOI). If used, the exception must be disclosed in the fund's financial statements.

Counterparty Risk Within Fair Value Measurement

Market participants view the impact of nonperformance risk as essential to the fair value measurement. Nonperformance risk is the risk that those party to a transaction will not perform their obligations. Generally, an entity's credit risk is the most significant component of nonperformance risk; however, other risks such as regulatory and operational considerations may also influence overall nonperformance risk.

As part of the valuation process, funds must consider the impact of nonperformance risk for counterparties to securities and derivative transactions. The assumed credit risk of the counterparty must be considered for assets held with a financial institution counterparty. For liability positions with a counterparty, funds should consider their own credit risk as part of their self-valuation.

Additional consideration for nonperformance risk is typically unnecessary for exchange-traded securities. Exchange-traded derivatives such as futures contracts and certain option contracts are usually subject to market protections like daily margin postings and guarantees from the exchange clearinghouse. This mitigates the impact of nonperformance risk outside of the risk reflected within the quoted prices. Therefore, the fair value process for exchange-traded derivatives is generally not expected to involve significant nonperformance risk adjustments. The consideration of counterparty risk will be more significant for valuations of illiquid securities and derivatives transacted over-the-counter with financial institutions.

When a fund relies on valuation inputs other than quoted prices for the valuation of illiquid securities, it should consider the use of relevant observable credit data. The effect of nonperformance risk on the valuation of illiquid securities may influence the determination of inputs.

For over-the-counter derivatives, the evaluation of a fund's counterparty credit risk exposures should include consideration of master netting arrangements, collateral balances, contract settlement provisions, and the attributes of the different derivative contract types. A fund may need to incorporate valuation adjustments at the portfolio level to consider the effects of nonperformance risk on the valuation of derivatives held with a particular counterparty.

Funds should carefully review any master netting arrangements to determine whether the arrangements permit the netting to apply between different product types.

In addition, funds must monitor the credit risk of the financial institutions with which they transact at each reporting period. Publicly available information such as published credit ratings, credit spreads, credit default swap rates, and SEC filings may be used. Funds must also include the responsiveness of available credit risk information to changes in market conditions as part of their monitoring process.

Application of Premiums and Discounts in Fair Value Measurement

Under ASC 820, a fair value measurement should incorporate premiums or discounts if market participants would take them into account in a transaction of the asset or liability. For instance, an illiquid convertible bond with an out-of-the-money conversion feature may be valued using a discount if participants trading in this market would consider such a discount in their determination of fair value.

ASC 820 allows for the application of control premiums and non-controlling interest discounts when a market participant would consider them appropriate to the unit of account.

Based on the same principles, blockage factors are prohibited at all levels of the fair value measurement hierarchy. A blockage factor is a discount applied in measuring the value of a security. Blockage factors relate to the size of the transaction, which is a factor specific to the reporting entity. They do not reflect a characteristic of the individual security sold from the perspective of a market participant.

Accounting for Transaction Costs

According to ASC 820, transaction costs are the costs required to sell an asset or transfer a liability within the principal (or most advantageous) market. These costs must meet both of the following criteria:

- They result directly from and are essential to the transaction
- They would not have been incurred by the entity had the decision to sell the asset or transfer the liability not been made

U.S. GAAP requires the capitalization of transaction costs in the initial cost of the asset or liability. In contrast, the fair value of the asset or the liability represents the price of the asset or liability. Since the fair value of an investment does not include costs required to complete a sale transaction, there is an initial unrealized loss for securities with capitalized transaction costs. Therefore, day one recognition of gains and losses on purchases of assets or liabilities that reflect the difference between the fair value and the transaction price are permissible under U.S. GAAP.

Considerations for Level Designations

Level 1

Typically, securities traded on an active market, such as the NYSE or other major exchanges are classified as Level 1, provided that (a) the market is the principal (or most advantageous) market, and (b) the fund has the ability to access the principal (or most advantageous) market. However, when a security is thinly traded and its reported "fair value" is not representative of an active market (or if trading is halted), the security may need to be transferred into Level 2 or Level 3.

A fund's valuation policy should include a quantitative threshold to determine what constitutes an active market, which is typically based on average trading volume, frequency of observable transactions, and evaluation of the bid-ask spread. As a best practice, a fund's accounting system should generate an exception report based on this quantitative threshold to determine whether investments should be transferred out of Level 1.

Aftermarket Events

ASC 820 requires consideration of aftermarket events in fair value measurement. Aftermarket events include aftermarket trading, earnings reports, and announcements of significant events that occur subsequent to the close of the last trading date in the reporting period and would be considered by market participants in determining fair value on the measurement date. Aftermarket events may occur on an ordinary business day after the market close, a non-business day such as a weekend or a holiday, or during a market closure due to extraordinary events.

Management should review any variances between the last closing price and the price subsequent to the aftermarket events. Variances over a threshold amount determined by management should be identified and the fair value of the investment should be adjusted when variances are deemed material. It should also be noted that any significant adjustment due to aftermarket events will result in a Level 2 or Level 3 designation in the fair value hierarchy.

Level 2
Liquidity Discounts

Level 2 inputs are observable inputs other than quoted market prices included within Level 1. Level 2 securities typically include restricted stock, digital assets with a public market, private investments in public equity (PIPEs), and certain convertible bonds. The fair value of these types of investments is generally based upon the price of the actively traded public equity price on an "as-if" converted basis, less any discounts applied to take legal restrictions into consideration, liquidity risk, price volatility, and other risk assumptions. In practice, we have seen discounts typically range from five to thirty percent. In situations where the discount is significant or when convertible securities are not in the money, then these positions typically move into Level 3.

Funds must consider the assumptions used to arrive at fair value from the perspective of a market participant when applying liquidity discounts. Neither the quantity of the investment held by a fund, nor a fund's intention to hold an investment are relevant in estimating fair value on the measurement date.

Derivatives Valued Using Models

In order for derivatives determined by using models to qualify for a Level 2 designation, the models used to measure fair value must:

- Be widely accepted
- Be non-proprietary
- Use data that is observable

Certain inputs derived through extrapolation may be corroborated by observable market data and still maintain Level 2 status. However, if there are significant judgments or adjustments made to either the model or data, the derivatives may be considered Level 3. For example, the extrapolation of short-term inputs for longer-term inputs may require additional assumptions or judgments that are not observable, therefore moving the investment to Level 3.

Level 3
Private Operating Companies

Due to their lack of observable inputs, investments, and digital assets in private operating companies' investments in private operating companies and private digital asset investments, including SAFT's, ICO's and other digitized equity ownership interests are generally categorized as Level 3 investments.

Many funds that invest in the above positions traditionally record the fair value of those investments at their initial transaction cost, and subsequently make adjustments when there is a new round of financing. While the initial transaction cost is not fair value, fair value can approximate the initial transaction cost. A fund's valuation policy should document the fair value of private equity investments and digital assets through its use of internal analysis, review of portfolio company financial statements, and comparison of the fair value of public securities to the fair value of its investment in the private equity.

When considering whether the transaction price from a new round of financing is a suitable input for fair value measurement, the following factors should be taken into account:

- Attributes and characteristics of the transaction
- Complexity of the capital structure
- Proximity to reporting date
- Extent of participation of additional third-party investors in the round of financing
- Any changes in the portfolio company in the intervening period between transaction date and reporting date

Again, the initial transaction cost can be considered (but not on its own) since it cannot be presumed to be fair value. As a best practice, a fund's financial reporting team should document the fair value measurement of its private equity investments. Private equity funds should include the use of multiple valuation techniques to supplement and corroborate the fair value based on the transaction price in a recent round of private equity financing.

Private Investment Companies

ASC 820 provides specialized guidance for funds that have investments in private investment companies (also hereto referred to as "investee funds") valued using the net asset value per share (NAV) or its equivalent. This guidance in ASC 820 applies if the investment in an investee fund meets both of the following criteria at its measurement date:

- The investment does not have a readily determinable fair value
- The investment has all of the attributes of an investment company as specified in the FASB ASC Topic 946, *Financial Services - Investment Companies*, ("ASC 946"). If it lacks one or more of the specified attributes, it is industry practice to issue financial statements using guidance consistent with the accounting principles of ASC 946

Practical Expedients

ASC 820 provides that a fund may use NAV as a practical expedient when determining the fair value of its interest in an investee entity, unless it is probable the investments will be sold at a price other than NAV. A fund is permitted to estimate the fair value of certain investee entities using NAV without further adjustment if NAV is calculated consistently with the guidance in ASC 946 as of the fund's measurement date.

In cases where a fund invests in an investee fund that in turn invests in other underlying investments, the fund is not required to look through to the investee fund's investments. However, before concluding that the reported NAV is calculated in accordance with ASC 946, the fund should consider:

- Evidence gathered during the initial due diligence and the ongoing monitoring

procedures of the investee fund
- The investee fund's fair value estimation processes and control environment, its policies and procedures for estimating fair value of underlying investments, and any changes to those processes, the control environment, or policies or procedures
- The use of independent third-party valuation experts
- Actively traded underlying securities held by the investee funds (i.e., Level 1 securities)
- Comparison between past realizations and last reported fair value
- Whether NAV is appropriately adjusted for items such as carried interest and claw backs
- The professional reputation and standing of the investee fund's service providers
- The qualifications of the auditor's report or whether there is a history of significant adjustments to the NAV reported by the investee fund manager as a result of its annual audit or otherwise
- The basis of accounting of the investee fund (i.e., U.S. GAAP, IFRS, income tax basis, cash basis, etc.)

Entities that value their investments using a practical expedient would no longer be required to include those investments within the fair value hierarchy disclosure, eliminating the differences in reporting approaches.

For funds that are either precluded from or elect not to use NAV as a practical expedient to estimate fair value, the funds must consider the specific attributes of the investment that independent market participants would take into account.

An investee fund's ability to provide liquidity to its investors is a key consideration in evaluating whether an adjustment to NAV is required. For example, if the investee fund is an open-ended fund that permits investors to periodically transact in and out of the investment, market participants may accept NAV as fair value since they would also likely transact at the same reported NAV. Redemption gates and side pockets are common techniques used to manage the liquidity of a fund. These features are generally considered and accepted by market participants and may not result in any adjustment to NAV. However, funds should still consider these features in conjunction with other inputs available to value the investment.

Disclosures

Disclosure of Level Designation for Each Class of Assets and Liabilities

ASC 820 requires a fund to provide fair value measurement disclosures for each class of assets and liabilities. For both equity and debt securities, funds must determine the appropriate classes for fair value measurement disclosures based on both the nature of the assets and liabilities and their classification in the fair value hierarchy. ASC 820 also requires funds to determine the classes for equity and debt securities by using major security types. When preparing the fair value measurement disclosure for each class of assets and liabilities, we recommend that funds use the same security types used in the SOI as a starting point. Depending on the exact nature and extent of an entity's holdings, greater detail and a higher number of classes may be more pertinent for Level 3 investments.

In many cases, a security's operating industry is a meaningful class designation to provide disaggregation in fair value disclosures. Other class designations may include market capitalization, geographic concentrations, asset class tranches, investment strategies, commodity type, derivative underlying, and credit rating categories. Funds should also consider disclosures in other U.S. GAAP literature such as ASC Topic 815, Derivatives and Hedging, when determining the appropriate level of disaggregation.

When preparing disaggregation disclosures under U.S. GAAP, fund managers should evaluate whether the combination of SOI and ASC 820 disclosure requirements will apply sufficient transparency to the fair value hierarchy classifications. Funds that disclose their investments by major security type on the SOI should pay special attention to certain investments that cross-over into various levels of the fair value hierarchy. It is important to note that when investments shown on the SOI contain material amounts of both Level 2 and Level 3 positions, a fund manager should consider bifurcating the amount of the investment into significant concentrations in the three level hierarchy footnote disclosure table.

Please refer to Exhibit 3 and Exhibit 4 for examples of sample financial statement footnote disclosures.

Disclosure of Activity in Level 3 Fair Value Measurement

Recent Accounting Pronouncements

In August 2018, the FASB issued Accounting (ASU) No. 2018-13, Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurements, which removes, modifies, and adds certain disclosure requirements for fair value measurements. Under this guidance, non-public entities are no longer required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels of the fair value hierarchy, the valuation processes for Level 3 fair value measurements, or a reconciliation of the opening balances to the closing balances of recurring Level 3 fair value measurements.

Please refer to Exhibit 3 and Exhibit 4 for examples of sample financial statement footnote disclosures.

Disclosures About Inputs and Valuation Techniques

Under ASC 820, fair value measurements using significant observable inputs (Level 2) and significant unobservable inputs (Level 3) are required to disclose a description of the valuation technique(s) and inputs used alongside any changes in technique use and the reason for doing so.

Funds are required to disclose quantitative information about significant unobservable inputs used in Level 3 investments in tabular format. Funds are not required to disclose unobservable inputs that are not developed by the fund.

Examples of unobservable inputs typically developed by management that would require disclosure include:

- Adjusted valuation multiples
- Discounts for lack of marketability
- Loss severities
- Prepayment speeds
- Recovery rates
- Correlations
- Control premiums and noncontrolling discounts
- Time to expiry
- Historical volatilities
- Cost of capital
- Growth rates

In some cases, a fund may use inputs that reflect prior transactions as significant inputs for Level 3 fair value measurement. They are not required to be disclosed to the extent that externally derived inputs are unadjusted. However, any adjustments to externally derived inputs, such as the application of a liquidity discount, are deemed to be internally developed by the fund, and, if significant to the fair value measurement, they are subject to the disclosure requirement.

