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Discounts on Real Estate Partnership Interest—IRS Loses on Minority Interest, Wins on Lack of Marketability

Z. Christopher Mercer*

The Tax Court took elements from both parties' experts in arriving at a value for the limited partnership interest in Estate of Weinberg.

On 2/15/00, *Estate of Weinberg*[1] was decided. *Weinberg* is not a case about the marketability discount but about the minority-interest discount. The Tax Court stated:

> Dr. Kursh [the IRS's expert] then applied a marketability discount. In order to determine the amount of this discount, he used the Quantitative Marketability Discount Model (QMDM) that is described in a book written by Mr. Z. Christopher Mercer, entitled *Quantifying Marketability Discounts* (1997).[2]

and

> . . . . we did not find the QMDM helpful in this case.

Like every case, *Weinberg* is based on a particular set of facts and circumstances. It is helpful to review the case, the treatments of the valuation issues by the two experts and the court, to place the court's comments about the QMDM into proper perspective.

Facts

Etta H. Weinberg, the decedent, died on 12/15/92, the valuation date in this case. On the date of her death, the decedent possessed a general

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[1] TCM 2000-51.

[2] Peabody Publishing, LP.

power of appointment over the principal of a marital deduction trust that had been created under her late husband's will ("Trust A"). Trust A owned a 25.235% interest in Hill House Limited Partnership ("Hill House" or "the FLP"). Hill House owned and operated an 11-story, single-building apartment complex with 188 residential units, an office suite, an underground parking garage, and a swimming pool. The complex had been built in 1964. Occupancy exceeded 98% as of the valuation date.[3]

The building had a mortgage with four remaining monthly installments of principal and interest of $18,406. Other things remaining the same, the FLP's annual cash flow would increase by $220,872 ($18,406 x 12 months) within four months. The parties stipulated that the FMV of the apartment complex was $10,050,000. This was the average value of two real estate appraisals prepared in this matter ($9,600,000 and $10,500,000).

The Hill House Limited Partnership Agreement ("the Agreement") provided that the general partner had "sole discretion to determine when distributions are made" and that "such distributions shall be made pro rata to the Partners in accordance with their respective Percentage Interests." There was a restriction on transfer in the Agreement, giving all the other partners a right of first refusal for any interests any partner hoped to sell, on the same terms and conditions offered by a third party. The Agreement provided that the general partner had sole discretion to consent to or to deny the substitution of a limited partner, unless the purchaser of an interest was already a partner. Trust A's 25.235% interest was the largest limited partnership interest. There were also three interests of 14% to 15% each, three interests of approximately 9%, and a 3% interest in the FLP. The decedent's son was the sole general partner with a 1% interest.

During the period reviewed, Hill House experienced growth in net income and maintained a strong cash position while making substantial distributions of its earnings. Average distributions for the 1990-1992 period totaled $683,333, or 82% of net income.

The taxpayer's expert, Mr. Siwicki, concluded that the fair market value (FMV) of the subject interest was $971,838. Mr. Siwicki is an Accredited Senior Appraiser (ASA) with the American Society of Appraisers, and holds a master's degree in finance from the Wharton School.

Dr. Kursh was the valuation expert for the IRS. He concluded that the FMV of the subject interest was $1,770,103. Dr. Kursh is a Certified Business Appraiser (CBA) of the Institute of Business Appraisers and holds a doctorate in business administration from George Washington University.

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[3] Dr. Kursh visited the property in connection with his appraisal. He commented that the location of the property resulted in extremely low vacancy rates. He further stated that the property was visually in excellent condition, and that, according to management, there were no significant deferred maintenance issues.

The sole issue for the court's consideration was the FMV of the taxpayer's 25.235% interest in Hill House Limited Partnership. While the court summarized the valuations of the experts based on the subject interest, this article discusses the value of the partnership in its entirety to maintain visible relationships to net asset value and distributions.

The court concluded that the FMV of the taxpayer's interest was $1,309,651. Although there is a specific rationale for the court's conclusion, that conclusion is approximately a splitting of the difference between the two appraisals presented to the court.

Taxpayer's Position

The taxpayer's expert used two methods in arriving at his conclusion: (1) the capitalization of income method, and (2) a "net asset value method." Beginning with Partnership Profiles, Inc.'s May/June 1992 publication (covering 1991 transactions), *The Perspective*, the taxpayer's expert narrowed his search from all 85 publicly registered partnerships to seven that invested in residential property, had little or no debt, and made cash distributions to limited partners. In the final analysis, he relied on a single company, IDS/Balcor Income Properties, as the basis for his capitalization rate of 11%, and discount to net asset value (NAV) of 51%.

The taxpayer's expert capitalized the three-year average distributions of $683,333 using a capitalization rate of 11% to reach a value of $6.2 million. He capitalized a measure of distributions expected to be available to the limited partners and not the cash flow of the enterprise. He did not capitalize the higher level of 1992 distributions ($800,000), nor did he consider that potential annual distributions could soon exceed $1 million as result of the mortgage payoff in four months. In other words, it appears that the taxpayer's expert capitalized far less cash flow than was currently being distributed or that might reasonably be expected to be distributed in the near future.

The taxpayer's expert then applied the discount to NAV from the single comparable of 51% to the partnership's net asset value of $10.3 million to reach a net asset value of $5.9 million. However, the discount of 51% to NAV for the comparable was created because the yield on its NAV was not sufficient to induce a buyer to come forth at a higher price. For example, assume that the dividend of IDS/Balcor Income Properties was $1.00 per unit. If that dollar is priced to yield 11%, it would result in $9.09 per unit (i.e., $1.00 / 11%). Correspondingly, the $9.09 per unit price would represent a 51% discount to IDS/Balcor's NAV, so its NAV is $18.55 per unit (i.e., solving for X when $9.09 = (1 − .51X)).

There is no new information in the NAV calculation. It is simply a proxy for a capitalization of income, and not, strictly speaking, a net asset value

method. The reason that the taxpayer's capitalized income figure yields a higher indicated value results from Hill House's higher payout percentage relative to the selected comparable. The IRS expert indicated that he tried to explain this issue during his testimony. Unfortunately, the court either did not understand or did not agree with his explanation. The fact is, his interpretation is correct.

The taxpayer's expert used weights of 75% on his capitalization of income method and 25% on his net asset value method, yielding an indication of value prior to the application of his marketability discount of $5.9 million, or a 43% minority interest discount to NAV of Hill House of $10.3 million. The yield at this indication of value is 11.5% based on the three-year average distributions, and 13.5% based on 1992 distributions, before the application of a marketability discount.

At this point, the taxpayer's expert "reviewed various market studies on illiquid securities" to arrive at a 35% marketability discount. In particular, he relied on the 1971 SEC restricted stock study. After applying the 35% marketability discount, he concluded that the FMV of the limited partnership was $3.9 million, or 37% of net asset value of $10.3 million (i.e., a 63% discount from NAV). The value of the estate's interest of 25.235% was therefore $972,000. The yields implied by his conclusion are 17.7% based on three-year average distributions, and 20.8% based on 1992 distributions.

Government's Position

The IRS expert used only one method, capitalization of income, in valuing the subject interest. He used this method to determine an effective minority interest discount from NAV.

Beginning with the May/June 1993 issue of *The Perspective* published by Partnership Profiles, Inc. (covering 1992 transactions), the IRS expert selected partnerships that owned residential or commercial real estate. These partnerships also had low debt or leverage; had cash flows greater than their distributions and capital expenditures; and had assets valued by independent appraisers. Yields on the selected partnerships ranged from 9.3% to 11.6%, and the IRS expert selected a base rate of return of 10.45% (the median). He adjusted this yield for: (1) the lack of diversity of the subject (0.5%); (2) commonality of interests (– 1%), because the general partner was also a limited partner; and (3) distressed sales in the Partnership Profiles database (– 0.25%). His resulting yield applied for capitalization was 9.7%.

The IRS expert recognized that the mortgage would soon be paid off and that there would be a substantial increase in cash flow thereafter. He used distributions of $800,476 (after adjusting for his rounding) for 1992 as

the "minimum level that a potential buyer would anticipate." His reasons for this assumption included the long history of paying dividends, the known increase in cash flow in four months, the excellent condition of the property, and the fact that the general partner had substantial interests (direct and indirect) in the distributions to the limited partners. His resulting marketable minority indication of value was $8.3 million, or a 20% minority interest discount to net asset value of $10.3 million.

