Valuing Art Fund Investments for Estate and Gift Tax Purposes

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Investors with large artwork collections may contribute these assets to an investment management entity that will hold, acquire, sell, manage, and protect the works of art. These entities are often referred to as art funds. An interest in an art fund may be a significant investment holding that is transferred to a beneficiary during life or at death. For gift or estate tax purposes, these transfers require independent valuation analyses—typically both an independent art appraisal and an independent business valuation.

Introduction

This discussion outlines the business valuation aspects to developing the fair market value of an investment interest in an art fund transferred for estate and gift tax purposes.

For purposes of this discussion, art funds are defined as entities, typically limited partnerships or limited liability companies, that invest in artwork. There are both private institutional art funds and private investor organized (often family-owned) art funds. Currently, there are no publicly listed or publicly traded art funds.

Investors in art may:

1. acquire artwork directly for their personal enjoyment,
2. acquire a noncontrolling interest in a private institutional art fund managed by professional investors, or
3. acquire (or form) a private-investor-backed art fund to commingle funds (or artwork).

This discussion addresses the important aspects that constitute the business valuation of an art fund investment interest transferred for estate or gift tax purposes.

Art Funds

Art funds are often organized to hold, acquire, sell, manage, and protect works of art. Art is considered a subcategory of alternative investments.

Institutional art funds are investment funds that may be structured like hedge funds and marketed to accredited investors. Investors (or limited partners) pool funds to invest in specific types of artwork. Institutional art funds raise capital and focus investment on a specific genre (e.g., old masters, contemporary, pop art, expressionism, postmodern) and a specific form of art (e.g., paintings, sculpture, photography, video, prints).

Management and Operations

Often managed by professional managers or advisory firms, institutional art funds seek to provide a return on investment through the appreciation and ultimate sale of its underlying assets. These managers (or general partners) may co-invest with the accredited investors.

The general partners typically charge both:

1. an annual management fee between 1 percent and 3 percent (based on the fund net asset value or total capital commitments) and
2. a performance fee (i.e., carried interest or success fee) equal to 20 percent of any profits made from the disposition of the fund's art portfolio.

Most institutional art funds have a termination date (e.g., 10 years), which limits the existence of the fund and indicates a date when an investor can expect a return of capital.

However, during this term, institutional funds may have reasonable avenues for investors to request a redemption of their interest by the fund, such as a quarterly redemption cycle. These types of funds may also have significant gate clauses or penalties for early redemption.

Private investor art funds are often not managed with the same fee structure as most institutional art funds. Private investor art funds are formed to commingle funds or existing artwork for collective management and asset protection. Private investor art funds are often less restricted than institutional funds, allowing for more concentrated and diverse discretion in the selection of art holdings.

Private funds may invest solely in one artist. Most institutional funds are diversified both from a value per work perspective and from an artist perspective.

Most private funds are not managed by professional private equity investment managers or professional art experts, such as institutional art funds. Rather, they are more likely managed by art enthusiasts. Private funds often do not have maturity dates that require the sale or dissolution of the fund.

Private funds may not have redemption provisions for an investor to exit the investment. Oftentimes, private investor art fund investments are less marketable and less liquid than that of institutional art fund investments.

The managers of both types of art funds perform several tasks on behalf of the fund and its investors, such as the following:[1]

1. Identify potential acquisitions
2. Raise capital for the fund
3. Manage investor relations
4. Handle administrative compliance of the fund
5. Showcase the investment portfolio through exhibitions and loans to museums
6. Manage the investments (e.g., storing and properly insuring the art)
7. Monitor the art market in general and the fund's artists in particular
8. Manage the orderly disposition of the fund's investment portfolio

Income and Expenses

Both types of art funds realize income from either:

1. renting or leasing art to individuals, companies, galleries, museums, or the like or
2. selling art through private sales or at auction.

