

# J.P. Morgan’s Response to FASB ASC Topic 820, Fair Value Measurements and Disclosures —for Fund Accounting Clients

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*This memorandum describes J.P. Morgan’s response and methodology regarding FASB ASC Topic 820, Fair Value Measurements and Disclosures*

J.P. Morgan developed its methodology through a committee of internal subject matter experts from our accounting product management, accounting operations, pricing and financial reporting teams. Other internal groups, including risk management, legal, and J.P. Morgan's governing corporate accounting policy group also supported this effort.

Beyond internal expertise, the committee also sought guidance from external partners including pricing vendors, audit firms and other industry groups.

The group's efforts resulted in:

- Accounting system enhancements to assign and track Level data
- A policy analysis and a 'default' for Fair Value Hierarchy 'Leveling'
- Process and procedures to ensure compliance with the valuation hierarchy
- Procedure documentation to support audit requirements
- An identification of the data requirements for disclosure reporting
- Development of client reporting to support disclosure requirements
- Creation of a feedback loop to clients regarding updates (if necessary) to our Fair Value Measurement solution based on changes initiated by FASB and/or from feedback from our clients, industry practitioners and audit firms

J.P. Morgan's approach to FASB Topic 820 supports our clients in meeting their requirements under the regulation. J.P. Morgan has created a Fair Value Hierarchy to assign Level classification to securities. Enhanced system and reporting functionality gives J.P. Morgan the capability to assign the Levels of the Fair Value Hierarchy to securities in clients' portfolios and to provide reporting to support the required disclosures. This program provides clients with the necessary transparency into the values applied to portfolio holdings. Our service offering also provides identification and tracking of data required for financial disclosure of fair value hierarchy ('Assets measured at fair value on a recurring basis) and additional disclosure for Level 3 securities ('Changes in Level 3 recurring fair value measurements').

## I. INTRODUCTION: THE STATEMENT

*Accounting standards discussed in this document include references to the original FASB statements as well as the corresponding Accounting Standards Codification (ASC). FASB ASC disassembled and reassembled original accounting pronouncements (including those of FASB, the EITF, and the AICPA) to organize them under approximately 90 topics. Effective on July 1, 2009, FASB ASC now uses a topical structure in which guidance is organized into areas, topics, subtopics and subsections (e.g. 815-10-50-1).*

In September 2006, the FASB issued Statement No. 157, *Fair Value Measurements* (FAS 157), which provides a single definition and framework for fair value measurements to ensure consistency of application.

FAS 157 / Topic 820:

- Defines fair value
- Establishes a framework for measuring fair value in accordance with generally accepted accounting principles
- Establishes a three-level hierarchy for fair value measurements based upon transparency of inputs to the valuation of an asset or liability as of the measurement date
- Expands disclosures about fair value measurements

In previous pronouncements, FASB had concluded that fair valuation information is relevant to users of financial statements and had required (or permitted) fair value as a measurement objective. *The Statement does not, however, require any new fair value measurements in GAAP.*

The Statement applies broadly to securities and other types of assets and liabilities. This pronouncement is applicable to all reporting entities that issue financial statements under U.S. GAAP. FASB Statement No. 157, *Fair Value Measurements* (FAS 157) / Topic 820, affects the measurement and disclosure of pension and other postretirement benefits (OPEB) plan assets in the separate financial statements of the plan and only the measurement of the pension assets in the employer's financial statements. FASB Staff Position No. 132(R)-1, *Employer's Disclosures About Postretirement Benefit Plan Assets*, required the additional FAS 157-like disclosures of the pension plan assets to be made in the employer's financial statements. FAS 157 / Topic 820 became effective December 31, 2008 for calendar year-end measurement of plan assets and for disclosures in plan financial statements. FSP 132(R)-1 is effective for fiscal years ending after December 15, 2009.

## II. DEFINITION OF TERMS

### **Fair value**

Fair value is 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.

Represents an exit price. The transaction price, or entry price, may in certain cases represent the exit price but the entry price should not be presumed to represent the fair value of an asset or liability at initial recognition.

### **Inputs**

**Observable**—Observable inputs are inputs that reflect the assumptions that market participants use in pricing the asset or liability developed based on market data obtained from sources independent of the Firm. Characteristics of observable inputs include readily available, not proprietary, regularly distributed, and transparent.

**Unobservable**—Unobservable inputs are inputs that reflect the Firm’s own assumptions about the assumptions that market participants would use in pricing the asset or liability developed based on the best information available in the circumstances.

### **Active Market**

An active market is defined as one in which an accurate daily price can be obtained from multiple reliable sources and a fair value measurement (exit price) may be arrived at without adjustment or the use of a model.

## III. FAIR VALUE HIERARCHY

The Statement establishes a fair value hierarchy which prioritizes inputs to valuation techniques used to measure fair value. When the inputs to the valuation fall within different Levels of the hierarchy, the Level in which the instrument is classified is based on the lowest Level significant input to the valuation. The term “inputs” refers broadly to the assumptions that market participants would use in pricing an asset. Inputs may be based on independent market data (“observable inputs”) or they may be internally developed (“unobservable inputs”). Where an instrument is classified within the fair value hierarchy also impacts the entity’s ability to record valuation adjustments, for example, no valuation adjustments may be recorded for instruments classified within Level 1 of the hierarchy.

Detailed below is a description of the hierarchy Levels, policies associated with the ‘default’ determination of classification, and examples of products included within each of the Levels:

- **Level 1** - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

- No adjustments may be made to the quoted price for instruments classified within Level 1 (for instance, block discounts [size of position discounts] are prohibited).
- Where a quoted price in an active market is available for the identical asset but is not readily accessible for the individual instrument, the reporting entity may use an alternative pricing method (for example, matrix pricing). Where an alternative pricing method is utilized as a practical expedient the instruments must be classified in a lower Level of the hierarchy.

Examples of Level 1 instruments:

Exchange-traded equities and exchange-traded derivatives.

- **Level 2** - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
  - Quoted prices for similar assets or liabilities in active markets.
  - Quoted prices for identical or similar assets or liabilities in markets that are not active, that is, markets in which there are few transactions for the asset or liability, the prices are not current, or price quotations vary substantially either over time or among market makers (for example, some brokered markets), or in which little information is released publicly (for example, a principal-to-principal market).
  - Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument (for instance, interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayments speeds, loss severities, credit risks, and default rates).
  - Inputs that are derived principally from or corroborated by observable market data by correlation or other means (market-corroborated inputs).

There is generally evidence of two-way flow (purchases and sales in the market) for instruments that are classified within Level 2.

Examples of Level 2 instruments:

Privately placed bonds whose value is derived from a similar bond that is publicly traded, certain equities such as ADR/GDR whose price is evaluated, over-the-counter interest rate swaps valued based on a model whose inputs are observable, LIBOR forward interest rate curves, resale and repurchase agreements, warehouse loans, government bonds, corporate bonds, collateralized mortgage and debt obligations, high-yield debt securities, as well as certain structured liabilities where the inputs to the valuation are primarily based upon readily observable pricing information.

- **Level 3** - inputs to the valuation methodology are unobservable and significant to the fair value measurement. Fair value for Level 3 instruments is often based on internally developed models in which there are few, if any, external observations. For transactions

in this category, there is rarely a two-way market, and typically there is considerable structuring.