He used the QMDM to arrive at a marketability discount of 15%. He used a lower than "normal" marketability discount because a low discount was warranted by the facts, and the court agreed. There are five key assumptions to the QMDM. The court noted four of them. The expected growth rate of value was estimated at 3% to 4%, based on expected inflation. This is consistent with recent growth in earnings shown above. The IRS expert assumed that the expected growth rate in dividends would be in the same 3% to 4% range. This article uses 3.5% in its analysis.[4] His expected distribution yield was 10% ($800,000/ $8.3 million, rounded). He assumed a required holding-period return of 16.4%. He used a build-up method beginning with Treasury yields and added a total of 9.2% for a combined large and small stock premium. To his resulting base equity discount rate of 14.4% he added a 1% premium for holding-period uncertainty and another 1% premium for lack of diversification. He then bracketed this discount rate and assumed a relevant range of required returns of 16% to 18% in his analysis.

The IRS expert assumed that the expected holding period would be between ten and 15 years. He presented QMDM tables that, under his assumptions, yielded a marketability discount of 15%. The court's conclusion of 20% is also well within the range of judgment indicated by the IRS expert's assumptions.

Applying the 15% marketability discount to a capitalized income indication of $8.3 million yielded a value of $7 million for the FLP as a whole, and $1,770,103 for the taxpayer's interest. The yield at this conclusion is 9.7% based on three-year average distributions, and 11.4% based on 1992 distributions. The limited partners of Hill House do not have to wait for an ultimate sale for substantial liquidity. The general partner could elect to remortgage the property and make a special distribution in the near future, which could be repaid by lowering or eliminating current partnership distributions. There are obviously tax implications to such a strategy, but it is illustrative of the flexibility that existed with Hill House.

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[4] This assumption regarding the expected growth of distributions is clear from Kursh's report, although not noted by the court.

Court's Analysis

The court took elements from each of the experts in arriving at a value, before marketability discount, of $6.5 million. This represents an effective minority interest discount of 37%.

The taxpayer's valuation included three-year average distributions of $683,333. For some reason, the court did not consider the higher level of distributions in 1992 or the prospects for even higher distributions on payoff of the mortgage in four months. This is one of the major swing elements in value differentials; $800,476 is 17% higher than $683,333. The former appears quite reasonable, and the selection of the latter was a conservative assumption on the part of the court.

The IRS valuation included an adjusted percentage yield for the income capitalization method of 9.7%. Similar to the taxpayer's expert, the court applied a 53.4% (versus 51%) discount to NAV in a net asset value method. Again following the taxpayer's expert, the court used weights of 75% for the income capitalization and 25% for the NAV method. The value of $6.5 million represented a 37% discount from NAV of $10.3 million.

Regarding the marketability discount, the court did not agree with either expert. It dismissed the taxpayer's expert's reference to the standard restricted stock studies, indicating that he "failed adequately to take into account certain characteristics of the subject limited partnership interest that suggest a decrease in the marketability discount. These factors include consistent dividends, the nature of the underlying assets [real estate], and a low degree of financial leverage." The court concluded, without further explanation, that the marketability discount should be 20%. This result was much closer to the IRS expert's 15% marketability discount than the taxpayer's 35% and clearly within a reasonable range of judgment.

The court's conclusion as to the FMV of Hill House was $5.2 million, or 50% of NAV. The FMV of the taxpayer's 25.235% interest was therefore $1,309,651. The implied yields based on three-year average distributions and 1992 distributions were 13.2% and 15.4%, respectively.

Partnership Profiles Data and the Minority Interest Discount

The taxpayer's expert and the court used Partnership Profiles transaction data to determine a minority interest discount. In doing so, in the author's opinion, they overstated the effective minority interest discount. The IRS expert could be criticized for making the same mistake but to a much lesser degree (because he did not combine his yield capitalization with an NAV method). However, his use of the QMDM allowed him to reach a reasonable conclusion.

Some background regarding Partnership Profiles data is necessary to put these comments into perspective and assist in understanding the differences between the taxpayer's 43% minority interest discount, the court's 37% minority interest discount, and the 20% minority interest discount applied by the IRS. While there is a limited market for publicly traded limited partnerships, the market is not considered to be overly active or efficient. Publicly traded limited partnership interests are thinly traded in the secondary market compared to the activity of stocks in the primary markets, such as the New York Stock Exchange (NYSE). When an investor sells shares of a company traded on the NYSE, he or she can receive the cash proceeds in three days. However, it typically takes 60 to 180 days for an investor in publicly traded limited partnership units to complete the transaction and receive the cash proceeds, primarily because of the required paperwork with the general partner. Even with this delay, a publicly traded limited partnership interest is generally more liquid than a private limited partnership interest, causing the private interest normally to be worth less than a comparable publicly traded interest.[5]

In a presentation by Charles Elliott, ASA, of Howard, Frazier, Barker and Elliott, several aspects of the secondary market for limited partnership interests were discussed. The paper was presented at the 1998 Annual Business Valuation Conference of the AICPA.[6] Elliott's analysis of the secondary market is consistent with the implications of the QMDM.

What Elliott is saying is that the secondary market prices limited partnership interests in a rational manner that considers the economics and riskiness of ownership. That is also what the QMDM attempts to do.

Elliott goes on further to discuss the secondary market, indicating a flaw in the taxpayer's analysis regarding the marketability discount. Because the valuation reference source is the secondary market, it is inappropriate to use traditional lack of marketability discounts in the 30%-50% range. The reason is that the secondary market is a "thin market." As a consequence, there is an element of illiquidity already expressed in the pricing of units in the secondary market.

Various sources in the secondary market have suggested that additional yields of about 200 basis points may be required because of the illiquidity of the secondary market. This translates into a range of lack of marketability

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[5] Fishman, Pratt, et al, *Guide to Business Valuations* (Practitioners Publishing Company, Fort Worth, 1999) pp.14-18.

[6] Elliott, "An Outline of Valuation Considerations Related to Limited Partnerships," available through Shannon Pratt's Business Valuation Update web site at (http://www.bvupdate.com).

discounts of 15%-25%, to be applied to the value of a noncontrolling interest in a real estate FLP.

The taxpayer's expert considered the "illiquidity already expressed" mentioned by Elliott in his capitalization of distributions. He then further discounted by weighting a price/NAV method. Finally, he discounted further by applying a traditional lack-of-marketability discount of 35%. The compounding of discounts resulted in a low value with a high implied yield on expected distributions. This yield represented a premium to his 11% secondary-market pricing base of about 1000 basis points, far greater than Elliott's suggestion of 200 basis points. The court achieved a more reasonable result by applying a lower than traditional marketability discount. By using market returns from Partnership Profiles applied to the expected distributions of Hill House, the IRS expert developed a value indication reflecting approximately a 20% minority interest discount from NAV. His minority interest discount may be overstated somewhat due to the thinness of the secondary market. However, by basing his expected yield on this value, the QMDM mitigated any overstatement of the marketability discount.

Basing Assumptions on "Hard Data"

The court "did not find the QMDM helpful in this case" because it said certain assumptions made by the IRS expert were "not based on hard data." The expected growth rate in value of 3% to 4% was consistent with recent historical growth in rental revenues and with expected inflation. The distribution yield of 10% was based on the most recent year's distributions and his capitalized distribution result of $8.3 million, as well as reference to market yields. While the court used a recent average of distributions, the IRS expert's assumption was clearly observable and based on factual information. His expected holding period was between ten and 15 years. There is little information in the court's decision to support this; however, the court did not question this assumption. Assumptions about expected holding periods cannot be made based on hard data absent a contractual agreement for liquidity at a specific time and on a specific basis. The IRS expert was faced with making a decision based on available information.

