Chapter 7

Using Empirical Data to Value Family Limited Partnerships

By Bruce A. Johnson, ASA and James R. Park, ASA

When valuing family limited partnership interests, some practitioners continue to use the Asset Based Approach (or Cost Approach) to value noncontrolling interests. This method is based on taking the net asset value (NAV) of the partnership and then applying average discounts for lack of control and lack of marketability based on various published studies. Because an owner of a family limited partnership interest cannot exercise control over the liquidation of the partnership, the use of the Asset Based Approach for valuing noncontrolling interests is not generally appropriate.[1] The Tax Court has been particularly critical of this methodology for several reasons including:

- the testifying expert has insufficient knowledge of the underlying data contained in the discount studies to explain how it relates to the specific interest being valued (size, industry, leverage, etc.),
- the wide range of discounts observed in the studies (from premiums of 10% to discounts of 90%),
- the subjectivity involved in determining the discounts for lack of control and lack of marketability.

For example in Kelley vs. Commissioner, Judge Vasquez stated that the appraiser "…did not analyze the data from these studies…therefore we cannot accept the premise that this average discount [for lack of marketability] is appropriate."

Because a family limited partnership interest is noncontrolling, a limited partner typically cannot exercise control over the sale of the assets of the partnership. Rather, the limited partner looks primarily to the income-generating ability of the partnership and the possible sale of assets at a future point in time to realize a return on their ownership interest. To adequately take into consideration the primary factors that influence the value of a family limited partnership interest, appraisers should consider the use of both the Income Approach and Market Approach. The Income Approach allows the appraiser to give consideration to the income generating and distribution-paying capacity of the interest. The Market Approach offers a look at alternative investments with similar characteristics in terms of income generating ability and capital structure that can be purchased instead of the subject limited partnership interest.

Empirical Methodology

The Income and Market Approaches offer a reliable way to value an interest in a family limited partnership by quantifying risk and return using empirical data. For example, using the Income Approach, an appraiser can forecast available cash flow (including a future liquidation) generated by the investment and discount it to present value using a discount rate that reflects the risk of the limited partnership. As we know from basic financial theory, the rate of return or discount rate increases as the risk of the investment increases.

---

[1] Jay E. Fishman and Others, Guide to Business Valuations, (Fort Worth, TX: Practitioners Publishing Company, 2011), 7-2

The Market Approach is useful to determine the value of a privately held interest by using pricing ratios of comparable, but publicly held investments. Revenue Ruling 59-60 states that the sale transactions for publicly held interests should be considered when valuing privately held interests. This is noted as follows:

> As generalization, the prices of stocks which are traded in volume in a free and active market by informed persons best reflect the consensus of the investing public as to what the future holds for the corporations and industries.…

Various sources of data frequently used by appraisers to obtain comparative Price to NAV ratios includes, but is not limited to:

- Closed-End Funds, and
- Publicly Held Limited Partnerships

It is important to note that the Income and Market Approaches are regularly used by appraisers to value privately held noncontrolling interests in operating companies. In addition, these are the methodologies typically used by investors in the capital market.

Discount for Lack of Control

In recent years, the Tax Court has expressed a preference for the use of analytical techniques for the valuation of family limited partnership interests and the determination of discounts for lack of control and marketability at which an interest would trade from its pro rata share of NAV. Using the Income Approach, a value and the effective discount at which the interest would trade can be determined using projections of net cash flow that are discounted to present value using an appropriate rate of return. Use of the Market Approach results in effective discounts using pricing ratios from comparable publicly held entities.

For example, when a family limited partnership holds real estate, discounting the expected net cash flow using rates of returns from REITs and publicly held limited partnerships results in a noncontrolling, marketable value. Applying Price to NAV ratios from publicly held limited partnerships to the NAV of a privately held limited partnership also results in a noncontrolling, marketable value. For family limited partnerships that invest in marketable securities, practitioners can use Morningstar’s Ibbotson rate of return data for the Income Approach and closed-end fund data for the Market Approach.