While ASC 820 requires valuation methodologies and corresponding quantitative inputs to be disclosed, a certain level of judgment is required in how the disclosure is presented. Funds should consider further disaggregating each class of investments by, for instance, business sector, stage in life cycle of investment, or exit strategy for private equity investments. Funds may use the SOI as a starting point for disaggregation and modify it as appropriate. The disclosure of inputs should fall within a meaningful range. In order to arrive at such range, there should be a reasonable balance in the amount of data aggregation performed.

As a best practice, funds should review their disclosures for Level 2 and Level 3 investments to ensure that a robust description of the valuation inputs and methodologies used are included in the financial statements. Management should ensure that the tabular disclosures of quantitative inputs reflect an appropriate level of transparency and disaggregation to enable financial statement users to compare their views to the management's assumptions, and to compare changes in assumptions and the range of inputs used over time. If third party prices are used, then management should ensure that they have performed appropriate due diligence regarding their evaluation and use of third-party prices.

Please refer to the section on Management's Responsibility for Valuation Inputs Developed by Third Parties for further guidance.

Disclosures About Valuation Processes

ASC 820 requires the disclosure of the valuation processes used for fair value measurements categorized within Level 3 of the fair value hierarchy. For instance, a fund may disclose the following to comply with ASC 820:

- A description of the group within the fund that decides the fund's valuation policies and procedures to whom the group reports, and the internal reporting procedures in place
- The frequency and methods for calibration, backtesting, and other testing procedures on pricing models
- The process for analyzing changes in fair value measurements from period to period
- How the fund determines that third party information, such as broker quotes or pricing services, used in the fair value measurement was developed in accordance with ASC 820
- The methods used to develop and substantiate the unobservable inputs used in a fair value measurement

The purpose of disclosure is to provide financial statement users with more transparency over the processes adopted by a fund's management to mitigate the subjectivity and bias inherent in Level 3 investments. While the portfolio manager responsible for the investment may have extensive knowledge of the assumptions underlying the valuation, there are potential conflicts of interest if the portfolio manager is solely responsible for the valuation.

Funds should be diligent in ensuring that the disclosure of the aspects of their valuation policies is consistent with their real-life practices. Inconsistencies in the valuation processes represented can be damaging if they are construed as misleading. A generic approach to this disclosure is not adequate, and it is important to note that the disclosure of a fund's valuation processes must provide a fair representation of day-to-day procedures.

Please refer to Exhibit 2 for the footnote disclosures in the example financial statements.

Additional Disclosures for Investments in Private Investment Companies

Under ASC 820, funds must provide additional disclosures for investments in private investment companies so that financial statements accurately convey risk. The following disclosures must be made by each major category of investment for interim and annual reporting periods:

- Fair value and a description of the significant strategies of investee(s)
- The estimated time that it will take the investee(s) to liquidate the underlying assets of investments that cannot be redeemed
- Unfunded commitments to investee(s)
- Redemption or liquidity terms such as notice periods and redemption times (e.g., 60-day notice period with monthly liquidity)
- Temporary restrictions on redemptions from otherwise redeemable investee(s), including how long the restriction has been in effect, an estimate of the time the restriction will lapse or the statement of the fact when the entity is unable to make an estimate
- Any other significant restrictions on the ability to sell or redeem an investment
- The fair value of any portion of an investment that is likely to be sold at an amount other than the reported NAV, and any remaining steps required to complete the sale or redemption
- Any plans or intentions to sell a group of unspecified investments that continue to qualify for the practical expedient and the remaining steps required to complete the sale

Additional disclosures must also be made to reflect investee funds by geographic regions, industries, and types of securities. In determining the appropriate major categories of investments in private investment companies, a fund should consider the activity or business sector, vintage, geographic concentration, credit quality, and other economic characteristics of the investee funds.

Please refer to Exhibit 5 for an example of sample financial statement footnote disclosures.

Additional Disclosures for Public Entities

Public entities are bound by additional disclosure requirements, such as:

- Disclosure of all transfers between Level 1 and Level 2 of the fair value hierarchy
- Level 3 investments require a narrative description of the effects of unobservable inputs on the recurring fair value measurement

Please refer to Exhibit 6 for examples of sample financial statement footnote disclosures. These additional disclosures are not required for private funds.

Best Practices for Fair Value Measurement and Disclosures

We recommend creating a financial reporting team. When implementing the guidance of ASC 820, the financial reporting team must understand how to both measure fair value based on a fund's portfolio and how to format the required financial statement disclosures. Once the financial reporting team is established with an assigned leader, the team should reach out to their auditor and fund administrator to learn how outside parties might add value to the process.

> *In addition to providing a framework for how to arrive at fair value, ASC 820 also provides greater transparency for investors. Ultimately, the required fair value disclosures will become a tool fund investors can use to evaluate a fund's portfolio.*

Best practices for establishing and maintaining compliance with the fair value measurement and disclosure guidance in ASC 820 should include:

- Documenting compliance policies and procedures, including monitoring active vs. inactive markets, aftermarket events and reliability of market data
- Addressing system requirements for data aggregation
- Evaluating the level designations within the fair value hierarchy on at least a quarterly basis
- Performing a soft close as of an interim date, including the preparation of all the required financial footnote schedules and disclosures prior to the year-end close
- Coordination with third-party service providers (administrators, CPA firms, pricing services and prime brokers)

Management's Role in Valuation Policies and Procedures

Management will need to have a process in place to facilitate the gathering of necessary information for compliance with the fair value measurement and disclosure standards. To that end, management should continually monitor the fund's front-and back-office accounting systems. This will allow a fund to make informed decisions on valuation techniques and the tagging of investments.

In our discussions with fund managers and administrators, the tagging of investments is performed either on a monthly, quarterly, or annual basis. We recommend tagging securities on a monthly basis as level designations can change as dictated by continually evolving market conditions.

It is important to note that if a fund engages an administrator for the preparation of its financial statements, management should understand the processes and data used by the administrator. The "owner" of the implementation process should manage the coordination with the administrator well before the year-end close.

Management and auditors alike will need to review a fund's valuation policies and procedures on a periodic basis. These policies should address the following:

- Methodology on level designation
- Definition of an active market
- The level of average trading volume and frequency
- Determination of the principal and/or most advantageous market

- Identification of aftermarket events and their impact on fair value
- Quantitative and qualitative documentation on the valuation inputs and techniques used, including how the fair value measurement of assets and liabilities fit into the fair value hierarchy
- Description of valuation process for investments valued using Level 2 and Level 3 and how significant Level 3 inputs are identified and developed by class of investments and valuation methodology used
- Evaluating the effect of investment restrictions
- Identification of the assumptions reflected in unobservable inputs
- Identification of the reports that will provide the required data to prepare the year-end financial statement disclosures, including reconciliations of those reports to the books and records of the fund
- Backtesting of all significant Level 2 and Level 3 investments by comparing the investments transaction price in the subsequent period (realized proceeds from the sale of an asset or disbursements made to settle a liability) against the fair values of those investments' reported in the most recent financial reporting period
- Criteria for transfer of investments between levels of the fair value hierarchy
- Due diligence procedures on valuation inputs developed by third parties

Applying Valuation Inputs Developed by Third Parties

In light of regulatory agencies' heightened attention to valuation practices, management is best served by ensuring sufficient and reliable information regarding possible risks and any proposed data.

Management must determine whether the pricing data is transactional or model-based. If pricing data is model based, then management should understand the significant inputs used and how they are impacted by changing market conditions. If a pricing service only provides a price for a given CUSIP, then management likely does not have enough information for an accurate measurement. Caveats or disclaimers that are included in the pricing service may affect the evaluation procedures.

A diligent review of third party pricing services depends on facts and circumstances such as:

- Type and complexity of the investment
- Liquidity of the market and access to actual transactions and other observable inputs
- Nature and complexity of pricing methodologies and assumptions
- Historical accuracy
- Background and expertise of service providers in valuing the financial product

> *Best practices should include an ongoing monitoring process to verify the reliability of the pricing methodologies, assumptions and sources used.*

When using third-party information in fair value measurement, management should:

- Understand the third party's overall and security-specific methodology and ensure that it is in conformity with the fund's governing documents and with current U.S. GAAP. Management should review the latest SSAE 16 1 report, as well as additional available documentation, to gain comfort with the controls and processes on fair value measurement in place at the service provider organization
- Perform periodic "deep dives" to test the valuation of individual instruments by the service provider. Supporting documentation for the valuation of the sampled items should be reviewed, including bid-ask quotes, yield curve data points, volatilities used in the fair value measurements, and their sources
- Build and execute a robust challenge protocol which includes setting acceptable levels of variance by buckets of security types, perform a periodic comparison between valuations generated internally and those provided by the pricing services, and follow up procedures in case of excess variances
- Perform backtesting of pricing service valuations by comparing prices on the measurement date to subsequent prices. Backtesting of pricing services valuations and broker-dealer quotations should be part of the ongoing monitoring procedures

- Compare prices provided by alternative service providers
- Obtain support for the classification of investments in the applicable level of the fair value hierarchy and evaluate whether such classification is in compliance with U.S. GAAP guidance and with the fund's valuation policy.

Best Practices When Applying Broker Quotes

When broker quotes are used, management should also consider the following best practices:

- Obtain sufficient information on the quotes to establish whether the quotes represent a binding commitment to buy and sell at that price, are non-binding, and/or whether the quotes reflect transactions that actually occurred in the market or are indicative and model-based. For indicative quotes that are developed using a model-based technique, evaluate the extent to which unobservable inputs have been used.
- Document any price adjustment applied to the broker quotes received and the justification for such adjustments.
- Document any price override and the justification for such override.
- Document the valuation methodology and inputs used to establish an alternative fair value measurement when there is a reasonable basis to believe that the quoted broker-dealer price does not accurately reflect the fair value of a portfolio security (for instance, in the case of illiquid markets, stale quotes, or transactions under duress).

Management must be sure to evaluate a specialist's credentials and review the valuation report to determine whether the specialist used the appropriate valuation inputs and techniques. It is recommended that management performs an independent verification using sample data and addresses any significant differences in findings.

Other Considerations

Differences Between U.S. GAAP and IFRS

There are a few differences between the U.S. GAAP and IFRS, including:

- IFRS requires a quantitative sensitivity analysis for financial instruments categorized within Level 3 of the fair value hierarchy
- IFRS does not provide for the use of a practical expedient for measuring certain investments in private investment companies
- IFRS requires that a fair value measurement be based on observable inputs when recognizing day-one gains and losses

Exhibit 1

Matrix of Levels and Typical Level Designations

Level	Types of Input	Types of Investments (Note 1)
Level 1 - Valuations based on quoted prices in active markets for identical assets or liabilities.	Unadjusted quoted prices from an exchange or broker-dealer market that is deemed to be active.	Exchange-traded securities, most U.S. government securities, certain other sovereign government securities, listed derivatives and over-the-counter (OTC) securities traded in an active market.
Level 2 - Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.	Adjusted prices from an exchange or broker dealer market that is deemed to be inactive, prices from brokered markets for restricted securities and registered debt, observable market inputs, such as equity prices, certain interest rates and yield curves, implied volatility, credit spreads, and other market corroborated inputs (including inputs extrapolated from other observable inputs). **(Note 2)**	Exchange-traded securities **(Note 3)** and listed derivatives that are not actively traded, digital assets, most OTC derivatives, restricted stock, corporate and municipal bonds, certain corporate loans, certain high-yield debt, certain residential and commercial mortgage loans, certain mortgage-backed securities (MBS), asset-backed securities (ABS), and collateralized debt obligation (CDO) securities, investments in certain private investment companies, forward contracts, physical commodities, and certain deferred fee arrangements.
Level 3 - Valuations based on inputs that are not observable and significant to the overall fair value measurement.	Unobservable inputs utilized in models such as Black-Scholes, binomial (e.g., historical volatilities), discounted cash flows, multiples of earnings or EBITDA, including risk assumptions consistent with what market participants would use to arrive at fair value.	Certain corporate loans, certain mortgage loans, certain high-yield debt, digital assets, distressed debt (i.e., securities of issuers encountering financial difficulties, including bankruptcy or insolvency), certain MBS, ABS and CDO securities, investments in real estate funds and certain private investment companies, private equity investments, complex OTC derivatives (including certain foreign currency options, long-dated commodity options and swaps, certain mortgage- related credit default swaps, derivative interests in mortgage-related CDOs, and basket credit default swaps), and certain deferred fee arrangements.

Note 1 - Level designation is based upon the lowest level input that is significant to the fair value of the measurement and actual designation may vary from the "typical" designations illustrated above, based on actual facts and circumstances.

Note 2 - For Level 2 designations, any model used must be widely accepted, non-proprietary and the data used must be observable. Any significant judgment or adjustments to the model or data will likely result in a Level 3 designation. In addition, quotes from brokered markets should represent a firm commitment to transact or be developed from other observable market data.

Note 3 - Exchange-traded securities that are traded in an inactive and disorderly market or for which prices from the exchange are adjusted due to aftermarket events would typically be assigned a Level 2 designation.

Exhibit 2

Sample Note 1
Disclosures of Significant Accounting Policies

The following data visualizations take ASC 820 into account. Level designations within the fair value hierarchy must be based on the lowest level input significant to the fair value measurement. It may vary from the designations illustrated in the disclosures below.

Definition and Hierarchy

Fair value is defined as the price received to sell an asset or paid to transfer a liability (i.e. the "exit price") in an orderly transaction between market participants at the measurement date.

In determining fair value, the fund uses various valuation techniques. A fair value hierarchy for inputs is used in measuring fair value. It maximizes observable inputs and minimizes unobservable inputs. Valuation techniques consistent with the market or income approach are used to measure fair value. The fair value hierarchy is categorized into three levels:

Level 1 - Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the fund has the ability to access.