The apartment building had been in the Weinberg family for 28 years as of the valuation date in 1992. The Hill House partnership was formed in 1980. The IRS expert knew that the general partner was in his late 50s or 60s. There was no evidence of plans to sell the apartment building. It was in excellent condition and providing excellent cash flow. In short, it appeared reasonable to have assumed a relatively long holding period and unreason-

able to assume a short one. Finally, there is the IRS expert's assumption about the required holding-period return. He used a 16.4% required return and then referred to a range of discounts from 16% to 18%. His build-up methodology is discussed above. His judgments in this derivation were consistent with his judgments when developing his cash-flow capitalization rate (which the court adopted). In short, his required holding period return appeared to be well supported by market evidence and reasonable judgments.

Referring back to the discussion from Fishman[7] above:

> Understanding how publicly traded limited partnerships are priced is essential to determining the fair market value of FLP interests. The total expected return for publicly traded limited partnerships generally ranges from 16% to 22%.

Examining the IRS expert's assumptions in this light, he has assumed a total rate of return in the range of 19% (16% lower-range return plus 3% inflation) to 22% (18% higher-range of return plus 4% inflation). While sometimes total returns somewhat higher than this are encountered, the IRS expert's results appear clearly within the range of known market data (and the same market data relied on by the court).

Based on the review of the case and the IRS expert's report, it appears that he used information that was factually based and within the range of reasonable comparisons with market data in his application of the QMDM. It is unfortunate, but the court was apparently not convinced of the reasonableness of the IRS expert's assumptions and their consistency with "hard data" in his report and otherwise readily available.

Alternative Calculations

The IRS expert used an effective 20% minority interest discount, with the taxpayer's expert and the court advancing even higher minority interest discounts of 43% and 37%, respectively. In fact, many appraisers reference studies of closed-end funds and other market data to suggest minority interest discounts of 10% to 15%. Below are a series of alternative calculations using this lower range of assumptions to show how the QMDM interrelates with differing minority-interest discounts to develop appropriate marketability discounts. These calculations are in the context of the assumptions used in the case regarding distributions (either that a three-year average was appropriate or that the 1992 level was appropriate).

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[7] Note 5, *supra*.

They are further made in the context of the IRS expert's QMDM assumptions. While in an independent analysis, the author may have made somewhat different assumptions, the IRS assumptions appear generally reasonable and supported by the facts and circumstances of the case.

Since the relevant distribution yield in the QMDM is the yield at the marketable minority level, somewhat different distribution yields could be used. The author suggests performing a more detailed distribution analysis to convert the yield to a C corporation equivalent yield. So the distribution yields vary based on the indicated distributions (three-year and 1992) and minority interest discounts (10% and 15%), relative to the higher minority interest discounts and lower marketable minority indications used by the valuation experts in *Weinberg*.

Several observations regarding the alternative calculations are as follows. The calculations using minority interest discounts of 10% and 15% and expected distributions of $800,000 yield conclusions of $7.1 million and $6.9 million, respectively. These indications are virtually identical to the IRS expert's conclusion of $7 million using a 20% minority-interest discount. All three calculations are valuing the same set of expected cash flows to limited partners. The differences in the assumptions are reconciled by different concluded marketability discounts (15% for the IRS expert and 21% and 24% in the alternative calculations).

This is not surprising. Hypothetical and real investors pay a price for an investment in the hope of achieving a target expected return. They do not care what the minority interest or marketability discounts might be. These discounts are tools used by appraisers to simulate the thinking of investors. As mentioned previously, all three calculations value the same expected cash flows and should yield similar results. In this regard, the QMDM is a forgiving tool. Inaccurate estimates in the minority-interest discount tend to be offset by yield adjustments relative to the concluded marketable minority indications (for high-distribution entities in particular).

The calculations that assume the three-year average distribution yield indications of $6.2 million and $6.3 million for assumed minority-interest discounts of 15% and 10%, respectively. These are higher than the court's conclusion of $5.2 million, and the taxpayer's expert's conclusion of $3.9 million. The lower level of expected distributions (relative to the 1992 level) requires higher marketability discounts (32% and 29%, respectively). In other words, given a level of net asset value, a lower level of expected distributions requires a lower price. This observation is also consistent with Partnership Profiles data, which suggests that low- or non-distributing partnerships are priced at higher discounts to NAV than higher-yielding partnerships.

Because the court's effective 37% minority-interest discount includes significant elements of a marketability discount, the application of a 20% marketability discount (larger than the IRS expert's calculated discount of 15%) overstates the effective marketability discount relative to the alternate calculations with similar assumptions (and yields a lower conclusion).

To put a final perspective on this issue, the court's conclusion represents a 13.2% yield based on capitalized distributions and 15.4% on likely distributions at the 1992 level of $800,000. It also represents a 50% discount to net asset value for an attractive, established, high-distributing limited partnership interest. From an investment viewpoint, many taxpayers with much less attractive partnerships would be ecstatic with this result. The *Weinberg* estate should definitely be pleased with the result.

Conclusion

The IRS expert's analysis using the QMDM was helpful to the court. It kept a clear focus on the impact of distribution yield on value. It allowed the court for the first time (at least in a published decision) to focus on all the critical QMDM factors. It also gave the court a reason to reach a conclusion of FMV that was far more reasonable than that advanced by the taxpayer's expert. It appears that the IRS expert "won" the battle over the appropriate marketability discount. He "lost" the battle over the appropriate minority-interest discount. It is unfortunate that the court's comments seem critical of the QMDM, because the court's conclusion is entirely consistent with its application by the IRS expert.

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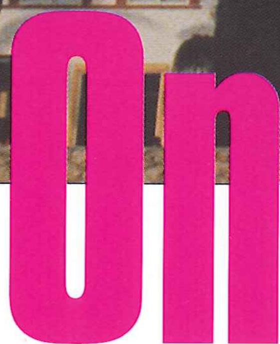
IT'S NOT ABOUT MARKETABILITY, IT'S ABOUT MINORITY INTEREST

Z. CHRISTOPHER MERCER, ASA, CFA

Estate of Weinberg **is not a case about the marketability discount as may first appear, but about the minority-interest discount.**



February 15th, *Estate of Etta H. Weinberg*[1] was decided. The Tax Court stated:

> Dr. Kursh [the IRS's expert] then applied a marketability discount. In order to determine the amount of this discount, he used the Quantitative Marketability Discount Model (QMDM) that is described in a book written by Mr. Z. Christopher Mercer, entitled *Quantifying Marketability Discounts* (1997).[2]

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Weinberg is not a case about the marketability discount but about the minority-interest discount. The taxpayer's expert, Robert M. Siwicki, concluded that the fair market value (FMV) of the subject interest was $971,838. Mr. Siwicki is an Accredited Senior Appraiser (ASA) with the American Society of Appraisers, and holds a master's degree in finance from the Wharton School.

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Facts

Etta H. Weinberg, the decedent, died on 12/15/92, the valuation date in this case. On the date of her death, she possessed a general power of appointment over the principal of a marital deduction trust that had been created under her late husband's will ("Trust A"). Trust A owned a 25.235% interest in Hill House Limited Partnership ("Hill House" or "the FLP"). Hill House owned and operated an 11-story, single-building apartment complex with 188 residential units, an office suite, an underground parking garage, and a swimming pool. The complex had been built in 1964. Occupancy exceeded 98% as of the valuation date.[3]

The building had a mortgage with four remaining monthly installments of principal and interest of $18,406. Other things remaining the same, the FLP's annual cash flow would increase by $220,872 ($18,406 × 12 months) within four months. The parties stipulated that the FMV of the apartment complex was $10,050,000. This was the average value of two real estate appraisals ($9,600,000 and $10,500,000).

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The court concluded that the FMV of the taxpayer's interest was $1,309,651. Although there is a specific valuation rationale for the court's conclusion, that conclusion is approximately a splitting of the difference between the two appraisals presented to the court.

The Taxpayer's Valuation

The taxpayer's expert used two methods in arriving at his conclusion: the capitalization of income method and a "net asset value method." He effectively used a single method. Beginning with Partnership Profiles, Inc.'s May/June 1992 publication (covering 1991 transactions), *The Perspective*, the taxpayer's expert narrowed his search from all 85 publicly registered partnerships to seven that invested in residential property, had little or no debt, and made cash distributions to limited partners. In the final analysis, he relied on a single company, IDS/Balcor Income Properties, as the basis for his capitalization rate of 11%, and discount to net asset value (NAV) of 51%.