When a fund rents or leases its art, the fund may incur some portion of restoration costs prior to or after exhibition, crating and shipping costs, and insurance costs. Arranging art for display in museums and galleries tends to increase the prominence of the art and thus increases the value of the art. Therefore, museums and galleries do not often pay rent for artwork they put on display for the fund; instead, the value to the investor is derived from the artwork's appreciation in value.

In these instances, the museum or gallery will also share in the cost of restoration (if any) and the shipping and handling of the artwork to and from the venue.

The majority of an art fund's income is realized at sale. Private sales and art auctions are often brokered by a dealer that helps an investor realize the highest sale price (or hammer price). For creating the pool of potential buyers, marketing the art, and orchestrating the sale process, private brokers and auction houses charge a fee (or commission). These commissions—which are negotiated and are determined on a case-by-case basis—often range from 5 percent to 25 percent of the hammer price.

In rare instance, seller fees may be waived on certain items. In addition to sales commissions, some auction houses can also charge storage fees, photo fees, promotional fees, insurance fees, and shipping fees. The net sales price (net of commissions and fees) is often used by institutional art funds to extract a performance fee for the general partners (often 20 percent of realized proceeds above the art's initial acquisition cost).

Private art funds may not have such performance fees, and the proceeds may either be re-invested or distributed to the owners.

In addition to the costs realized at sale, both types of art funds also incur material direct expenses. These expenses include management fees, legal fees, accounting fees, appraisal fees, insurance fees, storage fees, shipping and handling fees, and maintenance and restoration fees.

Management fees for institutional funds are often more than private investor funds. Management fees are often 1 percent to 3 percent of the assets under management. Although the balance of the fees listed above are variable, such fees are not dissimilar between the two art fund categories.

Investor Returns and Risks

In all, the investor's return on investment from an art fund is often measured by the internal rate of return. Unlike finding personal enjoyment in the art acquired on an individual basis, a noncontrolling investment in an art fund is often a passive investment strategy wherein the investor is seeking a risk-adjusted return and overall portfolio diversification.

In the *Art & Finance Report 2017*, the latest report published by Deloitte Luxembourg and ArtTactic, the report indicated that there had been a continued decline in institutional art fund assets under management since 2012, which represented a record year. In 2012, there were 115 art funds (90 of which were in China). The actual size of the art investment fund market is likely to be bigger than the publicly available data suggest.

According to the *Art & Finance Report 2017*, assets under management in art funds had decreased nearly 62 percent since 2012 from approximately $2.17 billion to an estimated $834 million. This estimate of the art fund market in 2017 was down from $1.03 billion in 2016 and $1.20 billion in 2015.

This trend is principally driven by regulatory oversight in China, France, and the United Kingdom, and by stricter regulations on unregulated collective investments. However, there are signs of new entrants to the market, especially in Europe and the United States.

Five concerns held by art fund investors are valuation (mark-to-market), due diligence, lack of a track record, lack of regulation, and lack of liquidity.[2]

However, proponents for art fund investment suggest that the lack of regulation, deficient price discovery mechanisms, nontransparent markets, subjective value, and illiquid nature of fine art enables them to generate arbitrage opportunities that seasoned art professionals can exploit for the benefit of their investors, yielding alpha returns.

Further, some investors believe art provides portfolio diversification benefits, a store of value, and acts as a hedge to inflation as a noncorrelated asset.[3]

Overview of Art Appraisals

In the valuation of an investment interest in an art fund, an art appraisal is often required to identify the current fair market value of the fund's assets.

An art appraisal report follows some of the same tenants of a business valuation report. An art appraisal that is prepared in a manner consistent with the *Uniform Standards of Professional Appraisal Practice* will typically include, among others, the following:[4]

1. Client information and appraiser information and qualifications
2. Signed and dated certification
3. Scope of work
4. Purpose of the appraisal
5. User of the report
6. Type of report (e.g., self-contained, summary, restricted)
7. Approach to value (e.g., market data comparison approach, cost approach, income approach)
8. Type of valuation used (e.g., retail replacement, marketable cash valuation)
9. Marketplace in which the valuation is applied
10. Relevant dates (e.g., effective valuation date, issue date of the report, date of inspection)
11. Description of the appraised works of art, including a description of the artist, title, date, size, medium, condition and quality, provenance, exhibition and publication history, and the like
12. Photographs of works appraised (as objects valued at $20,000 or more require a photograph for gift and estate tax purposes)
13. Comparable sales data of similar works
14. Assignment considerations, assumptions, and limiting conditions

For artwork, fair market value of a subject work is often based on what comparable works have sold for in recent years.