Level 2 - Valuations based on inputs, other than quoted prices included in Level 1, that are observable either directly or indirectly.

Level 3 - Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

Fair value is a market-based measure that is based on assumptions of prices and inputs considered from the perspective of a market participant on the measurement date. Therefore, even when market assumptions are not readily available, the fund's own assumptions reflect those that market participants would use in pricing the asset or liability at the measurement date.

The availability of valuation techniques and observable inputs can vary from investment to investment and are affected by a wide variety of factors. The determination of fair value requires prudent judgment. Due to the inherent uncertainty of valuation, estimated values may be materially different from values were a ready market available. Inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the fund's level is based on the lowest significant level input to the fair value measurement.

Valuation Techniques and Inputs

Investments in securities and securities sold short that are both freely tradable and listed on major securities exchanges are valued at their last reported sales price as of the valuation date.

Many over-the-counter contracts have bid and ask prices that are observable in the marketplace. Bid prices reflect the highest price that the marketplace participants are willing to pay for an asset. Ask prices represent the lowest price that the marketplace participants are willing to accept for an asset. For securities whose inputs are based on bid-ask prices, the fund's valuation policies do not require that fair value always be a predetermined point in the bid-ask range.

The fund's policy for securities traded in OTC markets and for listed securities for which no sale was reported on that date are generally valued at their last reported bid price if held long and last reported ask price if sold short.

These securities are categorized in Level 1 of the fair value hierarchy to the extent these securities are actively traded. Securities traded on inactive markets or valued by reference to similar instruments are generally categorized in Level 2 of the fair value hierarchy.

Investments in Restricted Securities of Public Companies

Investments in restricted securities of public companies cannot be offered for sale to the public until the fund complies with certain statutory requirements. The valuation will not exceed the listed price on any major securities exchange. Investments in restricted securities of public companies are generally categorized in Level 2 of the fair value hierarchy. However, investments in restricted securities in public companies may be categorized in Level 3 of the fair value hierarchy depending on the level of observable liquidity.

Derivative Contracts

The fund records its derivative activities at fair value. Gains and losses from derivative contracts are included in net gain (loss) from derivative contracts in the statement of operations.

Option Contracts

Options listed on major securities exchanges are valued at their last reported sales price as of the valuation date or based on the midpoint of the bid/ask spread at the close of business. Depending on the frequency of trading, listed options are generally categorized in Level 1 or 2.

Futures Contracts

Futures contracts listed on major securities exchanges are valued at their last reported sales price as of the valuation date. Futures contracts are generally categorized in Level 1.

Warrants

Warrants listed on major securities exchanges are valued at their last reported sales price as of the valuation date. The fair value of OTC warrants is measured using the Black-Scholes option pricing model, which is a valuation technique that follows the income approach. This pricing model takes into account the contract terms (including maturity). It considers multiple other inputs as well, including time value, implied volatility, equity prices, interest rates and currency rates. Warrants are generally categorized in Level 2 or 3.

Contracts for Differences

Contracts for differences are traded on the OTC market. The fair value of contracts for differences is derived by taking the difference between the quoted price of the underlying security and the contract price. Contracts for differences are generally categorized in Level 2.

Forward Contracts

Forward contracts are traded on the OTC market. The fair value of forward contracts is measured using observable inputs applied to notional amounts stated in the applicable contracts. Forward contracts are generally categorized in Level 2.

Interest Rate Swaps

Interest rate swaps are traded on the OTC market. The fair value for interest rate swap contracts is derived using a pricing model widely accepted by marketplace participants. It takes into account the contract terms (including maturity) as well as multiple inputs, including, where applicable, interest rates and currency rates. Many inputs into the model do not require material subjectivity as they are observable in the marketplace. Interest rate swaps are generally categorized in Level 2.

Total Return Swaps

Total return swaps are traded on the OTC market. The fair value of total return swaps is recorded at the swap contract's net equity value. Net equity is calculated by determining the notional fair value of the assets or liabilities underlying the swap contracts, which are typically equity securities, and is consistent with the valuation procedures discussed previously. Total return swaps are categorized in Levels 2 or 3.

Credit Default Swaps

Credit default swaps are traded on the OTC market. The fair value for a credit default swap contract is derived using a pricing model that is widely accepted by marketplace participants. The pricing model takes into account multiple inputs, including specific contract terms, interest rate yield curves, interest rates, credit curves, recovery rates, and current credit spreads obtained from swap counterparties and other market participants. Many inputs into the model do not require material subjectivity as they are observable in the marketplace or set per the contract. Other than the contract terms, valuation is heavily determined by the difference between the contract spread and the current market spread. The contract spread (or rate) is generally fixed, and the market spread is determined by the credit risk of the underlying debt or reference entity. If the underlying debt is liquid and the OTC market for the current spread is active, credit default swaps are categorized in Level 2. If the underlying debt is illiquid and the OTC market for the current spread is not active, credit default swaps are categorized in Level 3.

Swaptions

Swaption contracts are traded on the OTC market. The fair value of swaption contracts is derived using a pricing model that is widely accepted by marketplace participants. The pricing model takes into account the contract terms (including maturity). It also reflects notional value, interest rates, currency rates, and implied volatility. Swaptions are generally categorized in Level 2 or 3.

Government Bonds

The fair value of sovereign government bonds is generally based on quoted prices in active markets. When quoted prices are not available, fair value is determined based on a valuation model using inputs that include interest rate yield curves, cross-currency basis index spreads, and sovereign credit spreads similar to the bond in terms of issuer, maturity, and seniority. Sovereign government bonds are generally categorized in Levels 1 or 2.

Municipal Bonds

The fair value of municipal bonds is estimated using recently executed transactions, market price quotations, and pricing models that factor in, where applicable, interest rates, bond or credit default swap spreads, and volatility. Municipal bonds are generally categorized in Level 2.

Corporate Bonds

The fair value of corporate bonds is estimated using recently executed transactions, market price quotations (where observable), bond spreads, or credit default swap spreads. The spread data used is for the same maturity as the bond. If the spread data does not reference the issuer, then data that references a comparable issuer is used. When observable price quotations are not available, fair value is determined based on cash flow models using yield curves, bond or single name credit default swap spreads, and recovery rates based on collateral values as key inputs. Corporate bonds are generally categorized in Level 2. In instances where significant inputs are unobservable, they are categorized in Level 3.

SAFTs

The General Partner has determined to value certain digital assets that are Simple Agreements for Future Tokens, Simple Agreements for Future Equity, Service Token Presale Prepayment Agreements, or Initial Coin Offerings at cost. Management has determined that there have been no material developments related to these digital assets and therefore cost is representative of fair value. The General Partner has determined to value certain digital assets by applying a discount for the lack of marketability to an observable last reported sales price of a contract representing a commitment for the future purchase or sale of the digital asset at a specific date. To support the discount for lack of marketability, management may take into consideration the use of an option pricing model that is sensitive to certain key assumptions, such as volatility and time to exit, that are unobservable. The General Partner has also determined to value certain digital assets based on additional financing rounds, market transactions, or public offerings.

Digital Currency

The Fund values investments in digital assets at the last reported value using CoinMarketCap (coinmarketcap.com, in United States Dollars) which derives its prices by aggregating the prices from various exchanges. Such investments are classified as Level 2 in the fair value hierarchy.

The Fund's investments in digital assets are stated at fair value. Digital assets are generally valued using the price reported by CoinMarketCap as of 11:59 pm UTC on the valuation date, although the General Partner has substantial discretion in determining the value of the Fund's assets. CoinMarketCap is a well-known cryptocurrency market capitalization source in the industry that provides prices for cryptocurrencies using a volume weighted average of prices across the varying exchanges on which they are traded.

Bank Debt

The fair value of bank debt is generally measured using recently executed transactions, market price quotations (where observable), and market observable credit default swap levels. When quotations are unobservable, proprietary valuation models and default recovery analysis methods are employed. Bank debt is generally categorized in Level 2 or 3.

Commercial Mortgage-Backed Securities (CMBS) and Asset-Backed Securities (ABS) may be valued based on external price/spread data. When position-specific external price data is not observable, then the valuation is based either on prices of comparable securities or cash flow models that consider inputs including default rates, conditional prepayment rates, loss severity, expected yield to maturity, and other inputs specific to each security. Included in this category are certain interest-only securities, which in the absence of market prices, are valued as a function of observable whole bond prices and cash flow values of principal-only bonds using current market assumptions at the measurement date. CMBS and ABS are categorized in Level 2 when external pricing data is observable and in Level 3 when external pricing data is unobservable.

On December 31, 20XX, the fund had investments in ABS with a fair value of approximately $XX,XXX,XXX which are included in Level 3 of the fair value hierarchy. These securities represent mezzanine and equity tranches in various securitization trusts. The underlying loans for these securities include small business loans and credit card receivables that were originated between 200X and 201X.

Investments in Private Operating Companies

Private Equity Securities
Investments in private operating companies consist of direct, private, common, and preferred stock (together or individually "equity") investments. The transaction price, excluding transaction costs, is typically the fund's best estimate of fair value at inception. When evidence supports a change to the carrying value from the transaction price, then adjustments are made to reflect expected exit values in the investment's principal market under current market conditions. Ongoing reviews by the fund's management are based on an assessment of trends in the performance of each underlying investment from the inception date through the most recent valuation date.

These assessments typically incorporate valuation techniques that consider the evaluation of arm's length financing, sale transactions with third parties and a market approach that includes both a comparative analysis of acquisition multiples and pricing multiples generated by market participants. In certain instances, the fund may use multiple valuation techniques for a particular investment, and estimate its fair value based on a weighted average or a selected outcome within a range of multiple valuation results. These investments in private operating companies are categorized in Level 3.

Inputs relied upon by the income approach include annual projected cash flows for each investment through their respective investment horizons. Under the income approach, the privately held nature of an investment may be reflected in the magnitude of the selected range of discount rates or through application of separate liquidity discounts.

Equity investments valued by using a market approach used valuation multiples multiplied by the annual Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), or another such performance metric. The selected valuation multiples were estimated through a comparative analysis of the performance and characteristics of each investment within a range of comparable companies or transactions in the observable marketplace. The fund generally applies liquidity discounts and control premiums dependent upon the characteristics of the individual investment and its respective marketplace.

Private Debt Securities
Investments in private operating companies also include direct private debt investments. The transaction price, excluding transaction costs, is typically the fund's best estimate of fair value at inception. When evidence supports a change in carrying value from the transaction price, then adjustments are made to reflect expected exit values in the investment's principal market.

Ongoing reviews by the fund's management are based on an assessment of trends in the performance and credit profile of each underlying investment from the inception date through the most recent valuation date. These assessments typically incorporate valuation methodologies that consider the evaluation of arm's-length financing, sales transactions with third parties, and an income approach based upon a discounted cash flow analysis. These investments in private operating companies are generally included in Level 3.

Debt investments valued using an income approach

At December 31, 20XX, the approximate fair values of the fund's equity and debt investments in private operating companies by valuation methodology are as follows:

	Common Stocks	Warrants	Preferred Stocks	Debt Securities	Total
Third Party Transactions	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX
Income Approach	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX
Market Approach	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX
Blended Approach	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX	$ X,XXX,XXX

include an understanding of the company's compliance with debt covenants, an assessment of its credit profile from the point of original investment to the stated valuation date, the operating performance of the underlying company, trends in the liquidity and financial leverage ratios of the underlying company from the point of original investment to the stated valuation date, an assessment of the company's business enterprise value, its liquidation value and its debt repayment capacity. Inputs include an assessment of potential yield adjustments for each debt investment based on trends in the credit profile of the underlying company and trends in the interest rate environment from the date of original investment to the stated valuation date.

Investments in Special Purpose Vehicles

Investments in special purpose vehicles ("SPVs") are either offshore private investment companies or United States corporations that invest directly or indirectly through joint ventures or United States limited liability companies in private equity or debt securities, real estate, or intangible property.

The fund's investments in these SPVs are stated at fair value by evaluating the fair value of the net assets of the SPVs. Investments in SPVs are generally categorized in Level 3.

Investments in Private Investment Companies

Investments in private investment companies are valued, as a practical expedient, by using the net asset valuations provided by the underlying private investment companies. The fund applies the practical expedient to its investments in private investment companies on an investment-by-investment basis. If it is probable that the fund will sell an investment at an amount different from the net asset valuation or in other situations, then the fund considers other factors.

Valuation of Securities and Derivatives

Investments in private investment companies are valued at their net asset value as reported by the underlying funds in accordance with their respective agreements. The fund applies the practical expedient to its investments in private investment companies on an investment-by-investment basis, and consistently with the fund's entire position in a particular investment, unless it is probable that the fund will sell a portion of an investment at an amount different from the net asset valuation.

The valuations of the investments in private investment companies are supported by information received from the investee funds such as monthly net asset values, investor reports, and audited financial statements when available.

At December 31, 20XX, the fund has investments in private investment companies aggregating approximately $X,XXX,XXX which do not qualify for the practical expedient as it is probable that the fund will sell a portion of or the entire investment at an amount different from its net asset valuation. These investments were valued using discounts ranging from XX.X% to X.X% of their stated net asset valuations and were determined based on the fund's estimates of third-party transactions, quotations, and historical cost.

Valuation Processes

The fund establishes valuation processes and procedures to ensure that the valuation techniques for investments that are categorized within Level 3 are fair, consistent, and verifiable. The fund designates a Valuation Committee (the "Committee") to oversee the valuation process of the Fund's Level 3 investments. The Committee is comprised of various fund personnel who are separate from the fund's portfolio management and trading functions. It reports to the fund's board of directors. The Committee is responsible for developing the fund's written valuation processes and procedures, conducting periodic reviews of the valuation policies, and evaluating the overall fairness and consistent application of the valuation policies.