Examples of Level 3 instruments:

Long-dated commodity swaps where the relevant forward price curve is not directly observable or correlated with observable market data, shares of a privately held company, limited partnerships, structured notes with significant unobservable inputs, mortgage servicing rights, retained interests in securitizations.

## **A. J.P. Morgan's Policy Statement for 'Default' Fair Value Hierarchy 'Leveling'**

As a general statement, J.P. Morgan's rationale for the assignment of Levels began with the decision to analyze types or classes of securities rather than an analysis of each individual security. Key consideration in the assignment of Levels was given to the determination of whether a security's fair valuation measurement was obtained from an active market and then a further consideration for the types of inputs used to evaluate the fair value price. This approach was supported by our analysis of the methodology, the evaluated pricing models, and inputs used by our pricing vendor. It is also consistent with industry practice.

The following is a description of the valuation methodologies used for certain instruments (Securities, Derivatives and Private Equity) measured at fair value, including the rationale for J.P. Morgan's general or default classification of such instruments pursuant to the Fair Value Hierarchy. Additionally, J.P. Morgan has prepared a hierarchy detailing approximately 50 distinct asset classes with a description of the Fair Value Methodology applied by J.P. Morgan and the 'default' Fair Value Hierarchy assigned to each asset class.

### **Securities**

Where quoted prices are available in an active market, securities are classified in Level 1 of the Fair Value Hierarchy. Level 1 securities include quoted prices in active markets for exchange-traded equities. J.P. Morgan defines an "active market" in the same manner as the FASB Statement 157 / Topic 820. It is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.

If quoted market prices are not available for the specific security, then fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flows. Examples of such instruments are collateralized mortgage obligations and high-yield debt securities which would generally be classified within Level 2 of the Fair Value Hierarchy. As a default, J.P. Morgan assigns Level 1 inputs for quoted prices in active markets for equity securities only. Although reported broker trades for certain fixed income securities may be considered indicative of an active market, J.P. Morgan has not adopted this approach as a default at the asset class Level. For the determination of our 'default' classifications, J.P. Morgan has reserved the definition of 'quoted prices in active markets' to

strictly be applied to exchange trade equity and derivative securities. Fixed income prices provided by a vendor or broker/dealer are classified as a Level 2. This decision is based on our analysis which found that most fixed income securities are priced using an evaluated price provided by an independent pricing vendor or broker/dealer. If trade information is used along with observable inputs, the guidance in the Statement provides for classification based on the lowest Level of input. For example, consider a bond that is distributed solely by one broker, who provides an indicative bid daily. The bond has trades that are observable at Levels consistent with the broker quote. Is this an active market if there is only one broker? J.P. Morgan does not have access to reliable and consistent data across reporting periods to be able to accurately make this determination. J.P. Morgan, however, is prepared to override the default methodology if more accurate information becomes available.

Consistent with the rationale described above for fixed income assets in general, J.P. Morgan has also assigned a Level 2 to U.S. Treasuries. We are aware that arguments have been made to support the classification of Treasuries as a Level 1 asset and indeed some reporting entities do report Treasuries as Level 1. While we are aware that there is some diversity among reporting entities, we remain consistent in our categorization of Treasuries with other fixed income assets for the same reasons cited above. Chiefly among these reasons is our ability as fund administrator to accurately assess at a security level whether a quoted trade on a bond represents an active market. As fund administrator, our capability to distinguish actively traded Treasuries is limited by the amount of information provided by 3<sup>rd</sup> party pricing vendors. For instance, it is generally agreed that “on the run” Treasury bonds/notes are the most frequently traded Treasury securities of their maturity and may be liquid enough to be considered Level 1. The counterpart to these issues are the “off the run” Treasuries. However, pricing vendors do not provide trading volume details such as these to allow further consideration of the Level categorization. J.P. Morgan is prepared to override its ‘default’ Level 2 methodology based on client instruction.

In certain cases where there is limited activity or less transparency around inputs to the valuation, certain fixed income securities may be classified within Level 3 of the Fair Value Hierarchy. For instance, in the valuation of certain collateralized mortgage and debt obligations and high-yield debt securities the determination of fair value may require benchmarking to similar instruments or analyzing default and recovery rates. For cash collateralized debt obligations (CDOs), external price information is not available. Therefore, cash CDOs are valued using market-standard models, to model the specific collateral composition and cash flow structure of each deal; key inputs to the model are market spreads data for each credit rating, collateral type and other relevant contractual features. Asset-backed securities are valued based on external prices or spread data, using current market assumptions on prepayments and defaults. For those asset-backed securities where the external price data is not observable or the limited available data is opaque, the collateral performance is monitored and the value of the security is reviewed versus an index of mortgage-backed securities backed by subprime mortgages. For securities such as these, J.P. Morgan is prepared to override its ‘default’ Level 2 methodology based on client instruction.



## Derivatives

Exchange-traded derivatives valued using quoted prices are classified within Level 1 of the Fair Value Hierarchy.

Depending on the types and contractual terms of OTC derivatives, vendors and broker/dealers provide fair valuation measurements that are modeled using a series of techniques, such as the Black-Scholes option pricing model, simulation models or a combination of various models, which are consistently applied. Where derivative products have been established for some time, fair valuation measurement is based on models that are widely accepted in the financial services industry. These models reflect the contractual terms of the derivatives, including the period to maturity, and market-based parameters such as interest rates, volatility, and the credit quality of the counterparty. Further, many of these models do not contain a high level of subjectivity as the methodologies used in the models do not require significant judgment, and inputs to the model are readily observable from actively quoted markets, as is the case for “plain vanilla” interest rate swaps and option contracts and credit default swaps. Such instruments are generally classified within Level 2 of the Fair Value Hierarchy.

Derivatives that are valued based upon models with significant unobservable market parameters and that are normally traded less actively, have trade activity that is one way, and/or are traded in less-developed markets may be classified within Level 3 of the Fair Value Hierarchy. Level 3 derivatives may include credit default swaps referenced to mortgage-backed securities, where valuations are benchmarked to implied spreads from similar underlying loans in the cash market, as well as relevant observable market indices. For derivatives such as these, J.P. Morgan is prepared to override its ‘default’ Level 2 methodology based on client instruction.

## Private Equity Investments

The valuation of nonpublic private equity investments requires significant management judgment due to the absence of quoted market prices, inherent lack of liquidity and the long-term nature of such assets. As such, private equity investments are often valued initially based upon cost. Each quarter, valuations are reviewed utilizing available market data to determine if the carrying value of these investments should be adjusted. Such market data primarily includes observations of the trading multiples of public companies considered comparable to the private companies being valued. Valuations are adjusted to account for company-specific issues, the lack of liquidity inherent in a nonpublic investment and the fact that comparable public companies are not identical to the companies being valued. Such valuation adjustments are necessary because in the absence of a committed buyer and completion of due diligence similar to that performed in an actual negotiated sale process, there may be company-specific issues that are not fully known that may affect value. In addition, a variety of additional factors are reviewed by management, including, but not limited to, financing and sales transactions with third parties, current operating performance and future expectations of the particular investment, changes in market outlook and the third-



party financing environment. J.P. Morgan believes that nonpublic private equity investments should be included in Level 3 of the Fair Value Hierarchy.