The taxpayer's expert capitalized the three-year average distributions of $683,333 using a capitalization rate of 11% to reach a value of $6.2 million. He capitalized a measure of distributions expected to be available to the limited partners and not the cash flow of the enterprise. He did not capitalize the higher level of 1992 distributions ($800,000), nor did he consider that potential annual distributions could soon exceed $1 million as result of the mortgage payoff in four months. In other words, it appears that the taxpayer's expert capitalized far less cash flow than was currently being distributed or that might reasonably be expected to be distributed in the near future.

The taxpayer's expert then applied the discount to NAV from the single comparable of 51% to the partnership's net asset value of $10.3 million to reach a net asset value of $5.9 million. However, the discount of 51% to NAV for the comparable was created because the yield on its NAV was not sufficient to induce a buyer to come forth at a higher price. For example, assume that the dividend of IDS/Balcor Income Properties was $1.00 per unit. If that dollar were priced to yield 11%, it would result in $9.09 per unit (i.e., $1.00 / 11%). Correspondingly, the $9.09 per unit price would represent a 51% discount to IDS/Balcor's NAV, so its NAV would be $18.55 per unit (i.e., solving for X when $9.09 = (1 - .51X)).

There is no new information in the NAV calculation. It is simply a proxy for a capitalization of income, and not, strictly speaking, a net asset value method. That the taxpayer's capitalized income figure yields a higher indicated value results from Hill House's higher payout percentage relative to the selected comparable. The IRS expert indicated that he tried to explain this issue during his testimony. Unfortunately, the court either did not understand or did not agree with his explanation. The fact is, his interpretation is correct.

The taxpayer's expert used weights of 75% on his capitalization of income method and 25% on his net asset value method, yielding an indication of value prior to the application of his marketability discount of $5.9 million, or a 43% minority-interest discount to net asset value of Hill House of $10.3 million. The yield at this indication of value is 11.5% based on the three-year average distributions, and 13.5% based on 1992 distributions, before the application of a marketability discount.

At this point, the taxpayer's expert "reviewed various market studies on illiquid securities" to arrive at a 35% marketability discount. In particular, he relied on the 1971 SEC restricted stock study. After applying the 35% marketability discount, he concluded that the FMV of the limited partnership was $3.9 million, or 37% of net asset value of $10.3 million (i.e., a 63% discount from NAV). The value of the estate's interest of 25.235% was therefore $972,000. The yields implied by his conclusion are 17.7% based on three-year average distributions, and 20.8% based on 1992 distributions.

The Government's Valuation

The IRS expert used only one method, a capitalization of income method, in valuing the subject interest. He used this method to determine an effective minority-interest discount from NAV.

Beginning with the May/June 1993 issue of *The Perspective* published by Partnership Profiles, Inc. (covering 1992 transactions), the IRS expert selected

partnerships that owned residential or commercial real estate. These partnerships also had low debt or leverage, had cash flows greater than their distributions and capital expenditures, and had assets valued by independent appraisers. Yields on the selected partnerships ranged from 9.3% to 11.6%, and the IRS expert selected a base rate of return of 10.45% (the median). He adjusted this yield for: (1) the lack of diversity of the subject (0.5%); (2) commonality of interests (-1%), because the general partner was also a limited partner; and (3) distressed sales in the Partnership Profiles database (-0.25%). His resulting yield applied for capitalization was 9.7%.

The IRS expert recognized that the mortgage would soon be paid off and that there would be a substantial increase in cash flow thereafter. He used distributions of $800,476 (after adjusting for his rounding) for 1992 as the "minimum level that a potential buyer would anticipate." His reasons for this assumption included the long history of paying dividends, the known increase in cash flow in four months, the excellent condition of the property, and the fact that the general partner had substantial interests (direct and indirect) in the distributions to the limited partners. His resulting marketable minority indication of value was $8.3 million, or a 20% minority interest discount to net asset value of $10.3 million.

He used the QMDM to arrive at a marketability discount of 15%. He used a lower than "normal" marketability discount because a low discount was warranted by the facts, and the court agreed. There are five key assumptions to the QMDM. The court noted four of them. The expected growth rate of value was estimated at 3% to 4%, based on expected inflation. This is consistent with recent growth in earnings shown above. The IRS expert assumed that the expected growth rate in dividends would be in the same 3% to 4% range. This article uses 3.5% in its analysis.[4]

His expected distribution yield was 10% ($800,000/ $8.3 million, rounded). He assumed a required holding-period return of 16.4%. He used a build-up method beginning with Treasury yields and added a total of 9.2% for a combined large and small stock premium. To his resulting base equity discount rate of 14.4% he added a 1% premium for holding-period uncertainty and another 1% premium for lack of diversification. He then bracketed this discount rate and assumed a relevant range of required returns of 16% to 18% in his analysis.

The IRS expert assumed that the expected holding period would be between ten and 15 years. He presented QMDM tables that, under his assumptions, yielded a marketability discount of 15%. The court's conclusion of 20% is also well within the range of judgment indicated by the IRS expert's assumptions.

Applying the 15% marketability discount to a capitalized income indication of $8.3 million yielded a value of $7 million for the FLP, and $1,770,103 for the taxpayer's interest. The yield at this conclusion is 9.7% based on three-year average distributions, and 11.4% based on 1992 distributions.

The limited partners of Hill House do not have to wait for an ultimate sale for substantial liquidity. The general partner could elect to remortgage the property and make a special distribution in the near future, which could be repaid by lowering or eliminating current partnership distributions. There are obviously tax implications to such a strategy, but it is illustrative of the flexibility that existed with Hill House.

The Court's Analysis

The court took elements from each of the experts in arriving at a value, before marketability discount, of $6.5 million. This represents an effective minority-interest discount of 37%.

The taxpayer's valuation included three-year average distributions of $683,333. For some reason, the court did not consider the higher level of distributions in 1992 or the prospects for even higher distributions on payoff of the mortgage in four months. This is one of the major swing elements in value differentials; $800,476 is 17% higher than $683,333. The former appears quite reasonable, and the selection of the latter was a conservative assumption on the part of the court.

The IRS valuation included an adjusted percentage yield for the income capitalization method of 9.7%. Similar to the taxpayer's expert, the court applied a 53.4% (versus 51%) discount to NAV in a net asset value method. Again following the taxpayer's expert, the court used weights of 75% for the income capitalization and 25% for the net asset value method. The value of $6.5 million represented a 37% discount from NAV of $10.3 million.

Regarding the marketability discount, the court did not agree with either expert. It dismissed the taxpayer's expert's reference to the standard restricted stock studies, indicating that he "failed adequately to take into account certain characteristics of the subject limited partnership interest that suggest a decrease in the marketability discount. These factors include consistent dividends, the nature of the underlying assets, and a low degree of financial leverage." The court concluded, without further explanation, that the marketability discount should be 20%. This result was much closer to the IRS expert's 15% marketability discount than the taxpayer's 35% and clearly within a reasonable range of judgment.

The court's conclusion of the FMV of Hill House was $5.2 million, or 50% of NAV. The FMV of the taxpayer's 25.235% interest was therefore $1,309,651. The implied yields based

1 TCM 2000-51.

2 Peabody Publishing, LP.

3 Dr. Kursh visited the property in connection with his appraisal. He commented that the location of the property resulted in extremely low vacancy rates. He further stated that the property was visually in excellent condition, and that, according to management, there were no significant deferred maintenance issues.

4 This assumption regarding the expected growth of distributions is clear from Kursh's report, although not noted by the court.

5 Fishman, Pratt, et al, *Guide to Business Valuations* (Practitioners Publishing Company, Fort Worth, 1999) pp.14-18.

6 Elliott, "An Outline of Valuation Considerations Related to Limited Partnerships," available through Shannon Pratt's Business Valuation Update web site at (http://www.bvupdate.com).

7 Note 5, *supra*.

on three-year average distributions and 1992 distributions were 13.2% and 15.4%, respectively.