The Committee meets on a monthly basis to determine the valuations of the fund's Level 3 investments. They are required to be supported by market data, third-party pricing sources, industry accepted pricing models, counterparty prices, or other methods the Committee deems to be appropriate including the use of internal proprietary pricing models.
The fund tests its valuations of Level 3 investments through performing backtesting of the sales of such investments by comparing the amounts realized against the most recent fair values reported, and, if necessary, uses the findings to recalibrate its valuation procedures.

The fund annually engages the services of a third-party valuation firm to perform an independent review of the valuation of the Fund's Level 3 investments, and may adjust its valuations based on the recommendations from the valuation firm.

Exhibit 3 Sample Note 2 — Fair Value Measurement

The Fund's assets and liabilities recorded at fair value have been categorized based upon a fair value hierarchy as described in the Fund's significant accounting policies in Note 1. This table presents information about the Fund's assets measured at fair value as of December 31, 20XX (in thousands)

Assets (at fair value)	Level 1	Level 2	Level 3	Total
Investments in securities				
Common stocks				
United States				
Banking	$117,089	$	$	$117,089
Manufacturing	94,447			94,447
Consumer discretionary	87,491	2,191		89,682
Health care	81,038			81,038
Real estate	44,961			44,961
United Kingdom				
Manufacturing	38,571			38,571
Telecommunications	33,642	462		34,104
Preferred Stocks	96,000	600		96,600
Exchange traded funds	19,567			19,567
Digital Currency		21,233	25,266	46,499
Private preferred stocks			18,541	18,541
Corporate bonds		59,481	2,584	62,065
Government bonds	22,391			22,391
Municipal bonds		31,534		31,534
Asset-backed securities				
Senior debt		1,273	19,159	20,432
Mezzanine Debt			9,518	9,518
Total investments in securities	**635,197**	**116,774**	**75,068**	**827,039**
Investments in private investment companies				
Value		72,424		72,424
Growth				
North America		53,909		53,909
Asia			1,191	1,191
Merger arbitrage				
North America			23,339	23,339
Europe		1,460		1,460
Private Equity			38,223	38,223
Total investments in private investment companies		**127,793**	**62,753**	**190,546**
Derivative contracts				
Interest rate swaps		60,439		60,439
Warrants		44,911	1,879	46,790
Total return swaps		30,111	1.396	31,507
Swaptions		282		282
Call options	23,807			23,807
Put Options	2,159			2,159
Credit default swaps		4,189		4,189
Forward contracts		3,910		3,910
Gross Total	**25,966**	**143,842**	**3,275**	**173,083**
Less: Master netting arrangements		(8,099)		(8,099)
Total derivative contracts	**25,966**	**135,743**	**3,275**	**164,984**
Securities purchased under agreements to resell		12,450		12,450
Cash equivalents	**3,567**			**3,567**
Total Assets	**$664,730**	**$392,760**	**$141,096**	**$1,198,586**

The following table presents information about the Fund's liabilities measured at fair value as of December 31, 20XX (in thousands):

Liabilities (at fair value)	Level 1	Level 2	Level 3	Total
Securities sold short				
Common stocks				
United States	$402,260	$	$	$402,260
United Kingdom				
Banking	27,275	4,653		31,928
Other	81,046			81,046
Preferred stocks	34,194	1,003		35,197
Total securities sold short	**544,775**	**5,656**		**550,431**
Derivative contracts				
Credit default swaps		28,028	1,838	29,866
Total return swaps		24,660		24,660
Interest rate swaps		23,112		23,112
Contracts for differences		22,384		22,384
Forward contracts		25,982		25,982
Futures contracts	21,879			21,879
Call options	9,960			9,960
Put options	5,691			5,691
Gross Total	**37,530**	**124,166**	**1,838**	**163,534**
Less: Master netting arrangements		(8,099)		(8,099)
Total derivative contracts	**37,530**	**116,067**	**1,838**	**155,435**
Total Liabilities	**$582,305**	**$121,723**	**$1,838**	**$705,866**

The following table presents additional information about Level 3 assets and liabilities measured at fair value. Both observable and unobservable inputs may be used to determine the fair value of positions that the Fund has categorized within the Level 3 category. As a result, the unrealized gains and losses for assets and liabilities within the Level 3 category may include changes in fair value that were attributable to both observable and unobservable inputs. Changes in Level 3 assets measured at fair value for the year ended December 31, 20XX (in thousands) were as follows:

Level 3									
Assets (at fair value)	**Beginning Balance January 1, 20XX**	**Realized & Unrealized Gains (Losses)(a)**	**Purchases**	**Sales**	**Settlements (b)**	**Transfers into Level 3**	**Transfers out of Level 3**	**Ending Balance Dec 31, 20XX**	**Change in Unrealized Gains (Losses) for Investments still held at December 31, 20XX (c)**
Investments in securities									
Private preferred stocks	$	$(1,459)	$20,000	$	$	$	$	$18,541	$(1,459)
Corporate bonds						4,150	(1,926)	2,224	547
Asset-backed securities	17,319	34,910	2,451	(26,003)				28,677	12,481
Total investments in securities	**17,319**	**33,451**	**22,451**	**(26,003)**		**4,150**	**(1,926)**	**49,442**	**11,569**
Investments in private investment companies	**109,672**	**(9,024)**	**34,000**	**(4,000)**			**(67,895)**	**62,753**	**1,391**
Derivative contracts									
Warrants	2,934	4,094				1,467	(6,616)	1,879	(562)
Total return swaps	5,190	(41,209)			37,415			1,396	(1,834)
Total derivative contracts	**8,124**	**(37,115)**			**37,415**	**1,467**	**(6,616)**	**3,275**	**(2,396)**
Total Assets	**$135,115**	**$(12,688)**	**$56,451**	**$(30,003)**	**$37,415**	**$5,617**	**$(76,437)**	**$115,470**	**$10,564**

Changes in Level 3 liabilities measured at fair value for the year ended December 31, 20XX (in thousands) were as follows:

Level 3									
Assets (at fair value)	**Beginning Balance January 1, 20XX**	**Realized & Unrealized Gains (Losses)(a)**	**Purchases**	**Sales**	**Settlements (b)**	**Transfers into Level 3**	**Transfers out of Level 3**	**Ending Balance Dec 31, 20XX**	**Change in Un-realized Gains (Losses) for Investments still held at December 31, 20XX (c)**
Derivative contracts									
Credit default swaps	8,719	(7,443)				562		1,838	(418)
Total Assets	**$8,719**	**$(7,443)**	**$**	**$**	**$**	**$562**	**$**	**$1,838**	**$(418)**

a. Realized and unrealized gains and losses are all included in net gain (loss) on investments in the statement of operations.
b. Includes paydowns.
c. The change in unrealized gains (losses) for the year ended December 31, 20XX for investments still held at December 31, 20XX is reflected in net change in unrealized appreciation or depreciation on securities, net change in unrealized appreciation or depreciation on private investment companies, and net gain (loss) from derivative contracts in the statement of operations.

All transfers are recognized by the Fund at the beginning of each reporting period.

Transfers between Levels 2 and 3 generally relate to whether, significant, relevant, observable inputs are available for the fair value measurement in its entirety. See Note 1 for additional information related to the fair value hierarchy and valuation techniques.

The following table summarizes the valuation techniques and significant unobservable inputs used for the Fund's investments that are categorized within Level 3 of the fair value hierarchy as of December 31, 20XX (in thousands):

	Fair Value at December 31, 20XX	Valuation Technique	Unobservable Inputs	Range of Inputs (Weighted Average)
Assets (at fair value)				
Investments in securities				
Private preferred stocks	$18,541	Market comparable companies	Adjusted valuation multiples (EBITDA)	8% - 10% (9%)
			Discounts for lack of marketability	15% - 20% (17.5%)
			Control premiums	2% - 5% (3.5%)
Corporate bonds	$2,584	Indicative quote	Discounts for lack of marketability	10%
Asset-backed securities	$28,677	Discounted cash	Loss severities	2% - 5% (3.5%)
		Flow analysis	Probabilities of default	10% - 15% (13%)
			Prepayment rates	8% - 10% (9%)
Derivatives				
Warrants	$1,879	Industry accepted model	Historical volatilities	15% - 20% (17.5%)
Liabilities (at fair value)				
Derivatives				
Credit default swaps	$1,838	Industry accepted model	Credit spreads	6.7% - 8.9% (8.2%)
			Recovery rates	30% - 50% (40%)

The Fund's other Level 3 investments have been valued using unadjusted third-party transactions and quotations, unadjusted historical third-party information, or the unadjusted net asset value of the investments in private investment companies. No unobservable inputs internally developed by the Fund have been applied to these investments, thus they have been excluded from the above table.

Exhibit 4

Alternative Sample Note 2
Fair Value Measurement — Private Equity Fund

The Fund's assets recorded at fair value have been categorized based upon a fair value hierarchy as described in the Fund's significant accounting policies in Note 1. The following table presents information about the Fund's assets measured at fair value as of December 31, 20XX (in thousands):

Assets (at fair value)	Level 1	Level 2	Level 3	Total
Investments				
Common stocks				
United States				
Biotechnology	$25,000	$	$372,089	$397,089
Retail			58,019	58,019
United Kingdom				
Insurance			72,675	72,675
Preferred stocks				
United States				
Biotechnology			200,686	200,686
Retail			29,480	29,480
Warrants			200	200
Digital Assets		21,233	25,000	46,233
Debt securities			22,391	22,391
Total investments	**25,000**	**21,233**	**780,540**	**826,773**
Cash equivalents	6,200			6,200
Total Assets	**$31,200**	**$21,233**	**$780,540**	**$832,973**

The following table presents additional information about Level 3 assets measured at fair value. Both observable and unobservable inputs may be used to determine the fair value of investments that the Fund has classified within the Level 3 category. As a result, the unrealized gains and losses for the assets within the Level 3 category may include changes in fair value that were attributable to both observable and unobservable inputs. Changes in Level 3 assets measured at fair value for the year ended December 31, 20XX (in thousands) were as follows:

Level 3									
Assets (at fair value)	**Beginning Balance January 1, 20XX**	**Realized & Unrealized Gains (Losses)(a)**	**Purchases**	**Sales**	**Settlements/ Conversions**	**Transfers into Level 3**	**Transfers out of Level 3 (b)**	**Ending Balance Dec 31, 20XX**	**Change in Unrealized Gains (Losses) for Investments still held at December 31, 20XX (c)**
Investments									
Common stocks									
United States									
Biotechnology	$483,839	$(2,623)	$	$(84,127)	$	$	$(25,000)	$372,089	$(28,388)
Retail		7,898	50,121					58,019	7,898
United Kingdom									
Insurance	55,260	17,415						72,675	17,415
Preferred stocks									
United States									
Biotechnology	183,550	17,136						200,686	17,136
Retail		4,012	25,468					29,480	4,012
Warrants	200							200	
Debt securities	22,391							22,391	
Total Investments	**$745,240**	**$43,838**	**$75,589**	**$(84,127)**	**$**	**$**	**$(25,000)**	**$755,540**	**$18,073**

a. Realized and unrealized gains and losses are included in net gain (loss) on investments in the statement of operations.
b. Transfers out of Level 3 relate to investments that have become freely tradable and listed on a national exchange.
c. The change in unrealized gains (losses) for the year ended December 31, 20XX for investments still held at December 31, 20XX is reflected in the net change in unrealized appreciation or depreciation on investments in the statement of operations.

The following table summarizes the valuation methodology and significant unobservable inputs used for the Fund's investments that are categorized within Level 3 of the fair value hierarchy as of December 31, 20XX:

Assets (at fair value)	**Fair Value at December 31, 20XX**	**Valuation Techniques (a)**	**Unobservable Inputs (b)**	**Range of Inputs (Weighted Average)**
Investments in private operating companies				
Equity Securities	$732,949	Income Approach / Discounted Cash Flow Analysis	Normalized pre-tax operating margin	X% - X% (X%)
			Discount for lack of marketability	X% - X% (X%)
			Control premium	X% - X% (X%)
			Terminal value growth rate	X% - X% (X%)
			Discount rate / weighted average cost of capital	X% - X% (X%)
			Revenue CAGR (compound annual growth rate)	X% - X% (X%)
			Exit Multiple / capitalization rate	X times X%
			Weight ascribed to income approach	X% - X% (X%)
		Market Approach / Guideline Comparable Companies	EBITDA multiple	X times - X times
			Revenue multiple	X times - X times
			Discount for lack of marketability	X% - X% (X%)
			Control premium	X% - X% (X%)
			Enterprise Value / LTM EBITDA multiple	X times - X times
			Enterprise Value / Forward EBITDA multiple	X times - X times
			Book value multiple	X times - X times
			Weight ascribed to market approach	X% - X% (X%)
		Cost Approach (Adjusted Net Asset Approach)	Discount to Net Asset Value	X% - X% (X%)
			Appraisal of assets	$XX,XXX - $XX,XXX
			Weight ascribed to cost approach	X% - X% (X%)
Debt Securities	$22,391	Income Approach / Discounted Cash Flow Analysis	Covenant compliance **(c)**	Compliant / Non-compliant
			Remaining maturity	XX months
			Expected principal recovery / adjusted yield	X% - X% (X%)
			Risk adjusted discount factor	X% - X% (X%)
			Weight ascribed to income approach	X% - X% (X%)

Table Continues on page 38.