Private equity investments also include publicly held equity investments, generally obtained through the initial public offering of privately held equity investments. Publicly held investments in liquid markets are marked-to-market at the quoted public value less adjustments for regulatory or contractual sales restrictions. Discounts for restrictions are quantified by analyzing the length of the restriction period and the volatility of the equity security. Publicly held investments are primarily classified in Level 2 of the Fair Value Hierarchy.

## **Fund Investments**

The net asset value (NAV) of an open-ended fund, whether a registered investment company fund, such as a mutual fund, or certain alternative investment funds, such as a hedge fund, serves as the basis for subscription and redemption transactions for investors in such funds. For investments in funds for which the underlying assets and liabilities are required to be measured at fair value, and where NAV is available, the NAV is generally the most appropriate starting point when determining the fair value measurement for an interest in such fund.

However, when valuing such an investment, the holder must estimate the fair value of the interest held, which at times may be different from a value based solely on the NAV of the fund. The holder should also consider various factors including, but not limited to, the attributes of the interest held, including any restrictions or illiquidity on the disposition of the interest, and the holders' requirements to understand and accept the valuations provided by the fund (or modify them if appropriate), to determine the fair value of the interest itself. Depending on the facts and circumstances, the NAV may need to be adjusted depending upon the rights and obligations of the ownership interest and/or other factors. Furthermore, any adjustments to NAV based on unobservable inputs may result in the fair value measurement being categorized as a Level 3 measurement, if those inputs are significant to the overall fair value measurement.

### **i. Open-Ended Mutual Funds (non-money market funds)**

An open-ended mutual fund, a registered investment company, produces a daily NAV that is validated with a sufficient level of observable activity (i.e., purchases and sales at NAV) to support classification of the fair value measurement as Level 1 in the fair value hierarchy. In this case, the NAV represents the exit value of the security at the measurement date.

### **ii. Open-Ended Money Market Mutual Funds**

An open-ended Money Market Mutual Fund generally transacts subscription and redemption activity at a \$1.00 Stable NAV. However, on a daily basis the funds NAV is calculated using the amortized cost (not market value) of the securities held in the fund. It is generally accepted as industry best practice that securities valued at amortized cost are Level 2 assets; amortized cost does not meet the criteria for an 'active market'. This factor was the primary

determinant used by JPM WSS to assign a default fair value hierarchy of Level 2 to Money Market Mutual Funds.

An additional factor used in determining the JPM WSS default Level is that the NAV of the Money Market fund can drop below \$1.00 ('break the buck'). SEC guidelines (as prescribed by Rule 2a-7) are designed to try to maintain the \$1.00 NAV, however, the guidelines are not a guaranty that the NAV will not fall below \$1.00.

### **iii. Commingled Funds and Common Trust Funds**

The primary rationale to support the classification of Mutual Funds as Level 1 in the fair value hierarchy are: (1) the investments in the funds are required to be measured at fair value (SEC regulated), (2) the NAV is unadjusted and is in all cases the transaction price for purchases and sales (the NAV represents the exit value of the security at the measurement date), (3) there are no restrictions on redemptions and (4) the NAV is made publically available daily.

Commingled Funds and Common Trust Funds do not all meet these criteria. JPM WSS, as fund administrator, does not have the transparency into valuation methodology and valuation frequency of each of these pooled investment vehicles to make an accurate appraisal of whether the NAV does represent the exit value of the fund at each measurement date. For this reason, JPM WSS set these investments as Level 2 in our 'default' fair value hierarchy. J.P. Morgan is prepared to override its 'default' Level 2 methodology based on client instruction.

### **Alternative Investment Funds**

Alternative investment funds are typically not traded on an exchange and the funds do not stand ready to redeem shares on a daily basis. Instead, depending on the nature and structure of the fund, there may be restrictions on liquidity and transferability that would impact the determination of fair value. Because of the restrictions associated with interests in alternative investment funds, there is generally no secondary market for trading interests in such funds. Instead, the fund's NAV serves as the basis for the investor's periodic (e.g., monthly or quarterly) subscription and redemption activity pursuant to the terms of the fund's governing documents. In effect, the NAV serves as both the entry price (for subscriptions) and, depending on the facts and circumstances, the exit price (for redemptions). To the extent that there is an adequate level of observable activity (i.e., subscriptions and redemptions at NAV) to support a determination that the NAV represents an exit value of the security at the measurement date, such activity may support classification of the fair value measurement as Level 2 or Level 3 in the fair value hierarchy.

### **Private Equity Funds**

Closed-end funds, such as most private equity and private real estate funds, do not have a liquidity feature to provide redemptions to investors. Accordingly, investors are "locked-in"

and must wait until the fund can sell its investments in order to convert the investments into cash, which can then be distributed under the terms of the fund's governing documents.

In some situations, a transaction for an interest in a private equity fund may occur in the "secondary market," whereby an investor purchases a limited partner's existing interest and remaining commitment in a private equity fund. This often results from the seller's need for liquidity, inability to fund future commitments, or desire to reduce its exposure to private equity. The seller may sell its investment to the buyer at a discount or, for various reasons, at a premium to the fund's NAV.

Consequently, depending on the facts and circumstances, the sale or transfer price between the parties may or may not be indicative of fair value. Public closed-end funds, such as real estate investment trusts and closed-end mutual funds, generally have active secondary markets for their listed shares, which should serve as the basis for their valuation, as opposed to using the fund's NAV.

## B. Detailed Pricing Methodology and Fair Value Hierarchy

Security Type	Primary Source	Methodology	Secondary Source	Methodology	Other Sources	Methodology	If no source is available	Frequency	Fair Value Measurement Level
<b>US Fixed Income</b>									
US Investment Grade Corporate Bonds	IDC	Evaluated Bid <sup>1</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>1</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
US Taxable High Yield Corporate Bonds	IDC	Evaluated Bid <sup>1</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>1</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
Convertible Securities	IDC	Evaluated Bid <sup>1</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>1</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
Medium Term Notes	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>1</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
US Agencies	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>1</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
Private Placements	IDC	Evaluated Bid	Investment Manager/Client <sup>2</sup>	Bid/Mid Price	N/A	N/A	Cost Price or last available price from any source	Daily	2
US Stripped Coupon and Principal Issues	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
US Investment Grade Auction Rate Preferred	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
Bank Loans	Markit <sup>3</sup>	Evaluated Mid	N/A (Single sourced)	N/A (Single sourced)	N/A (Single sourced)	N/A (Single sourced)	Cost Price or last available price from any source	Daily	2
US Investment Grade Floating Rate & Variable Rate Demand Notes	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
US Treasury Bonds, Notes, Bills & TIPS	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
<b>Mortgage/Asset Backed Bonds</b>									
Asset Backed Pass-Through	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
Adjustable Rate Mortgage Securities (ARMS)	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
CMBS	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
CMO	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
FHLMC	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
FNMA	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
GNMA	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
TBAs	IDC	Evaluated Bid	BB Contributor <sup>4</sup>	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
<b>Municipal Bonds</b>									
U.S. Investment Grade Munis	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	S&P, Broker, Investment Manager, Client <sup>5</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
U.S. High Yield Munis	IDC	Evaluated Bid	BB Contributor	Bid/Mid Price	S&P, Broker, Investment Manager, Client <sup>5</sup>	Bid Price	Cost Price or last available price from any source	Daily	2