Private sales may lead to a higher price than auction sales. This is often due to the buyer (and/or seller) preferring anonymity or the desire by the buyer to fill a gap in his or her collection, despite paying a premium above historical auction sales of comparable works. However, private sales prices are not always higher than auction sales.

Auction sales of prominent works often exceed the private sales market price given the hype at auction.

Art appraisers may use various auction result databases in their analysis. Some of these databases include Artnet, Artprice, Artsy, AskArt, 1stDibs, and Invaluable. Auction house websites and catalogues, as well as art galleries, may also be relied on in the sales price of comparable works.

An art appraiser will often analyze the work on a highest and best use basis, applying a method that best represents the value of the piece at a point of time. The appraiser will also apply his or her best judgment and knowledge of the art market in determining fair market value.

Overview of Art Fund Business Valuations

In valuing an investment interest of an art fund, a valuation analyst ("analyst") considers all generally accepted business valuation approaches and methods in the analysis. Additionally, the analyst considers the contractual provisions of all applicable legal agreements.

The three generally accepted business valuation approaches are (1) the income approach, (2) the market approach, and (3) the asset-based approach. Within each approach, there are several generally accepted business valuation methods.

Two art fund valuation methods that are often applied to estimate the value of an art fund investment interest are as follows:

1. The adjusted net asset value ("ANAV") method (an asset-based approach method)
2. The discounted future distributions ("DFD") method (an income approach method)

The asset-based approach is readily applicable to estimate the value of an art fund. That is because the underlying assets can be discretely valued. The art fund's artwork can be contemporaneously appraised by a qualified art appraisal firm and by a qualified art appraiser.

Additionally, an income approach method can be applied to assess the investment's ability to generate distributable income from the projected income from sales of artwork.

The market approach is often not applicable in these alternative investment cases. This is because little to no guideline publicly traded, or recently acquired, company transaction data is available due to the private nature of art fund investing. In order to apply market-based methods, publicly disclosed pricing data needs to be identified in order to make a valuation comparison.

Although the market approach is often applied to estimate the value of discrete artworks, the market approach may be difficult to apply in the context of art funds.

In both business valuation methods (i.e., the ANAV method and the DFD method), the art appraisal(s) is (are) relied on by the valuation analyst. In almost all art fund valuation analyses prepared for gift and estate tax reporting purposes, both art appraisers and valuation analysts are required.

The following sections outline some of the analyst's considerations in developing the fair market value of art fund investment interests when applying an ANAV method and a DFD method.

The Art Fund Asset-Based Approach ANAV Method

In business valuation, the asset-based approach relies on methods that analyze the fair market value of an entity's assets (both tangible and intangible) and liabilities (both recorded and contingent). Indications of value for each asset and each liability are estimated in order to derive a value of equity.

One widely applied asset-based approach method is the ANAV method.

The ANAV method is an asset-based approach method applied to estimate the fair market value of business entity equity.

Estimating the Fair Market Value of the Art Fund Equity

In applying the ANAV method, the values of all of the business entity's assets are separately estimated under the value-in-continued-use premise. Each separate asset category is valued by applying the most appropriate valuation method. The values of all assets are accumulated to estimate the fair market value of all the assets of the business.

The current values of all liabilities, both current and long term, are also estimated. The values of all the liabilities are accumulated in order to estimate the fair market value of all the liabilities of the business entity.

To estimate the fair market value of the business entity equity, the fair market value of total liabilities is subtracted from the fair market value of total assets. This difference, or residual, represents the ANAV of the business entity equity.