The following table summarizes the valuation methodology and significant unobservable inputs used for the Fund's investments that are categorized within Level 3 of the fair value hierarchy as of December 31, 20XX:

Assets (at fair value)	**Fair Value at December 31, 20XX**	**Valuation Techniques (a)**	**Unobservable Inputs (b)**	**Range of Inputs (Weighted Average)**
Investments in private operating companies				
Debt Securities (continued)		Income Approach / Market Data / Benchmarks	Market Yield / Yield to Maturity	X% - X% (X%)
			Premium (Discount)	X% - X% (X%)
			Weight ascribed to income approach	X% - X% (X%)
		Market Approach / Market Comparables	Discount Margin	X% - X% (X%)
			Market Yield / Yield to Maturity **(d)**	X% - X% (X%)
			Total Leverage	X% - X% (X%)
			Illiquidity Discount	X% - X% (X%)
			Weight ascribed to market approach	X% - X% (X%)
		Liquidation Approach	Investment Collateral / support for liquidation value	$XX,XXX - $XX,XXX
			Time required to liquidate; present value factor	X% - X% (X%)
			Weight ascribed to liquidation approach	X% - X% (X%)
Warrant Positions	$ 200	Option Pricing Model	Industry Volatility	X% - X% (X%)
			Risk-free interest rate	X% - X% (X%)
			Fair Value of underlying equity / stock	$XX,XXX - $XX,XXX ($XX,XXX)
			Estimated time to exit; maturity remaining on option contracts	XX months
			Discount for lack of marketability	X% - X% (X%)

a. In determining certain of these inputs, management evaluates a variety of factors including economic conditions, industry and comparable companies and company specific developments including exit strategies and realization opportunities. Management also considers the following unobservable inputs in considering the fair value of its investments: financial information obtained from each portfolio company including unaudited financial statements for the most recent period available as compared to budgeted numbers; current and projected financial condition of the portfolio company; current and projected ability of the portfolio company to service its debt obligations; type and amount of collateral, if any, underlying the investment; current financial ratios applicable to each investment; current liquidity of the investment and related financial ratios; pending debt or capital restructuring of the portfolio company; projected operating results of the portfolio company; current information regarding any offers to purchase the investment; and current ability of the portfolio company to raise any additional financing as needed. Management has determined that market participants would take these inputs into account when valuing the investment. Once management has estimated the underlying entities' business enterprise value, a waterfall analysis of the entities' capital structure should be considered. LTM means Last Twelve Months and EBITDA means Earnings Before Interest Taxes Depreciation and Amortization.
b. Significant increases or decreases in any of the above unobservable inputs in isolation may result in a significant lower or higher fair value measurement, respectively.
c. Included in covenant compliance is performance of subject debt instruments.
d. In order to determine the appropriate market yield, the credit profile of the underlying entity and the synthetic credit rating of the subject debt instrument must be considered.

Exhibit 5

Sample Additional Disclosures for Investments in Private Investment Companies

The following table summarizes the Fund's investments in other private investment companies as of December 31, 20XX. Other private investment companies in which the Fund invested 5% or more of its net assets, as disclosed in the condensed schedule of investments, are individually identified, while smaller investments are aggregated. The Fund's investments in private investment companies have certain redemption and liquidity restrictions which are described in the following tables.

	Required for CFTC Funds			Required for all Funds either here or in SOI		
Investment	Income (Loss)	Fees/Allocations		Redemptions Notice Period	Redemptions Permitted	Liquidity Restrictions
		Management	Incentive			
Value						
North America						
ABC Fund, Ltd	$3,331,000	$1,376,000	$519,000	45 days	Quarterly	None
Other	(393,000)	72,000		30-60 days	Monthly-Annually	None
Growth						
North America						
JKL Partners, Ltd	(3,193,000)	969,000		30 days	Semi-annually	None **(a)**
Other	3,919,000	108,000	610,000	45 days	Quarterly	None
Asia						
Other	5,132,000	201,000	1,081,000	30 days	Semi-annually	Lock-up until April XX, 20XX **(b)**
Merger arbitrage						
North America						
DEF Partners, LLC	(3,922,000)	466,000		30 days	Semi-annually	Lock-up until September XX, 20XX **(c)**
Europe						
Other	1,381,000	100,000	231,000	30 days	Semi-annually	None
Private Equity						
North America						
PE Fund L.P.	(2,931,000)	760,000		N/A	N/A	See below **(d)**
Asia						
Other	(2,191,000)	64,000		N/A	N/A	See below **(e)**
Total Investments	**$1,133,000**	**$4,116,000**	**$2,441,000**			

a. Approximately 20% of this private investment company has been placed in a side pocket. It is anticipated that distributions will be made in 2 to 3 years.
b. This private investment company can institute a gate provision if requests for redemptions for any three-month period are in the aggregate of more than 20% of the net assets of the underlying fund. The Fund anticipates distributions in December 20XX.
c. This private investment company can institute a gate provision of requests for redemptions would cause a decline in assets under management of 10% or greater. Investors would have to resubmit redemption requests each quarter until the intended payout is achieved.
d. It is estimated that the underlying assets of the fund would be liquidated over 5 to 8 years.
e. It is estimated that the underlying assets of the funds would be liquidated over 3 to 5 years.

The North America value group disclosed in the preceding table invests solely in the health care industry.
The North America merger arbitrage group disclosed in the preceding table consists of investments in hedge funds that invest in approximately 60% equities concentrated in technology and 40% bonds concentrated in economic, political and government driven events.
The private equity categories disclosed in the above table invest primarily in energy companies based in Canada and in Asia. These investments cannot be voluntarily redeemed. Instead, the nature of the investments in this class is that distributions are received through the liquidation of the underlying assets of the funds.

The Fund is subject to credit risk to the extent that the investment managers of the underlying private investment companies are unable to fulfill their obligations according to their organizational documents. The Fund, through its investments in private investment companies, is subject to risk inherent when investing in securities and private investments. In connection with its investments, the Fund is subject to the market and credit risk of those investments held or sold short by the private investment companies. Due to the nature of the Fund's investments, the above described risks are limited to the Fund's investment balances and unfunded commitments to private investment companies.

Exhibit 6

Sample Disclosures of the Sensitivity of the Level 3 Fair Value Measurements to Changes in Significant Unobservable Inputs [Required for Public Entities Only]

Asset-Backed Securities

As of December 31, 20XX, the Fund held asset-backed securities with a fair value of approximately $X,XXX,XXX classified as Level 3 in the fair value hierarchy. The significant unobservable inputs used in the fair value measurement of the Fund's asset-backed securities are prepayment rates, probabilities of default, and loss severities in the event of default. Significant increases (decreases) in any of those inputs in isolation would result in a significantly lower (higher) fair value measurement.

Generally, a change in assumptions used for the probability of default is accompanied by a directionally similar change in the assumption used for the loss severity, as well as a directionally opposite change in the assumption used for prepayment rates.

Swaptions

As of December 31, 20XX, the Fund held investments in interest rate swaptions with a fair value of approximately $X,XXX,XXX classified as Level 3 in the fair value hierarchy. The Fund values such swaptions using a binomial option pricing model. A significant increase (decrease) in the volatility of the swaptions and in the estimated time to exit would result in a significantly higher (lower) fair value measurement, while a significant increase (decrease) in the risk-free rate would result in a significantly lower (higher) fair value measurement.

Credit Default Swaps

As of December 31, 20XX, the Fund held credit default swaps (sell protection) with a fair value of approximately $X,XXX,XXX classified as Level 3 in the fair value hierarchy. Generally, the fair value of Fund's Level 3 credit default swaps would decrease (increase) as credit spreads increase (decrease) and recovery rates decrease (increase). Credit spreads and recovery rates are strongly related to distinct risk factors of the underlying reference obligations, which include reference entity-specific factors such as leverage, volatility and industry, market-based risk factors such as borrowing costs or liquidity of the underlying reference obligation, and macro-economic conditions.

Investments in Private Operating Companies

As of December 31, 20XX, the Fund held investments in equity securities of private operating companies with a fair value of approximately $X,XXX,XXX classified as Level 3 in the fair value hierarchy. Under the discounted cash flow valuation technique, a significant increase (decrease) in the discount rate would result in a significantly lower (higher) fair value measurement, while a significant increase (decrease) in the terminal value growth rate and normalized pre-tax operating margin would result in a significantly higher (lower) fair value measurement.

Under the guidelines for comparable companies' valuation technique, a significant increase (decrease) in the EBITDA and revenue multiples would result in a significantly higher (lower) fair value measurement.

Exhibit 7

Sample Digital Assets Valuation Memo

Exchange Traded Assets

For digital assets traded on exchanges, the fair value on any given day will be calculated as the Closing Price (defined as the price at fund-specific Universal Coordinated Time (UTC)) displayed on Coinmarketcap.com or other applicable pricing source in the case of assets listed on the website. The only exception to this policy will be made in the case of assets traded at de minimis levels of liquidity such that a single large order can cause a material change in the reported price; in these instances, the Fund may, at its sole discretion, apply a discount to the reported price.

For digital assets that are traded on an exchange but at de minimis levels of liquidity such that a single large order can cause a material change in the price, the fund may apply a discount to the reported price

For futures contracts, exchange traded options contracts or other exchange traded digital assets not appearing on Coinmarketcap.com, the closing price from the exchange on which the asset trades (or in the instance of digital assets trading on multiple exchanges, the closing price from the exchange in which it trades in the greatest volume) shall be utilized.

In the case of otherwise liquid assets that are subject to resale restrictions (i.e. a lock-up), the Fund may discount the market value of the asset to reflect fair and current market values, and, in good faith, maintain the ability to change the valuation of a digital asset based on many factors including, but not limited to, liquidity, trading volume and price movements of the underlying digital asset. Discounts may be applicable from 5%-25% based on marketability or liquidity.

Other than Publicly Traded Assets

Any digital assets without market valuation information are to be reviewed and priced by management in good faith to reflect the asset's fair and current market value, and supporting documentation maintained. Management will arrange for periodic and frequent reviews of valuation information from whatever source to promptly identify any incorrect, stale, or mispriced digital assets.

Generally speaking, illiquid digital assets such as those acquired via an Initial Coin Offering will be held at the lesser of cost or fair value. There will be a bias to hold these digital assets at cost provided no credible negative information regarding the associated project has been publicized or otherwise come to the fund attention that would lead it to conclude the cost of acquiring the digital asset is no longer an appropriate reflection of its value. In the event that management determines it is necessary to adjust the valuation of one of these digital assets, they shall use one or a combination of industry comparables or inputs from a third-party valuation firm to do so.

Exhibit 8 - Frequently Asked Questions

General Questions

1. How is a "nonpublic entity" defined for purposes of the exemption from the additional disclosure requirements of ASC 820?

As defined within ASC 820, a "nonpublic entity" is an entity that does not meet any of the following provisions:

a. Its debt or equity securities trade in a public market either on a stock exchange or in an over-the-counter market.
b. It is a conduit bond obligor for conduit debt securities that are traded in a public market.
c. It files with a regulatory agency in preparation for the sale of any class of debt or equity securities in a public market.
d. It is required to file or furnish financial statements with the U.S. Securities and Exchange Commission ("SEC").
e. It is controlled by an entity covered by criteria (a) through (d).

Nonpublic entities are not required to include the disclosure of information on transfers between Level 1 and Level 2 of the fair value hierarchy and the sensitivity analysis of Level 3 fair value measurements to changes in unobservable inputs and any interrelationships between those unobservable inputs in their financial statements.

While many privately held funds are managed by an SEC-registered investment advisor ("RIA"), the managed funds are not subject to SEC regulation, and the RIA is not required to file the financial statements of such managed funds with the SEC. As a result, privately held funds generally meet the definition of nonpublic entity and are exempt from certain fair value disclosures as noted above.

2. When is the use of a valuation model to determine fair value acceptable under ASC 820?

In most cases, the use of a valuation model to determine fair value is acceptable only when quoted prices representing orderly transactions in active markets are not available. The inputs used in the valuation model should include the assumptions that market participants would use in pricing the asset in a current transaction even if the market participants' assumptions are different from the fund's inputs.

A fund cannot ignore market data typically used by market participants, and that can be obtained without undergoing undue cost and effort. The best practice is to backtest models and calibrate the models' assumptions to continually improve the valuation process with the ultimate goal to arrive at an appropriate fair value.

3. If there are multiple valuation techniques available, how does a fund determine the most appropriate valuation technique under ASC 820?

The valuation techniques with the most observable inputs should be given priority over those that have unobservable inputs. The overall theme of ASC 820 is to elevate the fair value measurement in its entirety within the three-level hierarchy as high as possible and to use the most observable and reliable market inputs in a fair value measurement. However, funds should place less reliance on observable inputs which are indicative of disorderly transactions. If one valuation technique proves to be a better representation of market participant assumptions than other techniques, then that valuation technique should be used. Multiple valuation techniques can be combined to value an investment. The weighting of each valuation technique will require judgment by the fund.

Once the valuation techniques are chosen, the best practice is to use the methods chosen on a consistent and contemporaneous basis. If a change in techniques or a change in the combination of techniques used will result in a better fair value measurement, the change in approach is allowable.

When significant, changes in valuation techniques will require disclosure in the footnotes to the financial statements.

4. Are the fair value disclosures required under ASC 820 reported on the condensed

schedule of investments or in the footnotes to the financial statements?

The fair value disclosures required under ASC 820 are not part of the condensed schedule of investments and should be included in the footnotes to the financial statements.

5. Are the fair value disclosures in ASC 820 required for feeder funds whose sole investment is in a master fund?

Generally, the fair value disclosures in ASC 820 are not required for feeder funds whose sole investment is in a master fund. Feeder fund footnote disclosures should include a reference to the valuation and disclosures included in the attached report of the master fund.