Security Type	Primary Source	Methodology	Secondary Source	Methodology	Other Sources	Methodology	If no source is available	Frequency	Fair Value Measurement Level
<b>International Fixed Income</b>									
Emerging Market Debt/Eurobonds	IDC	Evaluated Bid <sup>7</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>6</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
International Sovereign & Corporate Bonds	IDC	Evaluated Bid <sup>7</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
International Convertible Securities	IDC	Evaluated Bid <sup>7</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	2
Japanese Government Bonds	IDC <sup>7</sup>	Evaluated Bid <sup>7</sup>	BB Contributor	Bid/Mid Price	Reuters, Broker, Investment Manager/Client <sup>6</sup>	Bid Price	Cost Price or last available price from any source	Daily	2
<b>Funds</b>									
Mutual Funds	IDC	NAV	Bloomberg	NAV	Reuters, Broker, Investment Manager/Client	NAV	Cost Price or last available price from any source	Daily	1 = Publicly Traded 2 = Not Publicly Traded
Offshore Funds	IDC	NAV	Bloomberg	NAV	Reuters, Broker, Investment Manager/Client	NAV	Cost Price or last available price from any source	Daily	1 = Publicly Traded 2 = Not Publicly Traded
<b>Derivatives</b>									
Futures Contracts (on bonds)	Bloomberg	Exchange Settlement Price	Thomson Reuters <sup>10</sup>	Exchange Settlement Price	Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	1
Index Futures	Bloomberg	Exchange Settlement Price	Thomson Reuters <sup>10</sup>	Exchange Settlement Price	Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	1
Options	Bloomberg	Exchange Settlement Price or manufactured <sup>9</sup>	Thomson Reuters <sup>10</sup>	Exchange Settlement Price or manufactured	Broker, Investment Manager/Client	Bid Price	Cost Price or last available price from any source	Daily	1 = Exchange Traded 2 = OTC
Currency Forwards	WM Reuters	4pm London Close Mid Rates	N/A	N/A	N/A	N/A			2
Rights	Thomson-Reuters <sup>12</sup>	Exchange Close/Bid if none available, manufactured on terms	Bloomberg	Exchange Close/Bid if none available, manufactured on terms	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1 = Exchange Traded 2 = Evaluated Price or Calculated
Warrants	Thomson-Reuters <sup>12</sup>	Exchange Close/Bid if none available, manufactured on terms	Bloomberg	Exchange Close/Bid if none available, manufactured on terms	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1 = Exchange Traded 2 = Evaluated Price or Calculated
OTC Derivatives	Investment Manager	Broker Level	N/A	N/A	N/A	N/A	Cost Price or last available price from any source	Daily or Monthly	2
OTC Derivatives	Markit <sup>11</sup>	Contributed <sup>11</sup>	Investment Manager <sup>11</sup>	Broker Level <sup>11</sup>	N/A	N/A	Cost Price or last available price from any source	Daily or Monthly	2
<b>Stocks</b>									
US Domestic	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1
Non-US - Foreign	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1
German Equities	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1
South American	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1
ADRs & GDRs	Thomson-Reuters <sup>12</sup>	Listed ADRs/GDRS - Most Liquid Exchange / Primary / Eval on exchange close	IDC <sup>12</sup>	Listed ADRs/GDRS - Primary / Eval on exchange close	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1 = Listed 2 = Evaluated
Convertible	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1
Preferred	Thomson-Reuters <sup>12</sup>	Primary Exchange Close/Bid	Bloomberg	Primary Exchange Close/Bid	IDC, Broker, Investment Manager/Client <sup>13</sup>	Bid Price	Cost Price or last available price from any source	Daily	1 = Listed 2 = Evaluated

Security Type	Primary Source	Methodology	Secondary Source	Methodology	Other Sources	Methodology	If no source is available	Frequency	Fair Value Measurement Level
<b>Stock with restrictions to foreigners</b>									
Indonesia & Thailand	Thomson-Reuters <sup>12</sup>	Exchange close from most liquid exchange (Local/Foreign)	Bloomberg	Exchange close from most liquid exchange (Local/Foreign)			Cost Price or last available price from any source	Daily	1
<b>Limited Partnerships</b>									
Limited Partnerships, Other Alternative Investments	Administrator Price	Bid/Latest price					Cost Price or last available price from any source	Daily or Monthly	3
<b>Commingled Funds</b>									
Commingled Funds	Fund/Third Party Administrator	NAV	Administrator				Cost Price or last available price from any source	Daily or Monthly	2
<b>Short Term Instruments</b>									
Commercial Paper	IDC	Evaluated Bid	N/A	N/A	Amortized Cost			Daily	2
Bankers Acceptance	IDC	Evaluated Bid	N/A	N/A	Amortized Cost			Daily	2
US T-Bills	IDC	Evaluated Bid	BB Contributor	Mid/Bid Price	Amortized Cost			Daily	2
Short Term Discount Notes	IDC	Evaluated Bid	N/A	N/A	Amortized Cost			Daily	2

**In Q4 2011 and Q2 2012, J.P.Morgan implemented changes to our pricing hierarchy. The changes are designated with a footnote in the matrix with a brief description of the change noted below. None of these changes prompted a change to J.P. Morgan's 'default' fair value measurement Levels (1-3).**

**As of Q4 2011:**

<sup>1</sup>For US Investment Grade Corporate Bonds, US Taxable High Yield Corporate Bonds, Convertible Securities we are now only using an IDC evaluated bid and Prudential American Securities is no longer available as a third party source. Prudential is also not available as a third party source for Medium Term Notes and US Agencies.

<sup>2</sup>We are no longer using Bloomberg for Private Placements.

<sup>3</sup>Bank loans are now single sourced using Markit.

<sup>4</sup>SPS is no longer available for all Mortgage/Asset Backed Bonds

<sup>5</sup>S&P has been added as a third party source for Municipal Bonds

<sup>6</sup>Mogan Markets is no longer available for Emerging Market Debt/Eurobonds

<sup>7</sup>We are now using IDC - Evaluated Bid as the primary price source for all International Fixed Income

<sup>8</sup>Reuters has been added as a third party source for Japanese Government Bonds, and we have made IDC Evaluated Bid the primary price source

<sup>9</sup>OCC Methodology not available for Options

<sup>10</sup>Thomson Reuters is now the secondary price source for Futures Contracts, Index Futures, and Options

<sup>11</sup>OTC Derivative price sources have been changed to Markit as primary and Investment Managers as secondary

**As of Q2 2012:**

<sup>12</sup>Thomson Reuters is the primary source for Equities, Rights and Warrants.

<sup>13</sup>IDC is a third party source for Equities, Rights and Warrants.



## IV. FAIR VALUE HEIRARCHY LEVEL ASSIGNMENT

### A. Process Overview and Workflow Diagram

The methodology and rationale used by J.P. Morgan to prepare its response to FAS 157 / Topic 820 is detailed in the document titled "J.P. Morgan's Response to FASB Topic 820 - Fair Value Measurements and Disclosures". The process narrative below enumerates the entities responsible for and a description of the processes and procedures for assigning and maintaining Fair Value Hierarchy Levels in the WINS accounting system.