Partnership Profiles Data and the Minority-Interest Discount

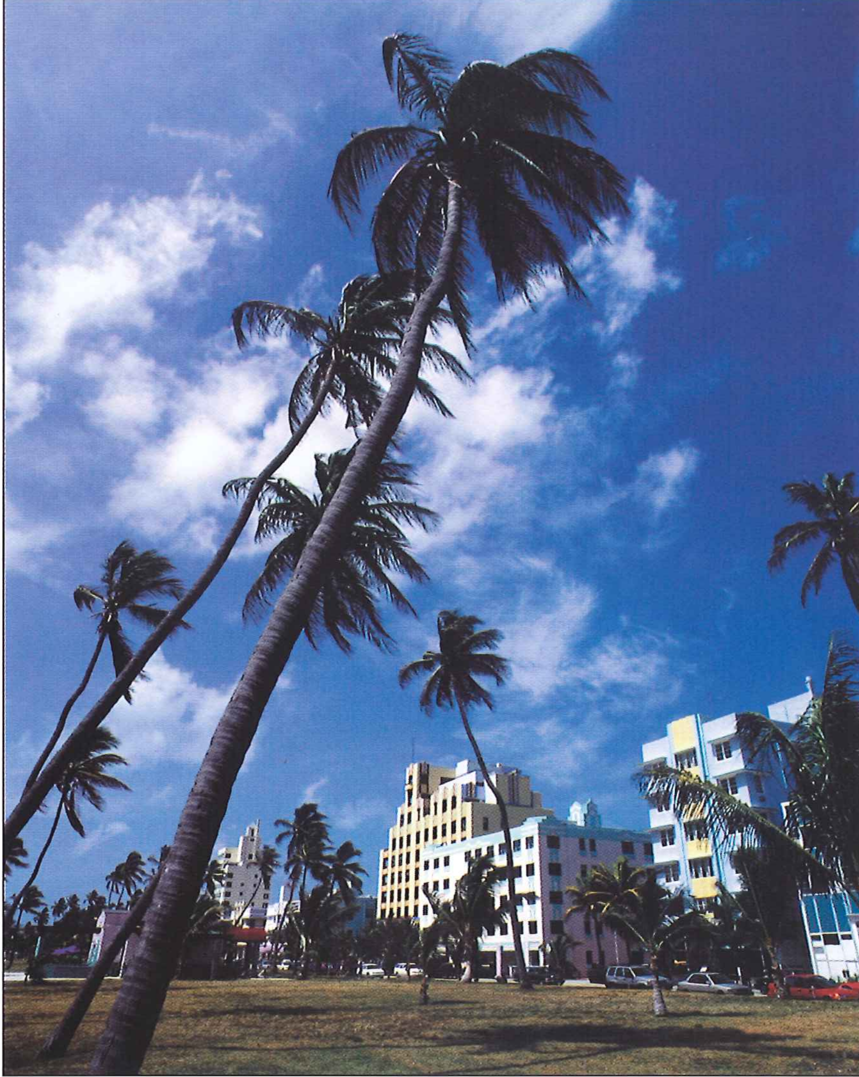
The taxpayer's expert and the court used Partnership Profiles' transaction data to determine a minority interest discount. In doing so, in the author's opinion, they overstated the effective minority interest discount. The IRS expert could be criticized for making the same mistake but to a much lesser degree (because he did not combine his yield capitalization with a net asset value method). However, his use of the QMDM allowed him to reach a reasonable conclusion.

Some background regarding Partnership Profiles' data is necessary to put these comments into perspective and assist in understanding the differences between the taxpayer's 43% minority-interest discount, the court's 37% minority-interest discount, and the 20% minority-interest discount applied by the IRS. While there is a limited market for publicly traded limited partnerships, the market is not considered to be overly active or efficient. Publicly traded limited partnership interests are thinly traded in the secondary market compared to the activity of stocks in the primary markets, such as the New York Stock Exchange (NYSE). When an investor sells shares of a company traded on the NYSE, he or she can receive the cash proceeds in three days. However, it typically takes 60 to 180 days for an investor in publicly traded limited partnership units to complete the transaction and receive the cash proceeds, primarily because of the required paperwork with the general partner. Even with this delay, a publicly traded limited partnership interest is generally more liquid than a private limited partnership interest, causing the private interest normally to be worth less than a comparable publicly traded interest.[5]

In a presentation by Charles Elliott, ASA, of Howard, Frazier, Barker and Elliott, several aspects of the secondary market for limited partnership interests were discussed. The paper was presented at the 1998 Annual Business Valuation Conference of the AICPA.[6] Elliott's analysis of the secondary market is consistent with the implications of the QMDM.

What Elliott said is that the secondary market prices limited partnership interests in a rational manner that considers the economics and riskiness of ownership. That is also what the QMDM attempts to do.

Elliott's discussion of the secondary market indicates a flaw in the taxpayer's



analysis regarding the marketability discount. Because the valuation reference source is the secondary market, it is inappropriate to use traditional lack-of-marketability discounts in the 30%-50% range. The reason is that the secondary market is a "thin market." As a consequence, there is an element of illiquidity already expressed in the pricing of units in the secondary market.

Various sources in the secondary market have suggested that additional yields of about 200 basis points may be required because of the illiquidity of the secondary market. This translates into a range of lack-of-marketability discounts of 15%-25%, to be applied to the value of a noncontrolling interest in a real estate FLP.

The taxpayer's expert considered the "illiquidity already expressed" mentioned by Elliott in his capitalization of distributions. The taxpayer's expert then further discounted by weighting a price/NAV method. Finally, he discounted further by applying a traditional lack-of-marketability discount of 35%. The compounding of discounts resulted in a low value with a high implied yield on expected distributions. This yield represented a premium to his 11% secondary-market-pricing base of about 1000 basis points, far greater than Elliott's suggestion of 200 basis points. The court achieved a more reasonable result by applying a lower than traditional marketability discount.

By using market returns from Partnership Profiles applied to the expected distributions of Hill House, the IRS expert developed a value indication reflecting approximately a 20% minority-interest discount from NAV. His minority-interest discount may be overstated somewhat due to the thinness of the secondary market. However, by basing his expected yield on this value, the QMDM mitigated any overstatement of the marketability discount.

Basing Assumptions on 'Hard Data'

The court "did not find the QMDM helpful in this case" because it said certain assumptions made by the IRS expert were "not based on hard data." The expected growth rate in value of 3% to 4% was consistent with recent historical growth in rental revenues and with expected inflation. The distribution yield of 10% was based on the most recent year's distributions and his capitalized distribution result of $8.3 million, as well as reference to market yields. While the court used a recent average of distributions, the IRS expert's assumption was clearly observable and based on factual information. His expected holding period was between ten and 15 years. There is little information in the court's decision to support this; however, the court did not question this assumption. Assumptions about expected holding periods cannot be made based on hard data absent a contractual agreement for liquidity at a specific time and on a specific basis. The IRS expert was faced with making a decision based on available information.

The apartment building had been in the Weinberg family for 28 years as of the valuation date in 1992. The Hill House partnership was formed in 1980. The IRS expert knew that the general partner was in his late 50s or 60s. There was no evidence of plans to sell the apartment building. It was in excellent condition and providing excellent cash flow. In short, it appeared reasonable to assume a relatively long holding period and unreasonable to assume a short one. Finally, there is the IRS expert's assumption about the required holding-period return. He used a 16.4% required return and then referred to a range of discounts from 16% to 18%. His build-up methodology is discussed above. His judgments in this derivation were consistent with his judgments when developing his cash-flow capitalization rate (which the court adopted). In short, his required holding period return appeared to be well supported by market evidence and reasonable judgments.

Referring back to the discussion from Fishman[7] above:

> Understanding how publicly traded limited partnership are priced is essential to determining the fair market value of FLP interests. The total expected return for publicly traded limited partnerships generally ranges from 16% to 22%.

Examining the IRS expert's assumptions in this light, he assumed a total rate of return in the range of 19% (16% lower-range return plus 3% inflation) to 22% (18% higher-range of return plus 4% inflation). While sometimes total returns somewhat higher than this are encountered, the IRS expert's results appear clearly within the range of known market data (and the same market data relied on by the court).

Based on the review of the case and the IRS expert's report, it appears that he used information that was factually based and within the range of reasonable comparisons with market data in his application of the QMDM. It is unfortunate, but the court was apparently not convinced of the reasonableness of the IRS expert's assumptions and their consistency with "hard data" in his report and otherwise readily available.