6. What is the consequence when a fund assigns incorrect levels to its investments in the fair value hierarchy?

Assigning levels in the fair value hierarchy under ASC 820 is an important part of a fund's year-end financial reporting internal control system. If a fund's internal controls are not adequate to assign the correct levels to its investments, the fair value footnote disclosures may be materially misstated. The resulting deficiency may be deemed a significant deficiency or material weakness which would require a comment in an internal control deficiencies letter.

7. A fund holds a liability position in an over-the-counter swap contract with a counterparty dealer. Which factors should the fund consider when measuring its swap liability at fair value?

The fund's swap contract is an over-the-counter contract for which quoted prices in an active market for an identical liability are not available. Under such circumstances, the fund should measure the fair value of the derivative liability from the perspective of a market participant that holds the identical item when traded as an asset at the measurement date, if such quotation is available.

The fund may use a discounted cash flow method to estimate the fair value of the contract and compare its own estimate of value to the value of the contract as reported by its counterparty. As a best practice, a fund should consider whether there are any significant differences from the counterparty valuation that may warrant an adjustment to the fund's estimated value and whether such differences reflect intrinsic differences when the contract is traded as an asset versus a liability.

A fund should also consider the impact of nonperformance risk on the valuation, including its own nonperformance risk, after taking into account the existence of master netting agreements and collateral arrangements that might mitigate such risk.

Third-Party Pricing

Broker-Dealer Quotations

8. Where does pricing from recognized third party pricing services and broker-dealers fall within the three-level hierarchy?

Prices from recognized third-party pricing services or broker-dealers can fall within Levels 1, 2, or 3. A fund must gain an adequate level of transparency to understand the inputs used by the pricing services or broker-dealers that support the prices provided to determine what is the most suitable classification in the fair value hierarchy.

9. If a fund receives broker-dealer quotes from multiple broker-dealers, can an average of the broker-dealer quotes be used to arrive at fair value?

The first step in the evaluation of broker-dealer quotes is to determine the principal market in which the asset or liability trades with the greatest volume or level of activity. If no principal market exists, then the most advantageous market should be used. If the brokers providing the quotes are participants in the principal or the most advantageous market, ASC 820 allows for funds to use a mid-point within the bid-ask spread of the quotes received by the brokers as a practical expedient.

10. How can management 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 820?

In order to evaluate whether broker-dealer quotes are observable, management should obtain sufficient information on the quotes to establish whether the quotes represent a binding commitment to buy or sell at that price, are non-binding and/or whether the quotes reflect transactions that actually occurred in the marketplace or are indicative and model based.

For indicative quotes that are developed using a model-based technique, management should evaluate the extent to which unobservable inputs are used.

Management should also evaluate the availability of those quotes to the marketplace and the consistency among the sources. Observable market inputs should not be limited to information that is only available to the entity making the fair value determination (or to a small group of users). Observable market inputs should be readily available and distributed to participants in that market. In addition, observable inputs should include a level of transparency that is reliable and verifiable. Management will have to use their judgment to evaluate whether inputs are "observable."

The range between bid and ask prices can be used to determine whether the market is active or inactive. A more active market will dictate more narrow ranges between bid and ask quotes with illiquid markets having larger spreads.

A best practice is to utilize a backtesting program to validate the indicative broker-dealer quotes. To the extent there is an adequate number of transactions and the variances between the broker-dealer quotes and actual market transactions are reasonable, backtesting may help verify the reliability of the market inputs.

11. What would the level designation be for securities that are priced using indicative broker-dealer quotes with legal disclaimers?

An indicative quote as typically provided by a broker-dealer or market maker to a trading party is not firm, and the broker-dealer is not obligated to transact at the quote provided. A fund must evaluate whether the quote is readily available and distributed to the participants in that market. In addition, a fund must evaluate whether the quote is reliable and verifiable. If management can obtain transparency on the inputs used, management may have adequate information to determine that the inputs are observable and assign a Level 2 designation to the related security. If adequate transparency cannot be obtained, or management determines that the inputs are unobservable, the related security would be assigned a Level 3 designation.

Level 1 Considerations

12. A fund purchases a security on Exchange A. The security is traded on both Exchange A and Exchange B. Exchange B has more liquidity and is more active than Exchange A. Does the fund determine the fair value of the security using Exchange A or Exchange B prices?

When measuring fair value under ASC 820, a reporting entity must first determine the principal market for a financial instrument. The principal market is the one with the greatest volume and level of activity for the asset or liability (Exchange B in this case). If the fund cannot identify a principal market, or the principal market is not accessible to the fund, the most advantageous market should be used to arrive at fair value. The most advantageous market is the market which would assign the highest fair value to an asset or the lowest fair value in transferring a liability net of transaction costs, and that is accessible to the fund. If the fund in this case has access to both exchanges with neither being the principal market, the fund would use the most advantageous market. If the fund does not have access to Exchange B, but has access to Exchange A, the fund would use the price from Exchange A.

13. For securities that trade on multiple markets, how can a fund determine what is the principal market under ASC 820?

Generally, the market where a fund normally enters into transactions is presumed to be the principal market, unless there is evidence to the contrary. Consequently, a fund does not need to perform an exhaustive search for markets that may have more activity for the asset or liability than the market in which that reporting entity normally enters into transactions. A fund should consider public information on volume transacted and level of activity, and evaluate its ability to access the market in making its determination.

14. What are the factors to consider when determining whether the market for a thinly traded security is "active" or "inactive"?

Under ASC 820, an active market is defined as a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. Currently, there has not been any quantitative guidance issued by the SEC, FASB, or other industry participant on the definition of an active market.

However, ASC 820 provides factors to consider in determining whether there has been a significant decrease in the volume or level of market activity. The factors that a fund should evaluate include (but are not limited to) the following:

- There are few recent transactions.
- Price quotations are not developed using current information.
- Price quotations vary substantially either over time or among market makers (for example, in some brokered markets).
- Indices that previously were highly correlated with the fair values of the asset or liability are demonstrably uncorrelated with recent indications of fair value for that asset or liability.
- There is a significant increase in implied liquidity risk premiums, yields, or performance indicators (such as delinquency rates or loss severities) for observed transactions or quoted prices when compared with the fund's estimate of expected cash flows, taking into account all available market data about credit and other nonperformance risk for the asset or liability.
- There is a wide bid-ask spread or significant increase in the bid-ask spread.
- There is a significant decline in the activity of, or there is an absence of, a market for new issues (that is, a primary market) for the asset or liability or similar assets or liabilities.
- Little information is publicly available (for example, for transactions that take place in a principal-to-principal market).
- There is limited public float for an investment closely held by a fund or by a syndicate of investors which the fund participates in (for example, a sponsored co-investment structure).

In determining whether a market for a thinly traded security is "active" or "inactive," we recommend that a fund downloads the trading volumes for those securities along with their price feeds on a periodic basis. We also recommend that a fund should develop a system that would highlight when a security's average trading volume does not meet a certain quantitative threshold (to be determined by management). This reporting system could generate an exception report for management to evaluate whether securities with low trading volume should be designated as Level 2 securities.

15. A fund invests its excess cash in short term investments such as money market mutual funds, that are considered cash equivalents. Should cash equivalents be included in the fair value hierarchy table?

Yes. Cash equivalents should be included in the fair value hierarchy table using the same valuation procedures and considerations as other securities and factoring in criteria such as liquidity and valuation of the underlying investments, and whether they are traded in active markets with observable inputs. Cash equivalents are typically designated as Level 1 in the fair value hierarchy.

16. A fund holds 75,000 shares of a company that has traded at an average volume of 5,000 shares per month over the past 12 months. The fund is concerned about the impact that selling a large block of shares would have on the share price. Can the fund take a blockage discount in the measurement of the fair value of its holding?

No. Blockage discounts relate to the size of the transaction, which is a factor specific to the reporting entity, and do not reflect a characteristic of the individual security from the perspective of a market participant. ASC 820 prohibits the use of blockage discounts at all levels of the fair value hierarchy.

17. How should a fund determine the fair value of a publicly traded security when a current price on the measurement date is not available due to the exchange markets being closed for an extraordinary event?

Under ASC 820, fund management should first determine the principal market for the security (the market with the highest volume and level of activity for the security). If the fund cannot identify the principal market or if the fund is unable to obtain a quoted price from the principal market, the most advantageous market that is accessible to the fund may be used to value the security (the market that would assign the highest fair value to an asset or the lowest fair value when transferring a liability net of transaction costs). In the absence of reliable quoted prices from the principal and/or the most advantageous market, management may value the investment based on the last available quoted price in the principal market.

Any additional information that may have an impact on the fair value of the investment, and is available without undue cost and effort, must also be taken into account if such information would be considered by the marketplace. Management should review any variances between the last available closing price and the next available opening price in the market, and determine if the variance is significant enough to warrant an adjustment to the last available price. As a practical consideration, management may also consider whether the potential impact of the variance for the portfolio as a whole is significant to the net asset value of the fund. It should also be noted that any significant adjustment due to aftermarket events will result in a Level 2 or Level 3 designation in the fair value hierarchy.

18. Is a fund required to disaggregate Level 1 investments in the footnotes to the financial statements by industry or geographic concentrations if Level 1 investments are already disclosed on the condensed schedule of investments (SOI)?

To the extent the required Level 1 investments disaggregation information is included elsewhere in the financial statements (i.e., the SOI), there would not be a need to repeat the Level 1 investment disaggregation information in the fair value hierarchy level tabular disclosure. We recommend adding a reference to the fair value hierarchy disclosure indicating that the required disaggregation of Level 1 investments is disclosed in the SOI.

Level 2 and 3 Considerations

19. Should a discount be taken when determining the fair value of a restricted stock?

A fund must assess the reason for the restriction and whether the restriction would be a consideration by market participants when determining its fair value. If the starting point of valuation is the exchange-traded price of an unrestricted stock, typically a discount would be taken to arrive at fair value since a market participant would assess a higher risk for the restricted position and thus demand a higher than expected internal rate of return. However, when a member of fund management is on the board of directors of a holding and therefore the fund has certain restrictions on sales of the related security, a discount would not be taken since the restriction would not be transferred to a buyer of the security. If the restriction is on the security and such restriction would transfer to the holder (e.g., Rule 144 stock), a discount would typically be taken.

20. A fund has adopted a policy to apply a standard discount rate of 15% and 10% to its investments in restricted stock and private investments in public equity (PIPEs), respectively, when measuring fair value. Is this policy appropriate?

No. The application of a standard discount rate to investments such as restricted stock or a PIPE would not comply with ASC 820. A fund would need to consider the characteristics of the individual investment as well as the changing circumstances surrounding its restrictions. All relevant drivers of the discount, including, but not limited to, the length of the restriction, float and market capitalization of the issuer, liquidity of the marketplace and other qualitative and quantitative factors specific to the security should be carefully analyzed in determining the appropriate discount rate.

21. A fund invests in a currency forward contract on the EUR-USD that expires in 30

days and which is valued with reference to the spot rates of the underlying currency pair. How should this contract be classified in the fair value hierarchy?

Currency forward contracts are over-the-counter instruments. Unlike futures, they are not traded on an exchange. A one-month currency forward contract which can be valued based on observable market inputs such as currency spot rates of an actively traded currency pair such as the EUR-USD would typically be classified within Level 2 of the fair value hierarchy. Depending on the maturity date of the contracts and the characteristics of the market of the underlying currency pair, certain currency forwards may be classified within Level 3 of the fair value hierarchy.

22. Is a total return swap where the underlying notional position is an actively traded security (i.e., Level 1 security) considered Level 1 or Level 2?

The unit of measure is the total return swap contract and not the underlying stock. A total return swap contract where the underlying notional position is actively traded would likely fall into Level 2, provided that the significant inputs used to determine the valuation are observable.

23. A fund invests in a receive-fixed, pay-variable interest rate swap with a seven-year term. The swap is valued using an industry-accepted model and is based on a reference interest rate that can be observed at commonly quoted intervals for the first five years of the swap term. For Year 6 and Year 7, the fund derives the swap rate through extrapolation. How should the swap be classified under the fair value hierarchy?

Interest rate swaps that are based on a yield curve that is observable at commonly quoted intervals for a substantial amount of the full term of the swap are typically classified as Level 2 of the fair value hierarchy. For the swap in the example, observable data for Year 6 and Year 7 of the swap yield curve are not available. To the extent the extrapolated values of the swap rate for Year 6 and Year 7 are corroborated by observable market data, for instance by correlation with an interest rate curve that is observable at commonly quoted intervals over the term of the extrapolation, the fund can still classify the interest rate swap as Level 2 in the fair value hierarchy. If, on the other hand, the extrapolation is based on assumptions that rely on unobservable inputs, for instance if significant adjustments are made to the correlation inputs used by the fund, a Level 3 classification would be more appropriate.

24. Where do options fall within the fair value hierarchy?

Options that are traded on an exchange in an active market would be assigned a Level 1 designation. Options that are traded on an exchange in an inactive market would typically be assigned a Level 2 designation. In order to determine whether a Level 1 classification for an exchange-traded option is granted, a fund should make an overall assessment of whether the market for the option is active or inactive, considering factors such as the number of recent transactions and trading volume, the bid-ask spread, and whether quotes are reflective of current information. For instance, a fund may conclude that an out-of-the money exchange-traded option may still be classified under Level 1 of the fair value hierarchy based on an overall assessment of market activity, even if few transactions have occurred on the measurement date.