#### 1. Dallas Pricing Hub

##### Responsibilities

- Maintain Fair Value Hierarchy Level classifications in WINS (Fund Accounting System)
- Process client instructions for Level changes/overrides

##### Process Overview

The Central Pricing Team maintains a 'default' Fair Value Hierarchy which is used to systematically assign Fair Value Hierarchy Levels to all securities held in WINS. 'Default' Fair Value Hierarchy Levels may be overridden based on written client authorization or other market-driven events (e.g., defaults, delistings).

The Central Pricing Team performs the following functions:

- Assign 'Default' Fair Value Hierarchy Levels
  - Securities missing levels: Daily, identify any securities (e.g., new buys, security renumbering) that do not have a Fair Value Hierarchy Level assigned in WINS and perform updates based on the 'default' Fair Value Hierarchy. Daily processes are run mid-morning and mid-afternoon to ensure that any new buys processed into the accounting system are assigned a Fair Value Hierarchy Level.
  - Inbound price vendor file: Daily, the inbound price file from the pricing vendor, IDC, is processed in WINS and an analysis of indicative pricing information (e.g., 'close price', 'evaluated bid') is used to validate and update Fair Value Hierarchy Levels in WINS. This process utilizes data that is not available in the initial determination of the 'default' Levels.
  - Annual processes: At fiscal year-end, additional processes are run to ensure that any new purchases processed 'as of' the fiscal year-end close are assigned a Fair Value Hierarchy Level.
- Process and validate overrides
  - **Client-directed:** Periodically, process any client-directed Fair Value Hierarchy Level overrides based upon authorized instructions received in a centrally monitored mailbox: [dallas.fas157@jpmchase.com](mailto:dallas.fas157@jpmchase.com). Confirm completion of overrides back to clients and update the override database.

- **Market-driven:** Update Fair Value Hierarchy Levels for any market-driven events such as defaults, delisting, bankruptcies, etc., that warrant a change in Levels assigned based on the ‘default’ Fair Value Hierarchy and update the override database.
- Ongoing maintenance
  - Using the client reporting system reconcile client holdings against the ‘default’ Fair Value Hierarchy and any overrides (client-directed and market-driven). Research and resolve discrepancies.

## 2. Fund Accounting

### Responsibilities

- Coordinate the preparation and validation of Level 3 Rollforward Reporting with clients
- Review the Dallas Pricing Group’s decisions related to market-driven overrides of Fair Value Hierarchy Levels

## 3. J.P. Morgan Accounting Product Management

### Responsibilities

- Oversee J.P. Morgan’s ‘Default’ Fair Value Hierarchy
- Provide continuing oversight of the effectiveness of all internal FAS 157 / Topic 820 related operating procedures/process
- Collect and redistribute relevant feedback from external resources (e.g., FASB, clients, pricing vendors, auditors, industry committees, peers, etc.)
- Collect and redistribute feedback from internal resources (e.g., Corporate Accounting Policy)

## 4. J.P. Morgan clients

### Responsibilities

- Provide periodic review and authorization/approval of Fair Value Hierarchy Levels. In order to provide timely year end reporting to its clients, J.P. Morgan urges clients to perform a review and provide any changes to the Fair Value Hierarchy Levels for their plan assets **prior** to the fiscal-year end accounting close. Requests for changes to Levels after the accounting close will create delays in finalizing Fair Value Measurement reporting.
- Provide review and approval of asset classifications for alternative assets (limited partnerships, private equity, real estate holdings, etc.)
- Provide acknowledgement to J.P. Morgan of its methodology and ‘default’ Fair Value Hierarchy
- Periodically (no less frequent than semiannually) review and provide feedback to J.P. Morgan of client-specific holdings data

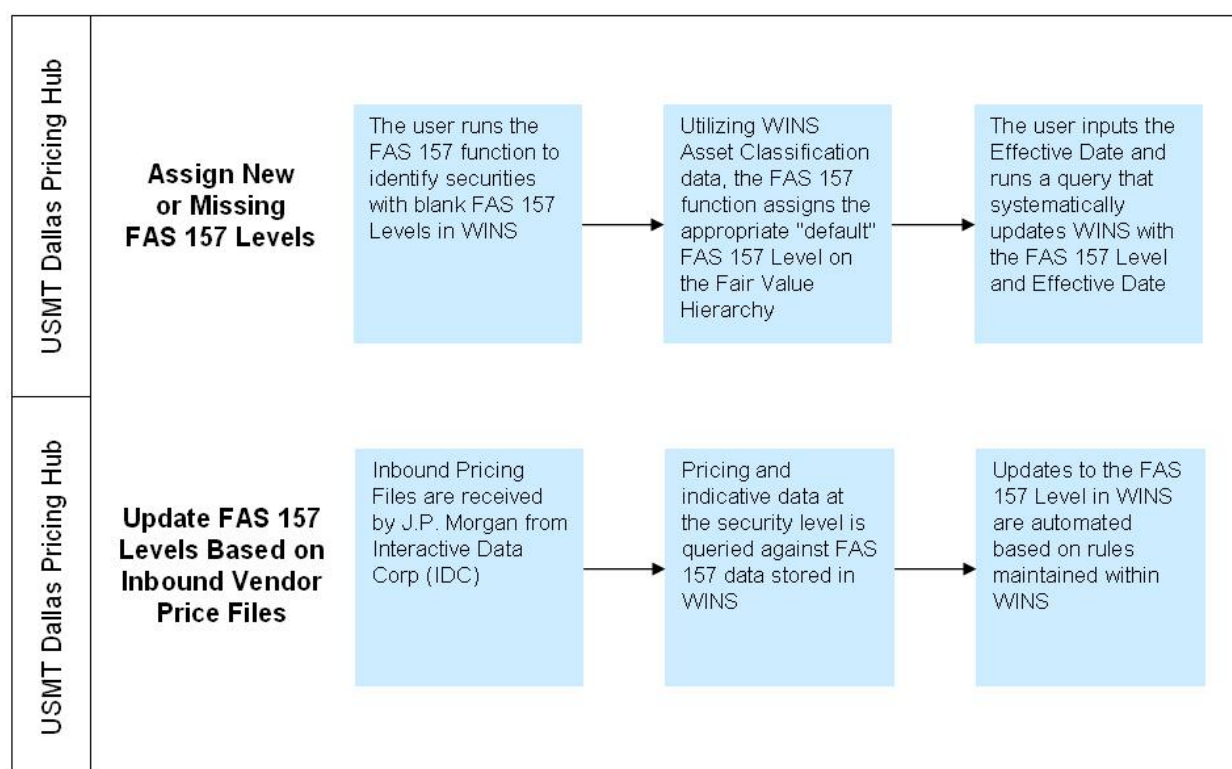
- Periodically (no less frequent than semiannually) provide J.P. Morgan with Fair Value Hierarchy Level challenges/overrides utilizing the **standard override template** and agreed-upon communication protocol – [Click on the link below to open the template.](#)

– [Standard Override Template](#)

- Periodically (no less frequent than semiannually) validate completeness and accuracy of all client overrides
- Provide necessary changes and/or approvals in a time frame that is consistent with and supports the desired financial reporting production schedule

**A. Fair Value Hierarchy Level Assignment Process – Workflow Diagram**

**Daily Process for Updates of FAS 157 Levels Within WINS**



## B. Client Override Process

To accommodate client specific requirements, clients will be able to override J.P. Morgan's 'default' Fair Value Hierarchy Levels by providing written instructions on a security level basis. All client requests for overrides to the 'default' Fair Value Hierarchy Levels must be sent in writing to the Dallas Pricing Hub via e-mail to a centralized mailbox: [dallas.fas157@jpmorgan.com](mailto:dallas.fas157@jpmorgan.com). Clients may send in requests periodically (based on reporting cycle) or on an ad hoc basis.