Alternative Calculations

The IRS expert used an effective 20% minority-interest discount, with the taxpayer's expert and the court advancing even higher minority-interest discounts of 43% and 37%, respectively. The author has suggested that the higher minority-interest discounts are too high. In fact, many appraisers reference studies of closed-end funds and other market data to suggest minority-interest discounts on the order of 10% to 15%. Below are a series of alternative calculations using this lower range of assumptions to show how the QMDM interrelates with differing minority-interest discounts to develop appropriate marketability discounts. These calculations are in the context of the assumptions used in the case regarding distributions (either that a three-year average was appropriate or that the 1992 level was appropriate).

They are further made in the context of the IRS expert's QMDM assumptions. Although the author may have made somewhat different assumptions in an independent analysis, the IRS assumptions appear generally reasonable and supported by the facts and circumstances of the case.

Since the relevant distribution yield in the QMDM is the yield at the marketable minority level, somewhat different distribution yields could be used. The author suggests performing a more detailed distribution analysis to convert the yield to a C corporation-equivalent yield. So the distribution yields vary based on the indicated distributions (three-year and 1992) and minority-interest discounts (10% and 15%), relative to the higher minority-interest discounts and lower marketable minority indications used by the valuation experts in *Weinberg*.

The calculations using minority-interest discounts of 10% and 15% and expected distributions of $800,000 yield conclusions of $7.1 million and $6.9 million, respectively. These indications are virtually identical to the IRS expert's conclusion of $7 million using a 20% minority-interest discount. All three calculations value the same set of expected cash flows to limited partners. The differences in the assumptions are reconciled by different concluded marketability discounts (15% for the IRS expert and 21% and 24% in the alternative calculations).

This is not surprising. Hypothetical and real investors pay a price for an investment in the hope of achieving a target expected return. They do not care what the minority interest or marketability discounts might be. These discounts are tools used by appraisers to simulate the thinking of investors. As mentioned previously, all three calculations value the same expected cash flows and should yield similar results. In this regard, the QMDM is a forgiving tool. Inaccurate estimates in the minority-interest discount tend to be offset by yield adjustments relative to the concluded marketable minority indications (for high-distribution entities in particular).

The calculations that assume the three-year average distribution yield indications of $6.2 million and $6.3 million for assumed minority-interest discounts of 15% and 10%, respectively. These are higher than the court's 0conclusion of $5.2 million, and the taxpayer's expert's conclusion of $3.9 million. The lower level of expected distributions (relative to the 1992 level) requires higher marketability discounts (32% and 29%, respectively). In other words, given a level of net asset value, a lower level of expected distributions requires a lower price. This observation is also consistent with Partnership Profiles data, which suggests that low- or non-distributing partnerships are priced at higher discounts to NAV than higher-yielding partnerships.

Because the court's effective 37% minority-interest discount included significant elements of a marketability discount (see discussion above), the application of a 20% marketability discount (larger than the IRS expert's calculated discount of 15%) overstated the effective marketability discount relative to the alternate calculations with similar assumptions (and yields a lower conclusion).

To put some final perspective on this issue, the court's conclusion represents a 13.2% yield based on capitalized distributions and 15.4% on likely distributions at the 1992 level of $800,000. It also represents a 50% discount to net asset value for an attractive, established, high-distributing limited partnership interest. From an investment viewpoint, many taxpayers with much less attractive partnerships would be ecstatic with this result. The *Weinberg* estate should definitely be pleased with it.

Conclusion

The IRS expert's analysis using the QMDM was helpful to the court. It kept a clear focus on the impact of distribution yield on value. It allowed the court for the first time (at least in a published decision) to focus on all the critical QMDM factors. It also gave the court a reason to reach a conclusion of FMV that was far more reasonable than that advanced by the taxpayer's expert. As should be clear from the analysis above, it appears that the IRS expert "won" the battle over the appropriate marketability discount. He "lost" the battle over the appropriate minority-interest discount. It is unfortunate that the court's comments seem critical of the QMDM, because the court's conclusion is entirely consistent with its application by the IRS expert. ●

Weinberg et al. v. Commissioner - It's Not About the Marketability Discount

By Z. Christopher Mercer, ASA, CFA

This article originally appeared in Mercer Capital's E-Law newsletter 2000-03 and 2000-04, March 13, 2000

INTRODUCTION

On February 15th, the *WEINBERG* case was filed in US Tax Court. [Estate of Etta H.Weinberg, et al, v. Commissioner, T.C. Memo 2000-51. View the case at the US Tax Court website at http://www.ustaxcourt.gov/InOpHistoric/WEINBERG.TCM.WPD.pdf].

Since we had just reported in this year's first E-LAW that we were unaware of any published opinions in which the QMDM was discussed, I was rather excited to read the case [E-Law 2000-01]. I received a copy on February 19th and pages 20 and 28 were flagged for my attention. I quickly turned to page 20 and read:

> "Dr. Kursh [who was the IRS' expert] then applied a marketability discount. In order to determine the amount of this discount, he used the Quantitative Marketability Discount Model (QMDM) that is described in a book written by Mr. Z. Christopher Mercer [yes, that's me] entitled *QUANTIFYING MARKETABILITY DISCOUNTS* (1997)." [I would be remiss without saying at this point that the book is available from the publisher, Peabody Publishing, LP at 1-800-769-0967.]

I then turned to page 28 where I read:

> ". . . we did not find the QMDM helpful in this case."

Wow! My first reactions were irritation, worry, and anxiety, not necessarily in that order. This was the first reported case to my knowledge in which the QMDM has been addressed and things didn't look so good.

But, like every case, *WEINBERG* is based on a particular set of facts and circumstances. We need to review the case, the treatments of the valuation issues by the two experts and the Court in order to place Judge Whalen's comments about the QMDM into proper perspective.

Let me say that after reviewing the case, I believe the Court DID find the QMDM helpful, as is proven by the results of the case. In fact, *WEINBERG* is not a case about the marketability discount but about the minority interest discount!

The conclusions of the experts and the Court are summarized in Table 1 so readers can see where we are headed at the outset.

Value Indications for Hill House, LP ($000's)	Expert for Taxpayer (Siwicki)	Expert for IRS (Kursh)	Court	Court's Differences to Siwicki	Court's Differences to Kursh
Net Asset Value (Stipulated)	$10,332	$10,332	$10,332		
Minority Interest Discounts %	42.7%	20.1%	37.2%	-5.5%	17.1%
Minority Interest Discounts $	($4,412)	($2,077)	($3,844)	$568	($1,767)
Marketable Minority Indications	**$5,920**	**$8,255**	**$6,488**		
Marketability Discounts %	35.0%	15.0%	20.0%	-15.0%	5.0%
Marketability Discounts $	($2,072)	($1,238)	($1,298)	$774	($59)
Nonmarketable Minority Indications	$3,848	$7,017	$5,191	$1,343	($1,826)

Table 1

The experts in the case were:

- Mr. Robert M. Siwicki, Howard, Lawson & Co., representing the taxpayer. He concluded that the fair market value of the subject interest was $971,838. Mr. Siwicki is an Accredited Senior Appraiser (ASA designation) with the American Society of Appraisers, and holds a master's degree in finance from the Wharton School.

- Dr. Samuel J. Kursh, representing the Internal Revenue Service. He concluded that the fair market value of the subject interest was $1,770,103. Dr. Kursh is a Certified Business Appraiser (CBA designation) of the Institute of Business Appraisers and holds a doctorate in business administration from George Washington University.

This E-LAW is based on the facts as presented in the Court's opinion. We supplemented our review of the opinion by obtaining a copy of Dr. Kursh's valuation report and talking briefly with him about his report. We chose to take time for a complete analysis of the case rather than responding quickly. Thanks to all of our readers who have called to let us know about the case or to inquire about our response. Here it is.