Over-the-counter options that trade based on the settlement of similar exchange-traded options ("look-alike" options) are typically classified under Level 2 of the fair value hierarchy. Options valued using a widely-accepted and non-proprietary model where the inputs, such as implied volatility, are observable, would also typically be assigned a Level 2 designation. For instance, an equity option valued using the Black-Scholes model where the implied volatility and dividend yield of the underlying stock, time to expiration and risk free rate are observable, would typically be assigned a Level 2 designation. Options that are priced via a model using historical volatility, other unobservable inputs, or include significant judgments and adjustments to arrive at fair value would typically be assigned a Level 3 designation.

25. What is the level designation in the fair value hierarchy for PIPEs including

the warrants typically attached to those transactions?

A PIPE investment where the fair value is primarily based on the price of a similar actively-traded public equity would typically be classified within Level 2. If a significant liquidity discount from the underlying public equity price is taken, the investment may fall into Level 3. In addition, convertible securities that are not "in the money" where the fair value is based upon the underlying borrower's credit worthiness and other unobservable inputs will fall into Level 3.

Typically, warrants in PIPE transactions will fall into Level 3 since the input of historical volatility into a model is not an observable input. Warrants can occasionally fall into Level 2 if they are in the money and the underlying public security is actively traded or an observable implied volatility can be obtained from market data. The challenge is to determine the lowest level input that is significant to the fair value measurement. For in-the-money warrants, volatility may not be a significant input to their fair value and thus such warrants may fall in a Level 2 designation. It will be up to the judgment of management to evaluate the significance of the inputs.

26. In an illiquid market (such as the asset-backed security market) there can be a disconnect between the intrinsic value (e.g., the value determined by applying data inputs to a valuation which may presume the position would be held to maturity) and what the current quoted observable prices are for the security in the marketplace. Can the intrinsic value be used in lieu of the quoted prices when the current market is not active and has unusually large bid-ask spreads?

The use of unobservable inputs is appropriate only to the extent that observable inputs that reflect orderly transactions in an active market are not available. ASC 820 states that entity-level inputs (i.e., unobservable) can be used as long as there is not contrary data indicating that market participants would use different assumptions. If such contrary data exists, a fund must adjust its assumptions to incorporate that market information. A fund must also consider the risk inherent in the valuation technique used and the risk inherent in the inputs to the valuation technique. A hold-to-maturity mentality does not conform to ASC 820 since it reflects an entity-specific assumption. ASC 820 requires the fair value measurement to reflect an exit price in current market conditions, including the relative liquidity of the market.

27. If there are no recent transactions for an asset-backed security and a fund uses matrix pricing based on observable data points for securities that have similar attributes and vintages, or a fund uses the ABX credit-derivative index to price the security, what would be the resulting level designation under these approaches?

Using matrix pricing based on observable quotes or yield curves for similar securities or using the ABX credit derivative index as a starting point to value an asset-backed security would typically result in a Level 2 classification for the security. Adjustments to Level 2 inputs will vary depending on the factors specific to the security (e.g., comparability, vintage, volume). However, any adjustment to the Level 2 inputs that is significant to the fair value measurement will drop the designation to Level 3. Funds should obtain an understanding of the processes involved in constructing the ABX credit derivative index or other forms of matrix pricing to determine if the matrix pricing is responsive to changes in market conditions in a timely manner. If the outputs of the matrix pricing are indicative of stale data, funds should consider the use of valuation adjustments that reflect current assumptions about market conditions.

28. A fund holds an asset-backed security that is valued using broker quotes. At some point during the year, broker quotes for the security are no longer available, and the fund changes its valuation technique to use an internal model instead. When should the adjustment to the fair value of the investment be recorded?

Fair value measurements are considered accounting estimates. Adjustments to the fair value of the investment as a result of a change in the valuation technique will typically be recorded in the current accounting period ending on the valuation date of the investment. If significant to its overall fair value measurement, the fund is required to disclose the change in estimate in the notes to its financial statements.

29. What level designation should a fund assign to a deferred fee liability which is reinvested into the fund?

A deferred liability has the characteristics of a host debt instrument with an embedded total return derivative feature which is indexed either to the fund's rate of return, participation in specific assets of the fund, or a combination of both. Since the unit of account of the deferred liability is different from the underlying investments of the fund, the deferred liability may not be designated as Level 1, even if all of the underlying assets and liabilities are actively marked on a daily basis. Funds may also consider analogized guidance of investments in private investment companies measured at fair value using the practical expedient based on the ability to redeem at or within a near term of the reporting date when determining between Level 2 and Level 3 designation.

30. Are repurchase agreements and reverse repurchase agreements required to be disclosed in the fair value hierarchy level tabular disclosure?

Repurchase agreements are investments at fair value and should be included in the fair value hierarchy level tabular disclosure. Reverse repurchase agreements may also be presented at fair value if a fair value option election is made under ASC 825 Financial Instruments. In such case, they would be included in the fair value hierarchy level tabular disclosure. In the absence of a fair value option election, reverse repurchase agreements are considered to represent a fixed, determinable obligation of a fund, would be presented at face value and would not be included in the fair value hierarchy level tabular disclosure.

Typically, the fair value of a repurchase agreement or reverse repurchase agreement (if the fair value option is elected) is computed using a standard cash flow discounting technique (income approach). The inputs to the valuation would typically include contractual cash flows and collateral funding spreads, which may be estimated using various benchmarks, interest rate yield curves and option volatilities. In instances where unobservable inputs are deemed significant, repurchase agreements and reverse repurchase agreements are classified in Level 3 of the fair value hierarchy; otherwise they are classified in Level 2 of the fair value hierarchy.

31. A fund holds a group of interest rate swaps with one counterparty under the same master netting agreement that can be valued on a stand-alone basis using Level 2 inputs. The swaps are managed on the basis of the group's net exposure and are measured at fair value under the exception. The fund applies a credit risk adjustment to the fair value of the group based on its assessment of counterparty risk. How should the credit risk adjustment be allocated to the individual contracts in the group, and how would it affect the classification of the individual derivative contracts in the fair value hierarchy?

ASC 820 does not prescribe a particular method to allocate a credit risk adjustment determined at the group level to the individual assets and liabilities in a portfolio measured at fair value under the exception. Although any allocation method is inherently subjective, a quantitative allocation would be appropriate if reasonably and consistently applied. Under the relative fair value approach allocation method, for instance, a fund may allocate the credit risk adjustment to each asset and liability in the group based on their relative fair values. Alternatively, the credit risk adjustment could be allocated only to the instruments that are in an asset position (if the overall credit risk adjustment is negative) or in a liability position (if the overall credit risk adjustment is positive).

To the extent the credit risk adjustment is significant for the individual contracts within the group, the contracts would be classified as Level 3 in the fair value hierarchy. Also, while the fair value of the individual contracts as reported in the financial statements may change as a result of the application of the credit risk adjustment under the exception, their presentation (on a net or gross basis) in the schedule of investments, fair value hierarchy levels table and Level 3 tables (if applicable), would not be affected.

32. Can a fund rely on other disclosures within the financial statements in lieu of applying the

disaggregation requirements to the disclosure of the Level 3 rollforward?

Generally the other disclosures within the financial statements do not provide sufficient disaggregated detail of the activity of a fund's investments by discrete classes of assets and liabilities. The disaggregation of fair value disclosures requires significant judgment and should give consideration to the nature and risks relevant to the asset and liability classes measured at fair value on a recurring basis. We feel that consideration of the Level 3 activity components, such as significant investment purchases or significant valuation write-downs, provides a more meaningful basis to disaggregate a class of shared economic exposures (e.g., industry, geographic, vintage, etc.) than an evaluation solely based on the significance of investment balances as of the reporting date.

For example, a fund may hold a substantial amount of private equity investments that had no transaction activity during the reporting period and retains the same values as from the prior period to a substantial degree. A disaggregated level of detail may be of limited use to the financial statement users. However, a fund may hold investments in a distressed industry within its private equity portfolio which have been written down to zero. A more granular detail of the classes subject to significant activity in the Level 3 rollforward may provide meaningful information to the users of the financial statements.

We recommend that funds consider the significance of activity within meaningful classes during the reporting period as a primary metric in determining the appropriate level of detail which should be provided for the disclosure of the Level 3 rollforward.

33. What are funds required to address as part of the disclosure on valuation processes for investments categorized as Level 3 in the fair value hierarchy?

Under the Implementation Guidance of ASC 820, a fund may disclose the following information to satisfy the disclosure requirements on the valuation processes for Level 3 investments:

- A description of the group within the fund that decides the fund's valuation policies and procedures, to whom the group reports and the internal reporting procedures in place (for example, how pricing, risk management or audit committees discuss and assess the fair value measurement).
- The frequency and method for calibration, backtesting, and other testing procedures on pricing models.
- The process for analyzing changes in fair value measurements from period to period.
- How the reporting fund determines that third party information used in the fair value measurement, such as broker quotes or quotes provided by third-party pricing services, was developed in accordance with ASC 820.
- The methods used to develop and substantiate the unobservable inputs used in a fair value measurement.

The purpose of the disclosure is to help provide financial statement users with additional transparency into a fund's valuation processes and to understand how the fund manages the subjectivity inherent to the valuation of Level 3 investments. Funds should review their internal processes and consider the industry best practices on sound valuation processes. There are various industry publications which address common themes which can be useful considerations towards the design and implementation of sound valuation processes, including:

- Governance over the valuation process
- Having adequate documentation of policies and procedures
- Implementing segregation of duties to mitigate conflicts of interest
- Consistency in the application of valuation procedures
- Availability and use of multiple and independent sources of information
- Reviewing the appropriateness of methods used
- Providing transparency of the procedures and valuation results

It is critical to note that a fund will need to tailor the disclosure to provide an accurate representation of the valuation processes being implemented by the fund. An approach that is not customized to the specific features of the fund's operations may result in a disclosure which is less meaningful to the reader and can be misleading if the disclosure is inconsistent with the actual practices of the fund.

34. Under ASC 820 is there a requirement to present the quantitative information on significant Level 3 inputs in tabular format?

Yes, funds are required to disclose the quantitative information on significant Level 3 inputs in tabular format. The Implementation Guidance of ASC 820 includes a table that presents, for each investment class, the aggregate fair value by valuation technique used and, for each technique, a listing of the significant unobservable inputs and the values (or range of values) used as a sample table to satisfy this requirement. Ultimately, it is management's responsibility to provide the required information in the most suitable format for the financial statement users, considering the characteristics of the investments, the valuation technique, and the type of inputs used. Quantitative information for significant unobservable inputs that have not been developed by management, such as prior transaction prices or third-party pricing information used without adjustment, is not required to be disclosed.

35. A fund invests in corporate bonds that are valued using broker quotes and are classified as Level 3 in the fair value hierarchy. Which information should the fund provide to satisfy the disclosure requirements about significant inputs in Level 3 fair value measurements?

Under ASC 820, the fund should provide a qualitative description of the inputs used in the corporate bond valuation. To the extent the quotes are unadjusted, the fund is not required to provide quantitative details relating, for instance, to the number or to the value/range of values of quotes used. If, however, the fund applies a valuation adjustment to the broker quotes developed by third parties, the valuation adjustment would qualify as a Level 3 input developed by management and, if significant, additional quantitative information on the adjustment will be required. The fund may consider disclosing the due diligence procedures applied to gain comfort with the third-party developed quotes and to determine the nature of the quotes (i.e., indicative versus transaction-based) used in fair value measurement under the terms of ASC 820.

36. A fund holds a significant investment in mortgage-backed securities that are classified under Level 3 of the fair value hierarchy. Which information could the fund provide to help users of its financial statements to evaluate the quantitative information on Level 3 inputs that is required by ASC 820?

In addition to the quantitative information that is required under ASC 820, the fund should consider providing additional information on the nature of the securities being measured at fair value using Level 3 inputs, including the characteristics of the securities that are considered in the determination of the relevant inputs, and how third party information such as broker quotes was taken into account when measuring fair value.

For example, for mortgage-backed securities, ASC 820 indicates that a fund may consider disclosing the types of underlying loans (prime loans or subprime loans), collateral, guarantees or other credit enhancements, seniority level of the tranches or securities, the year of issue, the weighted-average coupon rate, maturity and geographical concentration of the underlying loans, the weighted-average coupon rate, maturity and credit rating of the securities, among other disclosures.

37. What should a fund disclose when a third-party pricing service is engaged to value a portfolio of OTC derivatives, and the fund is not privy to the inputs used by the pricing service due to the proprietary nature of the models involved?

Under the unique circumstances in which the fund is unable to obtain information regarding the inputs used for the model-based valuations developed by the pricing service, we believe that at minimum, the fund should work with the pricing service to determine an adequate qualitative description of the valuation process involved and to disclose the fact that the inputs used in the valuation are not available to the fund. In addition, the fund should consider whether other disclosure approaches, such as the inclusion of a qualitative sensitivity disclosure, would mitigate the absence of the quantitative input disclosure from resulting in a material departure from U.S. GAAP.

38. During the year, a fund invested in a Level 3 option valued using significant inputs developed by management. The option was sold by year end. At year end, the fund did not hold any Level 3 investments. Does the fund need to include in its financial statements the disclosures of quantitative unobservable inputs and valuation processes?

The disclosure requirements in ASC 820-10-50-2 address fair value assets and liabilities reported in the statement of financial condition as of the reporting date. When a fund does not have any Level 3 investments at the end of the year, the disclosure of quantitative inputs and valuation processes may not be material to the financial statements from a qualitative standpoint. However, in certain circumstances, when Level 3 investments held during the year but not at year end were significant to the fund's operations and had a significant impact on the fund's performance, the fund should consider including additional disclosures that can provide meaningful information to the users of the financial statements regarding the overall impact of the fund's Level 3 investments during the year. The inclusion of such disclosures may be necessary to prevent the financial statements from being materially misleading.