A standard Microsoft® Excel® template must be used to communicate any overrides to the 'default' assigned Levels. [Click the standard override template link below to open the template.](#)

- [Standard Override Template](#)

The following information is required for the override template:

- Account Number
- CUSIP / Identifier
- Requested Level
- Requested Effective Date
- Comment (reason for override)

## V. FINANCIAL REPORTING DISCLOSURE REQUIREMENTS

### A. Quantitative Disclosures:

- a) **820-10-50-1:** For assets that are measured at fair value on a recurring basis, the reporting entity must disclose in its footnotes a breakdown of the fair value measurements by Level for each major category of assets, 'Assets measured at fair value on a recurring basis'. The fair value hierarchy affects the issuer's disclosure obligations under the Statement, with increased use of lower-level inputs necessitating more detailed note disclosures.

FASB Staff Position, FAS 157-4, *Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly*, provided additional disclosure guidance. FSP 157-4 requires entities to define *major category* (a term that appeared in paragraphs 32 and 33 of FAS 157) for both debt and equity securities to be major security types as defined in paragraph 19 of FAS 115, *Accounting for Certain Investments in Debt and Equity Securities* (ASC 942-320-50-1 and 50-2), which states in part:

*Major security types shall be based on the nature and risks of the security. An enterprise should consider the (shared) activity or business sector, vintage, geographic*

*concentration, credit quality, or economic characteristic in determining whether disclosure for a particular security type is necessary and whether it is necessary to further separate a particular security type into greater detail. In complying with this requirement, financial institutions shall include in their disclosure the following major security types, though additional types also may be necessary:*

- a. Equity securities (segregated by industry type, company size, or investment objective)*
- b. Debt securities issued by the U.S. Treasury and other U.S. government corporations and agencies*
- c. Debt securities issued by states of the United States and political subdivisions of the states*
- d. Debt securities issued by foreign governments*
- e. Corporate debt securities*
- f. Residential mortgage-backed securities*
- g. Commercial mortgage-backed securities*
- h. Collateralized debt obligations*
- i. Other debt obligations.*

FASB Staff Position, FAS 132(R)-1 (ASC 715-20-50-1), *Employers' Disclosures about Postretirement Benefit Plan Assets*, provided similar guidance regarding disclosures about categories of plan assets. FAS 132(R)-1, states:

*An employer shall disclose separately for pension plans and other postretirement benefit plans the fair value of each major category of plan assets as of each annual reporting date for which a statement of financial position is presented. Asset categories shall be based on the nature and risks of assets in an employer's plan(s). Examples of major categories include, but are not limited to, the following: cash and cash equivalents; equity securities (segregated by industry type, company size, or investment objective); debt securities issued by national, state, and local governments; corporate debt securities; asset-backed securities; structured debt; derivatives on a gross basis (segregated by type of underlying risk in the contract, for example, interest rate contracts, foreign exchange contracts, equity contracts, commodity contracts, credit contracts, and other contracts); investment funds (segregated by type of fund); and real estate.*

Note that the suggested disclosure of derivatives provided by FASB utilizes the primary risk exposure categories that are required in FAS 161 (ASC Topic 815) disclosure.

- b) **820-10-50-2:** For Level 3 measurements, additional disclosure, 'Changes in Level 3 Recurring Fair Value Measurements' a reconciliation of the beginning and ending Market Value balances, is required. This reconciliation requires disclosure of realized and unrealized gains and losses, purchases, sales and settlements and net transfers in and/or out of Level 3.

Separately, an entity must disclose the change in unrealized gains or losses relating to those assets still held at the reporting period. Accounting Standards Update (ASU) No. 2010-06 (issued January 21, 2010) *Improving Disclosures About Fair Value Measurements* and ASU 2011-04 (issued May, 2011) *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*— amend Subtopic 820-10 and require three new disclosure requirements.

- i. ASC 820-10-50-2 (c)(2): This first requirement prescribes a greater level of disaggregation in Fair Value Measurement disclosure. In the reconciliation of fair value measurements using significant unobservable inputs (Level 3), information about purchases and sales must be disclosed on a gross basis rather than on a net basis.

*Activity in Level 3 fair value measurements. In the reconciliation of fair value measurements using significant unobservable inputs (Level 3), a reporting entity should present separately information about purchases, sales, issuances and settlements (that is, on a gross basis rather than as one net number)*

This requirement is effective for annual reporting periods **beginning** after December 15, 2010

#### J.P. Morgan Solution

J.P. Morgan's VPR report, Fair Value Measurements – Level 3 Rollforward, provides the requisite level of detail, separately reporting purchases and sales in the L3 reconciliation.

- ii. ASC 820-10-50-2 (bb): The second requirement prescribes a new disclosure regarding transfers in and/or out of Fair Valuation Hierarchy Levels. A reporting entity is required to disclose the amounts of any (as amended from 'significant' by ASU 2011-04) transfers between Level 1 and Level 2, the reasons for the transfers and the reporting entity's policy for determining when transfers between levels are deemed to have occurred (methods described in paragraph 820-10-50-2C). Transfers into each level shall be discussed and disclosed separately from transfers out of each level. A rollforward/reconciliation of the Level 1 and Level 2 transfers is not required.

*For assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis, the amounts of any transfers between Level 1 and Level 2 of the fair value hierarchy and the reasons for those transfers, and the reporting entity's policy for determining when transfers between levels are deemed to*



*have occurred (see paragraph 820-10-50-2C)<sup>1</sup>. Significant transfers into each level shall be disclosed and discussed separately from transfers out of each level.*

<sup>1</sup>In the final version of the amendment, FASB changed its original proposal regarding the methods for recognizing transfers. In the original FAS 157 Statement, FASB did not prescribe a methodology for determining the market value at which the Level 3 asset should be transferred for purposes of the Level 3 reconciliation. This lack of clarification created diversity in practice; reporting entities used a variety of methodologies including hybrid methods such as Transfer In at Beginning/Transfer at Ending. FASB stopped short of prescribing one specific method. Rather, the FASB listed three possible methods and required only that the entity choose a method and **use the same method for both transfers in and out** of Level 3. This requirement for transfer methodology applies for all Level changes.

ASC 820-10-50-2C:

*A reporting entity shall disclose and consistently follow its policy for determining when transfers between levels of the fair value hierarchy are deemed to have occurred in accordance with paragraph 820-10-50-2(bb) and (c)(3). The policy about the timing of recognizing transfers shall be the same for transfers into the levels as that for transfers out of the levels. Examples of policies for determining the timing of the transfers include the following:*

- a. The actual date of the event or change in circumstances that caused the transfer*
- b. The beginning of the reporting period*
- c. The end of the reporting period.*

#### J.P. Morgan Solution

For the Level Transfer Methodology: The J.P. Morgan Level 3 Rollforward Report currently allows an entity elect to report the Beginning/Beginning, Ending/Ending or Point-in-Time methodologies for transfers. The Point-in-Time methodology would be available only to Daily Valuation/Daily Audited accounts. This is due to the fact that daily market values that could be used for the Point-in-Time methodology would only be available for accounts that receive market prices daily and are fully audited on a daily basis.