The analyst reviews the art appraisals and rely on those findings in the analysis of the art fund.

Additionally, the analyst considers business valuation adjustments to the art appraisal values that

may not have been considered in the art appraisal. Most art appraisals estimate the value of each piece of art as if individually owned on a fee simple interest basis.

An art appraisal may not capture all of the valuation effects incurred as a collection of artworks held by an art fund. The analyst may need to consider if:

1. any works are co-owned (i.e., undivided interests) with other funds or investors,
2. any blockage discounts may be applicable given the quantum of assets held (either in quantity or by concentration), or
3. transaction expenses should be considered in the analysis of the art fund's equity attributable to the art fund investors.

When works of art are co-owned by multiple investors, undivided interest adjustments may apply. Tangible property undivided interests often incur a discount from a fee simple ownership interest basis under the fair market value standard. Owners of tangible property undivided interests often lack ownership control rights and liquidity (marketability).

Concentrations in investment holdings may incur a blockage discount under fair market value. Blockage discounts are applicable when the assets may incur market absorption issues. Blockage discounts analyze the time inherent in the process of orderly liquidating so that the total value of the assets is not depressed as a result of offering the assets on the market at the same time.

The analyst may discuss with the art appraiser whether the collection held by the art fund may be subject to blockage (i.e., market absorption) concerns. The analyst and/or the art appraiser may be able to quantify the blockage discount subject to the art fund specifically.

This blockage discount analysis may be determined using historical sales of comparable art and identifying the quantum of the artist's work that would be saleable per year without decreasing the demand (and, therefore, the price) of the artist's work. Based on historical and current trend data, the blockage discount analysis may determine the time to liquidate the works over a period of time.

A risk-adjusted present value factor may be applied over the duration of the anticipated sales cycle. Market absorption risk adjustments are often included in the art fund analysis if the works could not be sold within a relatively short time period (e.g., six months) at the current appraisal value on an individual basis.

Lastly, upon the sale of an art fund's works, the fund may be subject to material seller transaction expenses. If so, the art fund may have a contingent liability at sale. When the fund sells its works and distributes proceeds, the investors will receive net proceeds (net of transaction expenses from the auction or private sale).

Analysts may consider and incorporate in the ANAV method, as applicable, a reasonable estimate of transaction expenses charged at the sale of each artwork in order to estimate the value to the subject investor interest.

The analyst can discuss with the fund manager(s), art brokers, and the art appraisers what the potential sales commissions may be for each work. Seller transaction expenses often range from 5 percent to 25 percent of the appraised value.

In addition to the three adjustments, the analyst may consider whether the collection in its entirety enhances the value of other work held in the collection. Generally, this analysis is taken into consideration by the art appraiser, as the art appraiser will determine if certain works sold collectively may yield a higher value together as one lot. This factor is typically identified in the art appraisal report.

Based on these considerations, the analyst would adjust the value of the artworks appraised by an art appraiser, as applicable. These considerations assist in the analysts' development of the fair market value of the fund's artwork collection to the investors.

The analyst may also consider whether the art fund had any additional assets, including identifiable institutional goodwill (or other types of intangible assets) or off-balance-sheet assets.

Based on the total fair market value of the assets held by the art fund, the analyst may subtract any recorded, unrecorded, contingent, or off-balance-sheet liabilities that existed as of the valuation date. Most art funds have accrued accounts payable; some art funds may have other types of debt.

In the application of the ANAV method, the art fund's fair market value of total assets is subtracted from the fair market value of all of its liabilities. This procedure provides for an indication of the art fund's fair market value of a 100 percent investment interest of the fund, on a controlling, marketable membership interest level of value basis.

However, in the context of gift and estate tax transfers, analysts often value a noncontrolling ownership interest that may lack the ability to control the operating, investing, and financial decisions of the art fund. Further, the noncontrolling interest will often be illiquid, limiting the investor's ability to market and convert his or her interest into cash. Art fund operating agreements often include onerous transfer restrictions.