THE BASIC FACTS

Etta H. Weinberg, the decedent, died on December 15, 1992, the valuation date in this case. On the date of her death, the decedent possessed a general power of appointment over the principal of a marital deduction trust that had been created under her late husband's will referred to as Trust A. Trust A owned a 25.235% interest in Hill House Limited Partnership ("Hill House" or "the FLP"). Hill House owned and operated an 11-story, single building apartment complex that contained 188 apartments, an office suite, an underground parking garage, and a swimming pool. The complex had been built in 1964. Occupancy exceeded 98% as of the valuation date. [Dr. Kursh visited the property in connection his appraisal. He commented that the location of the property resulted in extremely low vacancy rates. He further stated that the property was visually in excellent condition, and that, according to management, there were no significant deferred maintenance issues.]

The apartment had a mortgage with four remaining monthly installments of principal and interest of $18,406. [Other things remaining the same, the FLP's annual cash flow was going to increase by $220,872 ($18,406 x 12 months) within four months.]

The parties stipulated that the fair market value of the apartment complex was $10,050,000. [This was the average value of two real estate appraisals prepared in this matter ($9,600,000 and $10,500,000)]

The Hill House Limited Partnership Agreement provided the general partner "sole discretion to determine when distributions are made" and that "such distributions shall be made pro rata to the Partners in accordance with their respective Percentage Interests." There was a restriction on transfer in the Agreement giving all the other partners a right of first refusal for any interests any partner hoped to sell on the same terms and conditions offered by a third party. And the agreement provided that the general partner had sole discretion to consent to or to deny the substitution of a limited partner, unless the purchaser of an interest was already a partner. Trust A's 25.235% interest was the largest limited partnership interest. There were three interests of 14% to 15% each, three more interests on the order of 9%, and a final 3% interest in the FLP. The decedent's son was the sole general partner with a 1% interest.

The financial statements summarized in the Court's opinion provided the information found in Table 2 which is supplemented by relevant calculations.

Hill House Limited Partnership Summary Financial Statements	1990	1991	1992	Compound Growth %	3-Year Averages
Rental income	$1,928,127	$2,003,912	$2,057,151	3.3%	
Total income	$1,996,306	$2,082,707	$2,137,058	3.5%	
Net income	$754,465	$893,678	$843,275	5.7%	$830,473
Distributions	$650,000	$600,000	$800,000	10.9%	$683,333
Distributions/Net income	86%	67%	95%		82%
Cash	$722,128	$836,450	$801,078	5.3%	$786,552
Mortgage payable	$810,211	$635,012	$48,544	na	

Table 2

During the period reviewed, Hill House experienced growth in net income and maintained a strong cash position while making substantial distributions of its earnings. Average distributions for the 1990-1992 period totaled $683,333, or 82% of net income. A market value balance sheet providing a stipulated net asset value is reproduced in Table 3.

Hill House Limited Partnership Net Asset Value	
Value of apartment complex	$10,050,000
Other assets (primarily cash)	$840,075
Total assets	$10,890,075
Liabilities	$557,306
Net asset value	$10,332,769

Table 3

The sole issue for the Court's consideration was the fair market value of the subject 25.235% interest in Hill House Limited Partnership. While the Court summarized the valuations of the experts based on the subject interest, we will discuss the value of the partnership in its entirety in order to maintain visible relationships to net asset value and to distributions as we proceed.

The Court concluded that the fair market value of the subject interest was $1,309,651. Although there is a specific valuation rationale for the Court's conclusion, we note that the conclusion is approximately a splitting of the difference between the two appraisals presented to the Court.

THE TAXPAYER'S VALUATION

Mr. Siwicki's valuation (on behalf of the taxpayer) is summarized in Table 4.

Hill House Limited Partnership Summary of Valuation Methodology of the Taxpayer's Expert					
Capitalization Approach				Weights	Product
Average distributions (1990-1992)		$683,333			
Percentage yield of single comp *(Partnership Profiles data May/June 1992)*		11.0%			
Capitalized income indicator *(Partnership Basis)*			$6,212,121	75%	$4,659,091
Net Asset Value Approach					
Net Asset Value of Hill House		$10,332,769			
Less Discount from single comp	51%	($5,269,712)			
Net asset value			$5,063,057	25%	$1,265,764
Indicated value before marketability discount				100%	$5,924,855
Implied Minority Interest discount		43%			
Marketability Discount				35%	-$2,073,699
Concluded value					**$3,851,156**
Value of the Subject Interest				25.235%	$971,839
Value as percentage of actual net asset value					37.3%
Yield based on average distributions					17.7%
Yield based on 1992 distributions					20.8%

Table 4

Mr. Siwicki used two methods in arriving at his conclusion, the capitalization of income method, and a "net asset value method." In reality, we will see that he effectively used a single method.

Beginning with Partnership Profiles, Inc.'s May/June 1992 publication (covering 1991 transactions), "The Perspective," Siwicki narrowed his search from all 85 publicly registered partnerships to seven that invested in residential property, had little or no debt, and made cash distributions to limited partners. In the final analysis, he relied on a single company, IDS/Balcor Income Properties, as the basis for his capitalization rate of 11.0%, and discount to net asset value (NAV) of 51%.

Siwicki capitalized the three-year average distributions of $683,333 using a capitalization rate of 11.0% to reach an indication of value of $6.2 million. Note that Siwicki is capitalizing a measure of distributions EXPECTED TO BE AVAILABLE TO THE LIMITED PARTNERS and not the cash flow of the enterprise. He did not capitalize the higher level of 1992 distributions ($800,000), nor did he consider that potential annual distributions could soon exceed $1.0 million as result of the mortgage expected pay-off in four months. In other words, it appears that Siwicki capitalized far less cash flow than the cash flow that was currently being distributed or that might reasonably be expected to be distributed in the near future.

Siwicki then applied the discount to NAV from the single comparable of 51% to the net asset value of $10.3 million to reach a "net asset value" of $5.9 million. Note, however, that the discount of 51% to NAV for the comparable was created because the yield on its NAV was not sufficient to induce a buyer to come forth at a higher price. For example, assume that the dividend of IDS/Balcor Income Properties was $1.00 per unit. If that dollar was priced to yield 11.0%, it was priced at $9.09 per unit (i.e., $1.00 / 11%). Correspondingly, the $9.09 per unit price represented a 51% discount to IDS/Balcor's NAV, so its NAV is $18.55 per unit (i.e., solving for X when $9.09 = (1 - .51X)). There is no new information in the NAV calculation. It is simply a proxy for a capitalization of income, and not, strictly speaking, a net asset value method. The reason that his capitalized income figure yields a higher indicated value results from Hill House's higher payout percentage relative to the selected comparable. [Dr. Kursh indicated that he tried to explain this issue during his testimony. Unfortunately, the Court either did not understand or did not agree with his explanation. The fact is, Kursh's interpretation is correct.] Siwicki used weights of 75% on his capitalization of income method and 25% on his net asset value method, yielding an indication of value prior to the application of his marketability discount of $5.9 million, or a 43% minority interest discount to net asset value of Hill House of $10.3 million. Note that the yield at this indication of value is 11.5% based on the 3-year average distributions, and 13.5% based on 1992 distributions, before the application of a marketability discount.

At this point, Siwicki "reviewed various market studies on illiquid securities" to arrive at a 35% marketability discount. In particular, he relied upon the 1971 SEC restricted stock study. After applying his 35% marketability discount, Siwicki concluded that the fair market value of the limited partnership was $3.9 million, or 37% of net asset value of $10.3 million (i.e., a 63% discount from NAV). The value of the subject interest of 25.235% was therefore $972 thousand. THE YIELDS IMPLIED BY HIS CONCLUSION ARE 17.7% BASED ON THREE-YEAR AVERAGE DISTRIBUTIONS AND 20.8% BASED ON 1992 DISTRIBUTIONS.

THE GOVERNMENT'S VALUATION

Dr. Kursh's valuation is summarized in Table 5 and commented on below.

Hill House Limited Partnership Summary of Valuation Methodology of the Government's Expert		
Capitalization of Earnings Method		
Distributions to Partners during 1992		**$800,476**
Average yield of 16 comparables	10.45%	
(Partnership Profiles data)		
+ Adjustment for lack of diversity	0.50%	
+ Adjustment for commonality	-1.00%	
+ Adjustment for distressed sales	-0.25%	
= Yield applied for capitalization		9.70%
Capitalized income distributable to partners		**$8,252,325**
Implied Minority Interest Discount=	20%	
Marketability Discount	15.00%	($1,237,849)
Concluded Value		**$7,014,476**
Value of the Subject Interest	25.235%	$1,770,103
Net Asset Value		**$10,332,769**
Value as percentage of actual net asset value		67.9%
Yield based on average distributions		9.7%
Yield based on 1992 distributions		11.4%

Table 5

Dr. Kursh used only one method, a capitalization of income method, in valuing the subject interest. He used this method to determine an effective minority interest discount from NAV.