- iii. ASC 820-10-50-2 (e): This third requirement prescribes a greater level of disclosure regarding the valuation of Level 3 assets.

*For fair value measurements categorized within Level 3 of the fair value hierarchy, a reporting entity shall provide quantitative information about the significant unobservable inputs used in the fair value measurement. A reporting entity is not required to create quantitative information to comply with this disclosure requirement if quantitative unobservable inputs are not developed by the reporting entity when measuring fair value (for example, when a reporting entity uses prices from prior transactions or third-party pricing information without adjustment). However, when providing this disclosure, a reporting entity cannot ignore quantitative unobservable inputs that are significant to the fair value measurement and are reasonably available to the reporting entity.*

#### J.P. Morgan Solution

As fund administrator, J.P.Morgan does not independently value plan assets. Valuations are sourced from 3<sup>rd</sup> party vendors, Investment Managers, 3<sup>rd</sup> party fund administrators or clients. As such J.P.Morgan cannot provide the additional quantitative information required for this disclosure. J.P. Morgan is, however, engaged with audit firms and other industry groups to collect information about best practices and potential approaches entities will take to comply with this requirement. J.P.Morgan will share feedback from this external engagement with our clients.

In addition to the three disclosure requirements described above, ASU 2010-06 clarified some existing disclosure requirements of Subtopic 820-10 as follows:

1. Classification of Assets: Prior to the issuance of ASU 2010-06, the guidance in ASC 820 required separate fair value disclosures for each major category of assets and liabilities. ASU 2010-06 clarifies that reporting entities are required to provide fair value measurement disclosures for each class of assets and liabilities. Category and class are essentially the same; the point of the clarification is that the asset class/category is not intended to mean a single line in the statement of financial position. This disclosure still requires judgment by the reporting entity to determine the appropriate classes. In determining the appropriate classes for these disclosures entities should consider:
  - a. the nature and risk of the assets and liabilities
  - b. the level of disaggregated information already required under other Topics (e.g., in Topic 815 derivatives must be presented separately by type of contract such as interest rate contracts, foreign exchange contracts, foreign exchange contracts, etc.)
  - c. the number of classes may need to be greater for fair value measurements using significant unobservable inputs (Level 3 vs. Level 1 and Level 2). ASC 2010-96 requires sufficient information be provided to permit a reconciliation of the fair value

disclosures presented to the line items in the statement of financial position (e.g., through use of subtotals that tie back to the statement of financial position)

J.P. Morgan Solution:

J.P. Morgan has the ability to provide a custom asset classification solution for the two VPR FAS 157 Reports, Fair Value Measurement – Schedule of Investments and Fair Value Measurement – Level 3 Rollforward. Please contact your Client Service Coverage Officer for additional details.

2. Disclosures about inputs and valuation techniques: A reporting entity should disclose information about both the valuation techniques and inputs used in estimating Level 2 and Level 3 fair value measurements.

FASB provides some guidance and illustrative examples of this disclosure in paragraphs 820-10-55-22A through 55-22B. See below.

**55-22A**

*Examples of disclosures that the reporting entity may present to comply with the input disclosure requirement of paragraph 820-10-50-2(e) include the following:*

- a. *Quantitative information about the inputs, for example, for certain debt securities or derivatives, information such as, but not limited to, prepayment rates, rates of estimated credit losses, interest rates (for example Libor swap rate) or discount rates, and volatilities.*
- b. *The nature of the item being measured at fair value, including the characteristics of the item being measured that are considered in the determination of relevant inputs. For example, for residential mortgage-backed securities, a reporting entity may conclude that meeting the objective of this disclosure requirement requires disclosure of items such as the following:*
  1. *The types of underlying loans (for example subprime or home equity lines of credit)*
  2. *Collateral*
  3. *Guarantees or other credit enhancements*
  4. *Seniority levels of the tranches of securities*
  5. *The year of issuance*
  6. *The weighted average coupon rate of the underlying loans and the securities*
  7. *The geographical concentration of the underlying loans*
  8. *Information about the credit ratings of the securities*
- c. *How third-party information such as broker quotes, pricing services, net asset values, and relevant market data was considered in measuring fair value.*

**55-22B**

*For example, with respect to its investment in a class of residential mortgage-backed securities, a reporting entity may disclose the following.*

*As of December 31, 20X1, the fair value of the entity's investments in available for sale L3 residential mortgage-backed securities was \$XXX million. These securities are senior tranches in a securitization trust and have a weighted-average coupon rate of XX percent and a weighted maturity of XX years. The underlying loans for these securities are residential subprime mortgages that originated in California in 2006. The underlying loans have a weighted average coupon rate of XX percent and a weighted maturity of XX years. These securities are currently rated below investment grade. To estimate their fair value, the entity used and industry standard valuation model which is based on the income approach. The significant inputs for the valuation model include the following weighted averages:*

- a. Yield: XX percent*
- b. Probability of default: XX percent constant default rate*
- c. Loss severity: XX percent*
- d. Prepayment: XX percent constant prepayment rate*

Additionally, the AICPA Audit and Accounting Guides provide some illustrative examples of this financial statement disclosure. Included below are examples from the Investment Company Guide and the Employee Benefit Plan Guide. Based on the valuation sources and methodologies used by J.P. Morgan to value plan assets, we believe that examples in the Investment Company Guide better represent the methodologies and fair value hierarchy assignments that apply to our clients' plan assets.

### **AICPA Audit and Accounting Guide- Investment Companies**

- **Section 7.127 Fair value Measurements**

*Equity Securities (common & preferred stock). Securities traded on a national securities exchange (or reported on the NASDAQ national market) are stated at the last reported sales price on the day of valuation. To the extent these securities are actively trade and valuation adjustments are not applied, they are categorized in Level 1 of the fair value hierarchy.*

*Corporate bonds. The fair value of corporate bonds is estimated using various techniques, which may consider the recently executed transactions in securities of the issuer or comparable issuers, market price quotations (where observable), bond spreads, fundamental data relating to the issuer, and credit default swap spreads adjusted for any basis difference between cash and derivative instruments. While most corporate bonds are categorized in level 2 of the fair value hierarchy, instances where lower relative weight is placed on transaction prices, quotations, or similar observable inputs, they are categorized in level 3.*

*Asset backed securities.* The fair value of asset backed securities is estimated based on models that consider the estimated cash flows of each tranche of the entity, establishes a benchmark yield, and develops an estimated tranche specific spread to the benchmark yield based on the unique attributes of the tranche. To the extent the inputs are observable and timely, the values would be categorized in level 2 of the valuation hierarchy; otherwise they would be categorized as level 3

*Short term note.* Short term notes are valued using amortized cost, which approximates fair value. To the extent the inputs are observable and timely, the values would be categorized in level 2 of the fair value hierarchy.