In these instances, an analyst may adjust the indicated fair market value of the subject interest on a pro rata value of equity downward to reflect the subject interest's lack of control and lack of marketability attributes.

Estimating the Fair Market Value of an Investment Interest

To identify the appropriate adjustment for lack of control, the analyst may consider, among other factors, the following:

1. The lack of authority associated with a noncontrolling interest to lease or generate income from the artworks prior to any sales
2. The lack of influence on the type of investments made by the company over the investment holding period
3. The lack of property diversification (e.g., concentrated art holding of two artists)
4. The lack of control over timing of distributions
5. Unregulated market concerns and lack of art investment council organizations to promote guidelines within the art fund sector
6. The inability to select
    a. where the art is displayed or stored or
    b. the opportunity to personally enjoy any work
7. The lack of discretion regarding brokers and their brokerage fees
8. The inability to manage and control costs, including variable restoration costs

In the art fund business valuation analysis, there are generally insufficient publicly available data on third-party transactions of noncontrolling interests in art funds. Therefore, analysts may rely on the implied discounts from the net asset value of publicly traded noncontrolling interests in real property, such as publicly registered limited partnerships ("PRLPs").

These PRLP interests typically trade at discounts relative to the value of their net asset value. This is because these noncontrolling entity interests lack unilateral control over the partnerships' underlying real estate assets.

These PRLP interests can provide a useful comparison to noncontrolling interests in art funds given that real estate and artwork are tangible assets often classified as alternative assets.

In addition to the discounts from net asset value of publicly traded noncontrolling interests, additional adjustments are often appropriate to reflect the relatively lesser rights and avenues of influence that private limited entity investors (such as an art fund investor) would have when compared to the rights and features of publicly registered investors.

These adjustments are based on (1) the art fund operating agreement (and other legal instruments) and (2) fund-specific factors

The art fund operating agreement often limits a noncontrolling investor's ability to manage or control the operating, investing, and financing decisions of the fund.

Fund-specific factors include, but are not limited to the following:

1. Quality of management
2. Property diversification
3. Age of the entity
4. Financial condition of the fund
5. Oversight and transparency for investors
6. Access to information
7. Use and enjoyment (if any) of the art work

Next, the analyst will consider the application of, and the adjustment for, the subject art fund interest's lack of public market transferability.

All other things being equal, an equity investment in a company is worth more if it is readily marketable or, conversely, worth less if it is not. It is well known that investors prefer liquidity to lack of liquidity, and interests in closely held companies are illiquid relative to most other investments.

Investments in art funds (especially, private-investor-backed art funds) are often very illiquid investments. Art fund investing is a relatively small market. Deloitte Luxembourg and ArtTactic estimate the market has continued a steady decline from $2.13 billion in 2012 to approximately $834 million in 2017.[5]

This trend is predominately due to a decline in Chinese art funds over the same time period from $1.48 billion to $373 million. The Art & Finance Report 2017 research found that in 2017, only 3 percent of art collectors were buying art for an investment purpose, whereas, 32 percent are buying for collecting purposes and 65 percent are collecting but with an investment view.

Furthermore, the research indicated that in 2017, approximately 59 percent of wealth managers thought the art fund industry was still too small, and that 72 percent of respondents thought lack of liquidity was a main investment hurdle.[6]

To identify the proper adjustment for lack of marketability, an analyst may consider, among other factors, the following:

1. The lack of an identified pool of potential investors for the noncontrolling interest (liquidity concerns)
2. The lack of identifiable or regular distributions (extending the payback period to an investor)
3. The block size and dollar value of the subject interest
4. The lack of mark-to-market valuations
5. The carrying expense burden of holding the subject interest and the risk of future capital calls to maintain the artworks

These adjustments may also be based on (1) the art fund operating agreement (and other legal instruments) and (2) fund-specific factors.

The art fund operating agreement often limits an investor's ability to transfer his or her interest or to withdraw from the fund.