39. Fund assets carried at fair value should be classified and disclosed in one of three levels (1, 2 or 3) in the fair value hierarchy table. What would be the correct fair value classification for digital assets with a liquid market?

The differences in Level 1 versus Level 2 is that in Level 1 there's an active market for an exact asset. In Level 2 there's an active market with data obtained from external, independent sources. Data could include quoted prices for similar assets and liabilities in active markets, prices for identical or similar assets and liabilities in inactive markets, or models which have observable inputs. Digital assets typically trade on a number of exchanges and OTC desks where, although there is an active market, there are also observable spreads in pricing based on the individual and specific valuation inputs at each counterparty, therefore making digital assets a level 2 classification.

Level 3 Considerations

Investments in Private Operating Companies

40. For an investment in a private operating company, how does a recent round of financing factor into the fair value inputs in arriving at fair value, as well as the level designation within the fair value hierarchy?

When determining fair value for its investment in a private operating company, a fund should consider (1) the timing and pricing of a recent round of financing, and (2) whether any material events occurred subsequent to the transaction that would impact the fair value measurement on the measurement date. Since capital structures of a private operating company can be complex, a full analysis of the contractual terms of a recent round of financing must be part of the fair value measurement process. Generally, private equity investments will be classified as Level 3.

ASC 820 encourages multiple valuation techniques when dealing with Level 3 investments. When using multiple valuation techniques, a fund's management may place greater weight on the price from the most recent round of financing over valuation techniques such as discounted cash flow projections, or a technique based on a multiple of revenues or EBITDA derived from market comparables, if such information is deemed to be the most relevant indicator of fair value. This can be particularly relevant for development stage entities which do not yet have an established history of operating performance.

41. Can a fund measure the fair value of an investment in a private operating company based on the initial cost as a proxy of fair value?

While the initial transaction cost of an investment is typically not fair value, to the extent the initial transaction cost of the investment approximates the price that a market participant would be willing to pay to acquire a substitute investment on the measurement date, such cost may be considered as a factor in the valuation of the investment. In making an assessment, management should consider whether any significant change has occurred between the initial transaction date and the measurement date that might have affected the value of the investment from the perspective of a market participant looking to acquire the investment on the measurement date. Generally, after some period of time, the initial transaction cost becomes less reliable as a suitable reference value in the fair value measurement of an investment.

If a return-on-investment analysis was prepared at inception, management should re-evaluate cash flow projections to determine whether the actual results for the period from inception through the measurement date reflect the initial estimates and to identify any significant changes that would require a valuation adjustment to the initial cost. Also, management should consider applying multiple valuation techniques, including a market and income approach, to determine whether the values estimated under different approaches corroborate the reference to initial cost as a suitable factor to consider in the measurement of fair value or whether other techniques provide more appropriate evidence of fair value from the perspective of a market participant on the measurement date.

42. Under ASC 820, can a fund value its investment in a private operating company based on a recent sale price in a related party transaction?

The price in a related party transaction may be used as an input in fair value measurement if there is evidence that the transaction was entered into at market terms ("arm's-length"), however management should ensure that fair value is based on the assumptions that market participants would use in pricing the asset or liability when acting in their economic best interest. When possible, management should corroborate the inputs from related party transactions with market data from transactions from independent parties.

43. For a private loan receivable, does ASC 820 require an adjustment to the "fair value" based on movements of interest rates for similar loans in the marketplace (even though the underlying credit of the borrower has not deteriorated)?

Yes. If the private loan receivable is a fixed rate or floating rate loan and interest rates for similar loans have moved, a market participant would factor that movement into the fair value of the private loan. This poses challenges to funds that originate loans when their existing valuation policy is to generally carry loans at par unless there is a default or impairment (which would require a write down). ASC 820 requires that these funds look to the market to see what the current yields are for similar loans and adjust the carrying value of the loans to reflect market participant assumptions. Funds should also consider collateral values as part of the assumptions of expected recoveries for loans that are nonperforming.

44. A fund holds an investment in the common stock of a private operating company which recently closed a round of financing on its preferred stock. The fund values its common stock investment at fair value using a backsolve method that estimates the implied equity value of the investee entity based on the latest round of preferred financing. The fund then allocates the estimated equity value to each share class using an option pricing model that treats the common and preferred stock as a series of call options on the enterprise value. What should the fund consider to comply with the disclosure requirements of ASC 820 relating to inputs and valuation techniques for its common stock investment?

Under ASC 820, the fund's investment would qualify as a Level 3 investment in the fair value hierarchy. The fund would be required to disclose a description of the valuation technique and the significant inputs used in the valuation, which may include a description of the backsolve method (a market approach), the option pricing model (an income approach), and the related inputs. The fund would also be required to disclose quantitative information about the significant unobservable inputs used in the valuation. For instance, the fund may include a table that lists the significant inputs and values (or range of values) used in the option pricing model, such as the risk free rate, the estimated stock volatility and the estimated liquidation dates of each class of shares. The fund would not be required to disclose quantitative information on transaction-based inputs, such as the price of the preferred stock from the latest round of financing used in the backsolve method, since these inputs have not been developed by management.

45. A private equity fund has concluded that it is appropriate to record a contingent consideration from the sale of an investment in a private operating company at fair value. What is the appropriate level designation for the contingent consideration measured at fair value, and which inputs would typically be most significant in its valuation?

The valuation of a contingent consideration ("earn-out receivable") typically relies on unobservable inputs estimated by management, which would result in a Level 3 classification and in requiring the fund to provide additional quantitative disclosures of the significant unobservable inputs used in the fair value measurement. Certain earn-out receivables may be valued by applying a discount rate adjustment to contractual cash flows that are fixed in amount, pending the achievement of certain performance targets. In such case, the quantitative table of Level 3 inputs would typically include a disclosure of the discount rate (or range of rates) used in the valuation. The contract value of the cash flows would not need to be disclosed in the quantitative table of Level 3 inputs, as it would not qualify as an input developed by management. In other cases, an earn-out receivable may be valued using an expected present value technique, for instance when the amount of the expected cash flows is expressed as a multiple of performance measures such as EBITDA or gross revenues. In such case, in addition to the discount rate, the quantitative table of Level 3 inputs would typically include a disclosure of the EBITDA or revenue multiple (or range of multiples) used in the cash flow estimates. Ultimately, the disclosure of significant Level 3 inputs needs to be customized to reflect the specific characteristics of the valuation technique and inputs used in the valuation.

46. Is a fund required to include a disclosure of quantitative inputs for investments in private equity which are valued solely using the services of a third-party valuation expert?

The fund's management is responsible for the valuation of the fund's investments, which includes overseeing the work of valuation specialists used to assist in the valuation, and challenging the assumptions and inputs used. In addition, the fund is responsible for providing information regarding the investment to the valuation expert in order for the expert to have a sufficient understanding of the appropriate inputs and valuation approach to be used.

Essentially, the purpose of the quantitative input disclosure is to provide the financial statement users with meaningful information which can be compared against the users' assumptions on valuation, as well as to provide comparability of the assumptions over successive periods. The decision to outsource the valuation function does not preclude the requirement to include meaningful disclosure of quantitative inputs within the financial statements.

47. A fund deems the latest round of financing to be representative of fair value for one of its private equity investments. The fund also performs a model-based valuation as an additional step to corroborate the reasonableness of the latest round of financing; however, it relied solely on the round of financing without adjustment for the valuation of its investment on the measurement date. Does the fund need to provide disclosure of the quantitative inputs used for the reasonableness test?

The disclosure of quantitative inputs should reflect the valuations based on internally developed inputs at the measurement date. While the fund considered the results of the model in evaluating the reasonableness of the valuation, ultimately, the valuation was fully weighted based on the price from the latest round of financing, which was not an input that was internally developed by the fund. The fund is not required to present disclosure of inputs used in the model as the result was not weighted into the final valuation.

Level 3 Considerations

Investments in Private Investment Companies

48. A fund invests in a private investment company which reports under IFRS. Can the fund measure its investment at fair value using the investee entity's reported net asset value as a practical expedient?

Under ASC 820, the practical expedient can still be applied to measure the fair value of investments that report under IFRS or other bases of accounting that differ from the provisions of ASC 946 Investment Companies under U.S. GAAP. The fund, however, is required to consider whether an adjustment to the net asset value of the investee entity is necessary. The objective of the adjustment is to estimate a net asset value for the investment that is calculated in a manner consistent with the measurement principles of ASC 946 as of the fund's measurement date. The adjustment would be considered a Level 3 input. If the adjustment has a significant impact on the valuation, it would result in the investment being classified as a Level 3 in the fair value hierarchy. In addition, the fund should include a quantitative disclosure of the adjustment value/percentage (or range of values/percentages for multiple investments) in the footnotes to its financial statements.

49. How does the probable sale of an investment in a private investment company for an amount other than NAV affect the fair value measurement of the investment and the use of NAV as a practical expedient?

Under ASC 820 a fund is not permitted to use NAV as a practical expedient when it is probable that the fund will sell an investment at an amount other than NAV. A sale is considered probable only if all of the following criteria have been met as of the reporting fund's measurement date:

- Management, having the authority to approve the action, commits to a plan to sell the investment.
- An active program to locate a buyer and other actions required to complete the plan to sell the investment have been initiated.
- The investment is available for immediate sale subject only to terms that are usual and customary for sales of such investments (for example, a requirement to obtain approval of the sale from the investee or a buyer's due diligence procedures).
- Actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

If it is probable at the measurement date that a fund will sell an investment, or a portion of an investment, at an amount different from NAV, the portion that the fund intends to sell should be valued according to other provisions of ASC 820. Other provisions of ASC 820 can include a market or income based valuation approach. The remaining portion of the investment that is not likely to be sold may be valued by using NAV as a practical expedient. However, if a fund enters into a plan to sell a group of investments, but the individual investments to be sold have not yet been identified, the individual investments will continue to qualify for the practical expedient.

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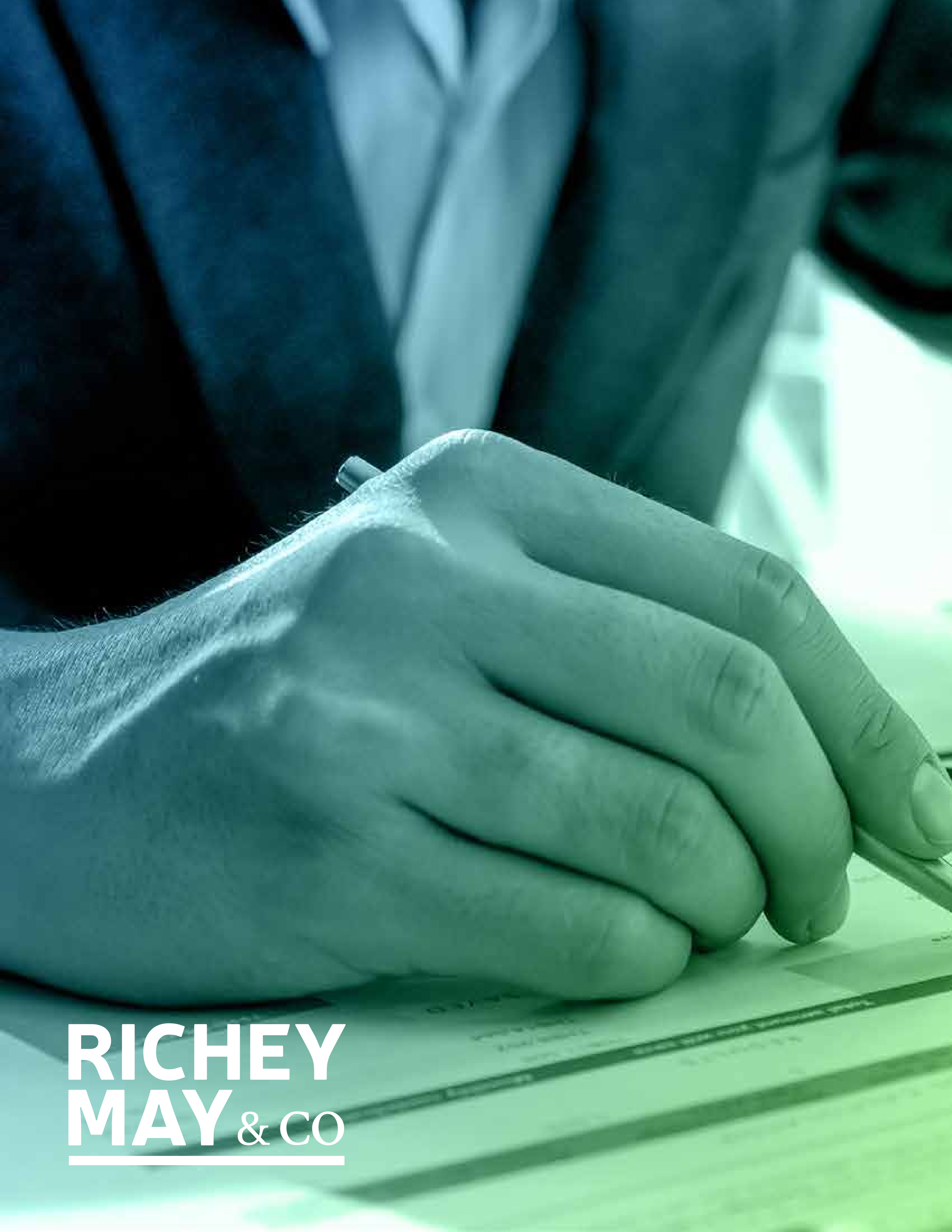
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