*U.S. government securities.* U.S. government securities are normally valued using a model that incorporates market observable data such as reported sales of similar securities, broker quotes, yields, bids, offers, and reference data. Certain securities are valued principally using dealer quotations. U.S. government securities are categorized in level 1 or level 2 of the fair value hierarchy depending on the inputs and market activity levels for specific securities.

*U.S. agency securities.* U.S. agency securities are comprised of two main categories consisting of agency issued debt and mortgage pass-throughs. Agency issued debt securities are generally valued in a manner similar to U.S. governments securities. Mortgage pass-throughs include to-be-announced (TBA) securities and mortgage pass-through certificates. TBA securities and mortgage pass-throughs are generally valued using dealer quotations. Depending on market activity levels and whether quotations or other data are used, these securities are typically categorized in level 1 or level 2 of the fair value hierarchy.

*Restricted securities (equity and debt).* Restricted securities for which quotations are not readily available are valued at fair value as determined by the board of directors. Restricted securities issued by publicly traded companies are generally valued at a discount to similar publicly trade securities. Restricted securities issued by non-public entities may be valued by reference to comparable public entities and/or fundamental data relating to the issuer. Depending on the relative significance of valuation inputs, these instruments may be classified in either level 2 or level 3 of the fair value hierarchy.

## **AICPA Audit and Accounting Guide – Employee Benefit Plans**

- **Exhibit D Note F (defined benefit plan) Fair Value Measurements**

*Corporate Bonds:* Certain corporate bonds are valued at the closing price reported in the active market in which the bond is traded. Other corporate bonds are valued based on yields currently available on comparable securities of issuers with similar credit ratings. When quoted prices are not available for identical or similar bonds, the bond is valued under a discounted cash flow approach that maximizes observable inputs, such as current yields of

*similar instruments, but includes adjustments for certain risks that may not be observable, such as credit and liquidity risks.*

*U.S. government securities: Valued at the closing price reported in the active market in which the individual security is traded.*

*Mortgages: Valued on the basis of their future principal and interest payments discounted at prevailing interest rates for similar investments.*

*Real Estate: Valued on the basis of a discounted cash flow approach, which includes the future rental receipts, expenses, and residual values as the highest and best use of the real estate from a market participant view as rental property.*

## J.P. Morgan Solution:

To assist our clients in preparation of this disclosure, J.P. Morgan has provided to our clients and will continue to provide updates to transparency into pricing vendor information regarding valuation inputs and methodologies. J.P. Morgan maintains documentation of the methodologies and significant inputs into valuation models used by our primary pricing vendor, IDC. Clients and their auditors also have direct access to evaluators at IDC for ‘deep-dive’ analysis into security pricing. Based on a selection of assets chosen by the client, the pricing vendor will provide the detailed inputs and market color used in determining valuations. This level of interaction with the vendor has proven particularly useful to our clients in confirming and supporting their ‘leveling’ decisions and has aided clients in their documentation of valuation methodologies.

**Click the link below to open the valuation methodology documentation provided by IDC.**

**[Valuation Methodology](#)**

**Click the link below to open summary of input documentation provided by IDC.**

**[Summary of Input Documentation](#)**



## B.) Sample Footnote Disclosure

Sample Disclosure: Assets Measured at Fair Value on a Recurring Basis

✍ (\$ in millions)

Description	12/31/XX	Fair Value at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Trading securities</b>				
Equity securities—real estate industry	\$ 93	\$ 70	\$ 23	
Equity securities—oil and gas industry	45	45		
Equity securities—other	15	15		
<b>Total trading securities</b>	<b>\$ 153</b>	<b>\$ 130</b>	<b>\$ 23</b>	
<b>Available-for-sale debt securities</b>				
Residential-mortgage-backed securities	\$ 149		\$ 24	\$ 125
Commercial-mortgage-backed securities	50			50
Collateralized debt obligations	35			35
U.S. Treasury securities	85	\$ 85		
Corporate bonds	93	9	84	
<b>Total available-for-sale debt securities</b>	<b>\$ 412</b>	<b>\$ 94</b>	<b>\$ 108</b>	<b>\$ 210</b>
<b>Available-for-sale equity securities</b>				
Financial services industry	\$ 150	\$ 150		
Healthcare industry	110	110		
Other	15	15		
<b>Total available-for-sale equity securities</b>	<b>\$ 275</b>	<b>\$ 275</b>		
<b>Total available-for-sale securities</b>	<b>\$ 687</b>	<b>\$ 369</b>	<b>\$ 108</b>	<b>\$ 210</b>
<b>Hedge fund investments</b>				
Equity long/short	\$ 55	\$ 55		
Global opportunities	35	35		
Distressed debt	90			\$ 90
<b>Total hedge fund investments</b>	<b>\$ 180</b>	<b>\$ 90</b>		<b>\$ 90</b>
Private equity investments <sup>(a)</sup>	\$ 25			\$ 25
Venture capital investments <sup>(a)</sup>	10			10
<b>Derivatives</b>				
Interest rate contracts	57		\$ 57	
Foreign exchange contracts	43		43	
Credit contracts	38			38
Commodity futures contracts	78	\$ 78		
Commodity forward contracts	20		20	
<b>Total derivatives</b>	<b>\$ 236</b>	<b>\$ 78</b>	<b>\$ 120</b>	<b>\$ 38</b>
<b>Total</b>	<b>\$ 1,291</b>	<b>\$ 667</b>	<b>\$ 251</b>	<b>\$ 373</b>

(a) Based on its analysis of the nature and risks of these investments, the reporting entity has determined that presenting them as a single class is appropriate.

(Note: For liabilities, a similar table should be presented.)

# Sample Disclosure: Changes in Level 3 Recurring Fair Value Measurements

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Roll forward  
(\$ in millions)

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)						
	Available-for-Sale Debt Securities			Other Fund Investments			
	Residential Mortgage- Backed Securities	Commercial Mortgage- Backed Securities	Collateralized Debt Obligations	Hedge Fund Distressed Debt	Private Equity	Venture Capital	Derivatives Credit Contracts
Beginning balance	\$ 100	\$ 39	\$ 25	\$ 145	\$ 20	\$ 11	\$ 30
Transfers into Level 3	80 <sup>(a)</sup> <sup>(b)</sup>						
Transfers out of Level 3							
Total gains or losses							
Included in earnings (or changes in net assets)	(8)			7	5	(3)	5
Included in other comprehensive income	(15)	(5)	(7)				(5)
Purchases, issuances, sales, and settlements							
Purchases		16	17			2	18
Issuances							
Sales	(12)			(62)			
Settlements							(10)
Ending balance	\$ 125	\$ 50	\$ 35	\$ 90	\$ 25	\$ 10	\$ 38
The amount of total gains or losses for the period included in earnings (or changes in net assets) attributable to the change in unrealized gains or losses relating to assets still held at the reporting date				\$ (5)	\$ 5	\$ (3)	\$ 2

(a) Transferred from Level 2 to Level 3 because of lack of observable market data due to decrease in market activity for these securities.

(b) The company's policy is to recognize transfers in and transfers out as of the actual date of the event or change in circumstances that caused the transfer.

(Note: For liabilities, a similar table should be presented.)

## IV. J.P. MORGAN FAIR VALUE MEASUREMENT REPORT GUIDES

[Click here to view the Fair Value Measurement Reporting Guide](#)

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