Fund-specific factors may include, but are not limited to, the following:

1. Block size of the subject interest
2. Investment time horizon based on the anticipated time for the investor's return on capital (if any)
3. Level and certainty of interim cash flow (if any)
4. The prevailing market conditions for the subject interest and the commingled assets of the art fund

These valuation discounts are confirmed by the notion that the art fund investors would not be able to personally enjoy the artwork held by the fund, either by hanging such works in their homes or by directing such works to be displayed in venues of their choosing. If an investor seeks to invest in art, he or she can purchase artwork individually and be able to personally enjoy that work.

The Art Fund Income Approach DFD Method

The income approach is based on the principle that the value of a company is the present value of all the future expected economic income to be derived by the company's creditors and shareholders.

One of the methods of the income approach is the DCF method. The DCF method is a model used to value income-producing assets on a going-concern basis. It has intuitive appeal because it incorporates a risk/return perspective, which is critical to the investment decision process.

The DCF method estimates the value of a company by forecasting the company's expected future net cash flow and calculating the present value of that net cash flow by applying a risk-adjusted present value discount rate. The DFD method is a variation on the discounted cash flow ("DCF") method.

The DFD method follows the same procedures as the DCF method except that it measures the stream of expected distributions to the equity owners of the company.

Depending on the underlying inputs, the DCF and DFD methods can result in either a controlling interest or a noncontrolling interest indication of value. The resulting basis is influenced by the nature of the cash flow and the present value discount rate incorporated in the analysis.

In estimating a present value discount rate, the valuation analyst could apply a noncontrolling equity cost of capital to the expected distributions anticipated by the interest investor. That is, the expected rate of return a noncontrolling investor would demand for its passive interest in the art fund, understanding that return is generated over a long period of time due to distributions to the members after the sale of artwork.

The analyst may consider an orderly sale of the art portfolio and subsequent distribution of net proceeds to occur during the estimated investment holding period. The basis for these assumptions would be based on due diligence interviews of the art fund management.

In the DFD method analysis, the analyst projects the anticipated distributions to be made by the art fund to its investors over time and present values those anticipated distributions to the investors at a noncontrolling equity rate of return, or present value discount rate.

Projecting Future Fund Distributions

The first procedure in the DFD method is to develop reasonable projections of future distributions by the art fund to the art fund investors.

The projected future distributions are calculated as net proceed distributions to the members. Net proceeds are defined as sales proceeds, less commissions, less direct operating expenses (e.g., storage, insurance, maintenance expenses, debt service), and less a cash reserve for operating overhead (in this case, current cash holdings were deemed sufficient to cover operating expenses until dissolution).

In this case, net proceeds are sales proceeds less commissions, as operating expenses are anticipated to be covered by cash holdings throughout the term of the art fund.

Assumptions are made by the analyst regarding future income and future expenses of the fund. The analyst estimates:

1. the expenses to be incurred throughout the life of the fund and
2. the timing and sales of art net of transaction expenses.

These assumptions are often based on research, discussions with management, historical financial results, and information provided by the art appraisers.

Expenses for most art funds may include management fees, consignment fees, restoration costs, storage and security fees, insurance, accounting fees, legal fees, and other administrative expenses.

Unlike stocks and bonds, art prices tend to have a positive correlation with inflation. One of the greatest risks involved in art investment is that there is low transparency in the market. The art market is driven by the following key attributes: art is a heterogeneous asset, there is low market transparency, expertise is mainly in the hands of the seller, there is low liquidity in the market, and transaction costs are higher than in other markets.

Compared with other assets, the art market's drive to equilibrium is weaker; in the case of dead artists, supply is limited to those produced during their lifetime. Works of art are unique and cannot (on an individual basis) be substituted easily, and the equilibrium price is difficult to determine, so an objective evaluation is challenging to achieve.

One of the issues resulting from these factors is also a problem facing art as an investment: the question of its economic value. The price of art is as much an emotional value as it is an economic assessment and clearly reflects variations in supply and demand.