As more and more appraisers have begun using empirical data in the Income and Market Approach to value interests in limited partnerships, as opposed to average discounts based upon published studies, new information is being published to support the derivation of rates of return for the Income Approach and the determination of pricing ratios for the Market Approach. Partnership Profiles, Inc. (www.PartnershipProfiles.com), a research company that provides transaction information on limited partnership interests that trade in the informal secondary market, is a frequently used source of information. Comparative data and Price to NAV ratios on a wide variety of publicly held limited partnerships is available through information published by Partnership Profiles, Inc. For the Income Approach, they provide an annual Rate of Return Study for real estate limited partnership interests purchased in the secondary market. For the Market Approach, their Guideline Reports reflecting data on actual trades of publicly held limited partnership interests, and their closed-end fund reports reflecting the Price to NAV ratio at which interests in various types of closed-end funds trade, provide the empirical data needed to value most family limited partnerships.

Discount for Lack of Marketability

Studies measuring discounts for lack of marketability reported in historical restricted stock and IPO studies present a wide range of discounts that have occurred in market transactions. While the average discounts from the studies are helpful, a more in-depth look at the individual discounts for lack of marketability in the studies show that they range to discounts as high as 90%. The average in discount from the studies is not always applicable. Discounts for lack of marketability occur in third party transactions because investors recognize that the lack of marketability of an interest increases the risk of an investment in the interest. Accordingly, an investor purchases the interest at a discount in order to increase the return on their investment. This increased rate of return offsets the additional risk caused by the lack of marketability of the investment.

Once a noncontrolling, marketable value has been determined using the Income and Market Approaches, practitioners can deduct a discount for lack of marketability by examining studies that measure the increased return demanded by investors in third party transactions for the risk of holding a nonmarketable investment. There are two basic steps that an appraiser should consider when quantifying a discount for lack of marketability.

1. After a value has been determined on a noncontrolling, marketable basis, the effective rate of return that an investor would expect to receive prior to the discount for lack of marketability should be calculated. This calculation is relatively simple, with the effective rate of return being determined using the average yield or using the IRR function in MS Excel based on the noncontrolling, marketable value and the forecast of net cash flow that was derived from the income approach. The result of this calculation provides the basis for determining the magnitude of the discount for lack of marketability.

2. The next step is to apply a discount for lack of marketability that increases the subject interest's rate of return to a level that achieves a sufficient increase in the rate of return to compensate for the lack of marketability of the interest being valued. There are three studies published in the 4th Edition of the Comprehensive Guide for the Valuation of Family Limited Partnerships that provide an indication of the increased return independent investors generally require over comparable marketable interests. The studies measure the increased return demanded by investors between Private Equity vs. Public Equity Investments, Restricted Stock vs. Publicly Traded Stock, and Horizon Risk (as measured by Long Term vs. Short Term Bond Returns). Based on these three studies, it is apparent that investors demanded approximately a 30% to 45% higher rate of return for the additional risk of holding a nonmarketable investment as compared to the same or comparable investment that is marketable.[2]

---

[2] Comprehensive Guide for the Valuation of Family Limited Partnerships – 4th Edition, (Dallas, Texas: Partnership Profiles, Inc., 2011), pgs. 123-143.

By applying a discount for lack of marketability, the subject interest's rate of return is increased to a level that achieves a rate of return that is sufficient to offset the risk due to the lack of marketability.

Conclusion

Typically, investors in third party transactions do not use the Asset Based Approach by applying average discounts to an investment's NAV to determine the market value of an interest. Rather, investors seek an appropriate return on their investment (Income Approach) or compare the subject interest to alternative investments (Market Approach) to determine a reasonable value. Discounts from net asset value can be used to check the reasonableness of the resulting value and are helpful in conveying a value to the client, but it should be noted that the discount is a result of a financial calculation and not a means to determine value.

Appraisers basing their valuations solely on the Asset Based Approach by primarily using discounts from net asset value run the risk of not being able to adequately support the discount taken. When the focus of a family limited partnership appraisal is on the resulting rate of return to the investor, the appraiser can determine a value that is supported based on market based rates of return and pricing ratios of third-party transactions of alternative investments.