The highest price one is willing to pay is often attributed to a work of art as an indication of its relative attractiveness over time. Moreover, the value of an artwork stems from multiple factors. For example, art is tied to the increasing demand for artwork and increases in global wealth.

Yields on art are predominately derived from financial appreciation and surplus liquidity. Even in times of turmoil, economic downturn, and unattractive capital market trends, the art market has managed to survive.

While there can be large gains and losses occurring within short holding periods, returns during longer holdings periods are very close to zero, indicative of a random process with a mean of zero.[7]

Exhibit 1 summarizes some of historical trends in various classes of art as compared to the returns

Exhibit 1
Art Market Rates of Return by Investment Holding Period

	Latest 12-Month Return [a]	5-Year CAGR [b]	10-Year CAGR [c]	15-Year CAGR [d]
European Old Masters	2.21%	1.72%	1.72%	3.69%
Global Impressionist Art	10.50%	-0.78%	-2.07%	1.54%
Global Modern Art	3.62%	-2.50%	-2.43%	4.05%
Global Post-War Art	-0.98%	1.29%	-1.26%	7.12%
Global Contemporary Art	7.45%	4.09%	2.04%	8.54%
Fine Chinese Paintings and Calligraphy	0.67%	-0.59%	9.17%	11.50%
20th-Century and Contemporary Chinese Art	3.74%	1.10%	3.19%	14.10%
S&P 500 Index (SPX)	15.44%	11.93%	5.31%	10.43%
FTSE World Index (WI01)	12.79%	8.48%	2.22%	9.29%
MSCI Europe Index (MXEU)	7.82%	5.31%	-1.74%	6.57%
MSCI Asia Index (MXAS)	13.71%	7.51%	0.79%	8.55%

CAGR = Compound annual growth rate
[a] The lastest 12-month return is calculated from April 2016 to April 2017.
[b] The 5-year CAGR is calculated from August 2012 to August 2017.
[c] The 10-year CAGR is calculated from August 2007 to August 2017.
[d] The 15-year CAGR is calculated from August 2002 to August 2017.
Note: The returns presented above are nominal and do not include transaction fees.
Sources: *Art & Finance Report 2017*, Deloitte Luxembourg; ArtTactic; and S&P Capital IQ.

of various common stock indexes. This data is presented in the *Art & Finance Report 2017* and is sourced from Artnet art price indices.

In terms of the correlation across other asset classes, certain art categories, such as impressionism and old masters, are highly correlated with safe haven asset classes, such as bonds and real estate. Alternatively, riskier movements, such as contemporary and Chinese art, are more correlated with higher risk asset classes, such as stocks and commodities.[8]

Estimation of a Present Value Discount Rate

The second procedure in the DFD method is to estimate a present value discount rate that is appropriate for the art fund's future distributions to the investors. The appropriate discount rate is often a noncontrolling, illiquid investor rate of return.

Various art indices would suggest investors can reasonably expect an average annual return of nearly 9 percent on long-term holdings of investment-grade art. Such data is "fundamentally flawed," however, according to Arthur Korteweg, a financial economist with the University of Southern California Marshall School of Business and the lead author of a 2015 report called "Does It Pay to Invest in Art?"

The most popular art indices, including the Mei Moses Index, are based on repeat sales of artworks that have already demonstrated marketplace demand, notes Korteweg. "Sample selection bias has a first-order impact on art indices, lowering the average annual return by 28 percent, from 8.7 percent for a standard repeat sales index to 6.3 percent for selection-corrected indices," he writes, noting the risk-adjusted return, or Sharpe Ratio, also drops by nearly 60. "The implications are that an investor would not find it attractive to invest in a portfolio that is representative for the broad art market, unless she derives substantial nonmonetary utility from owning and enjoying art."

The Fine Art Fund Group chief executive officer Philip Hoffman notes that his funds have produced an average return of 9 percent before taxes (most art funds, including those offered by the Fine Art Fund Group, charge a 1 percent to 3 percent management fee, plus 20 percent of profits; however, the Fine Art Fund Group collects its commission only after its investors have earned at least a 6 percent return).

Hoffman notes that investors who opt for large, diversified art funds would be "very lucky" to get 10 percent to 15 percent returns.

"Somewhere in the 6 percent to 8 percent range is achievable with a well-managed, diversified fund. You can potentially earn double digits, but you would need to take on higher risk," stated Hoffman.[9]

In the *Artprice Contemporary Art Market: The Artprice Annual Report 2013*, Artprice notes that the financial returns on contemporary art today show that this segment is one of the best alternatives to traditional financial investments. On a sample

of nearly 1,000 contemporary works acquired at auction and subsequently resold at auction during the last 12 months, the average annual yield is 8.1 percent.

In a more recent interview between Deloitte Luxembourg and Madelaine D'Angelo of Arthena (a company that builds investment funds backed by art assets using quantitative strategies), "investments in post-war and contemporary art, for example, have generated 10.7 percent annualized reports over the past 20 years, with a standard deviation of 12.9 percent, while art funds have returned 8.8–12.5 percent on average.

The S&P 500 returned 8.3 percent in the same period, with 19.3 percent standard deviation."[10] Based on accessible publicly reported data, art fund investors generally demand a rate of return of about 10 percent per annum.[11]

Calculation of Net Distributions

The third procedure in the DFD method is to calculate future distributions. As an economic earnings measure, distributions of free net cash flow represent the maximum amount of cash which could be distributed to a company's equity holders without depleting normal operational cash requirements.

Present Value of Distributions

The fourth and final procedure in the DFD method is to calculate the present value of estimated future distributions.

The present value of the projected discrete period net cash flow is calculated by applying a present value discount factor to the projected net cash flow to be distributed to the equity investors. This factor is based directly on the previously calculated cost of equity capital and assumes that each year's net cash flow is received at year end by the investors.

The total present value of the discrete period distributions to the interest investor indicates the fair market value of the ownership interest.

Summary and Conclusion

Every valuation is unique, and each valuation is based on engagement-specific facts and circumstances.

Estimating the fair market value of an investment interest in an art fund is both complicated and intricate.

Analysts may apply one or more business valuation methods to estimate the value of a subject interest investor's stake in an art fund. Often illiquid and noncontrolling interests, the analyst considers an asset-based method and an income-based method. The analyst weights the value indications from each method based on the circumstances and the facts of the specific case.

Art fund investment interests transferred by gift during life or held by an estate at death often require both a qualified art appraisal and a qualified business valuation for tax reporting purposes.

These valuation analyses can assist the taxpayer in establishing "adequate disclosure" under the requirements set forth by the Internal Revenue Service in Regulation 301.6501(c)-1(f)(3) and meeting the "qualified appraisal" and "qualified appraiser" requirements set forth in Section 170(f)(11).

As art funds are established by high net worth individuals and families, and as collections are amassed over time, the valuation of these investments will become an important estate planning consideration of both taxpayers and their wealth advisers.

Notes:

1. "What Are Art Funds," The Art Fund Association LLC.
2. *Art & Finance Report 2017*, Deloitte Luxembourg and ArtTactic.
3. Shelly Schwartz, "Wealthy Investors Dabble in Art Investment Funds," CNBC.com (May 29, 2015).
4. "Cost of Your Art Collection: Appraisals and Art Insurance," Artwork Archive.
5. *Art & Finance Report 2017*, 182.
6. Ibid., 191.
7. Raya Mamarbachi, Marc Day, and Giampiero Favato, "Evaluating Art as an Alternative Investment Asset," *Journal of Financial Transformation* 24 (2008).
8. *Art & Finance Report 2017*, 174.
9. Schwartz, "Wealthy Investors Dabble in Art Investment Funds."
10. *Art & Finance Report 2017*, 199.
11. Rebecca Hawkins, "Art Funds Survey 2015," Private Art Investor (April 12, 2015).

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