Beginning with the May/June 1993 issue of "The Perspective" published by Partnership Profiles, Inc. (covering 1992 transactions) Kursh selected partnerships that owned residential and/or commercial real estate. These partnerships also had low debt or leverage, had cash flows greater than their distributions and capital expenditures, and had assets that were valued by independent appraisers. Yields on the selected partnerships ranged from 9.3% to 11.6%, and Kursh selected a base rate of return of 10.45% (the median). He adjusted this yield for: a) the lack of diversity of the subject (+0.50%); b) commonality of interests (-1.00%, because the general partner was also a limited partner; and, c) distressed sales in the Partnership Profiles data base (-0.25%). His resulting yield applied for capitalization was 9.7%. Kursh recognized that the mortgage would soon be paid off and that there would be a substantial increase in cash flow thereafter. He used distributions of $800,476 (after adjusting for his rounding) for 1992 as the "minimum level that a potential buyer would anticipate." [His reasons for this assumption included the long history of paying dividends, the known increase in cash flow in four months, the excellent condition of the property and the fact that the general partner had substantial interests (direct and indirect) in the distributions to the limited partners.] His resulting marketable minority indication of value was $8.3 million, or a 20% minority interest discount to net asset value of $10.3 million.

Kursh used the QMDM to arrive at a marketability discount of 15%. Now some jaded readers are likely to think that he used a lower than "normal" marketability discount because his client was the IRS. In fact, Kursh used a lower than "normal" marketability discount because a low discount was warranted by the facts! And the Court agreed.

There are five key assumptions to the QMDM. The Court noted four of them used by Kursh.

1. The expected growth rate of value was estimated at 3% to 4%, based on expected inflation. Note that this is consistent with recent growth in earnings shown above. We will use 3.5% in this analysis. Kursh assumed that the expected growth rate in dividends would be in the same 3% to 4% range. We will use 3.5% in our analysis. [This assumption regarding the expected growth of distributions is clear from Kursh's report, although not noted by the Court.]
2. His expected distribution yield was 10% ($800 thousand / $8.3 million, rounded).
3. He assumed a required holding period return of 16.4%. He used a build-up method beginning with Treasury yields and added a total of 9.2% for a combined large and small stock premium. To his resulting base equity discount rate of 14.4% he added a 1% premium for holding period uncertainty and another 1% premium for lack of diversification. He then bracketed this discount rate and assumed a relevant range of required returns of 16% to 18% in his analysis.
4. And Kursh assumed that the expected holding period would be between 10 and 15 years.

Kursh presented QMDM tables that, under his assumptions, yielded a marketability discount of 15%. His conclusion of 15% is highlighted for visual reference. The Court's conclusion of 20% is also shown to be well within the range of judgment indicated by Dr. Kursh's assumptions (see Table 6)!

Hill House Limited Partnership
Excerpt from QMDM Results
Kursh's Conclusion in Yellow | Court's Conclusion in Blue

Req'd Returns	Assumed Holding Periods in Years						
	10	11	12	13	14	15	16
16.0%	8%	9%	9%	10%	10%	10%	11%
17.0%	13%	14%	14%	15%	15%	16%	16%
18.0%	17%	18%	19%	20%	20%	21%	21%

Table 6

A detailed QMDM analysis summarizing Dr. Kursh's assumptions, and showing his conclusion regarding the marketability discount, that of the Court, and the investment indicated by the Court's variation on Kursh's assumptions is provided as Table 7.

Analysis of QMDM Factors as Presented in
Weinberg v. Commissioner
(Calculations Assume Annual Dividends Received at Mid-Year)

Base Value (Marketable Minority Interest)	$1.00
Expected Growth Rate of Underlying Value	3.5%
Expected Dividend Yield	10.0%
Expected Growth Rate of Dividend	3.5%

Beginning Table Return	15.0%
Increasing by	1.0%

Dr. Kursh: 16% - 18% 10-15 Years	14%
Court's Change 19%-21% 15-20 Years	30%

Dr. Kursh's Concluded Marketability Discount	15%
Court's Concluded Marketability Discount	20%
Court's Variations to Dr. Kursh	30%

Required Holding Period Return (Annual %)

Req'd Returns	As in QMDM Tables Presented in Book			Expanded Model to Better See Effects of Court's Changes to Kursh's Assumptions — Assumed Holding Periods Expanded to Show Differences										
	10	15	20	10	11	12	13	14	15	16	17	18	19	20
				Implied Marketability Discounts										
15.0%	3%	4%	5%	3%	3%	4%	4%	4%	4%	4%	5%	5%	5%	5%
16.0%	8%	10%	12%	8%	9%	9%	10%	10%	10%	11%	11%	11%	11%	12%
17.0%	13%	16%	17%	13%	14%	14%	15%	15%	16%	16%	17%	17%	17%	17%
18.0%	17%	21%	23%	17%	18%	19%	20%	20%	21%	21%	22%	22%	22%	23%
19.0%	21%	25%	27%	21%	22%	23%	24%	25%	25%	26%	26%	27%	27%	27%
20.0%	25%	29%	31%	25%	26%	27%	28%	29%	29%	30%	30%	31%	31%	31%
21.0%	28%	33%	35%	28%	30%	31%	31%	32%	33%	33%	34%	34%	35%	35%
22.0%	32%	36%	38%	32%	33%	34%	35%	36%	36%	37%	37%	38%	38%	38%
23.0%	35%	39%	41%	35%	36%	37%	38%	39%	39%	40%	40%	41%	41%	41%
24.0%	37%	42%	44%	37%	39%	40%	41%	41%	42%	43%	43%	43%	44%	44%

PV=100%

Dr. Kursh described an investment with a required holding period return of about 17% (16% to 18%) and an expected holding period of 10-15 years. The Court noted that "slight variations" in the assumptions used in the QMDM produce "dramatic differences" in the results. Dr. Kursh reproduced summary tables from *Quantifying Marketability Discounts* in his report which compress time horizons over ten years. These tables do not provide a visual impression of the difference between 10-15 years and 15-20 years. The figure here has been adjusted to show both the presentation from *Quantifying Marketability Discounts* and an expansion of the time periods between 10 and 20 years. The marked differences in the Court's changes to Dr. Kursh's assumptions are more visually clear in this fashion. In either case, it is clear that the Court's conclusion of a 20% marketability discount fits comfortably within the range of implied marketability discounts suggested by Dr. Kursh's analysis. The expanded figure also illustrates more clearly the impact of the Court's lengthened holding period and the increase in riskiness suggested in the example.

The Court's concluded marketability discount of 20% is shown for further persepective. It is clear that both the Court's and Dr. Kursh's conclusions are within the same band of assumptions regarding required return and holding period ranges.

In the illustration above, we have shown Dr. Kursh's QMDM assumptions and the Court's variations in one table so we can clearly see the impact of the differences on implied marketability discounts. The Court has described a much more risky investment (3% of incremental risk is significant) and one where the outlook for ultimate liquidity is much distant in the future. Significant differences in key assumptions can, indeed, create significant differences in results. The QMDM is designed to assist appraisers and courts understand the impact of these differences.

Table 7

Applying the 15% marketability discount to a capitalized income indication of $8.3 million yielded a value of $7.0 million for the FLP, and $1,770,103 for the subject interest. The yield at this conclusion is 9.7% based on 3-year average distributions, and 11.4% based on 1992 distributions.

[It should be clear by now that I believe that Dr. Kursh's analysis is closer to cosmic truth than Mr. Siwicki's. Consider another possibility. The limited partners of Hill House, LP do not have to wait for an ultimate sale for substantial liquidity. The general partner could elect to re-mortgage the property and make a special distribution in the near future, which mortgage could be repaid by lowering or eliminating current partnership distributions. There are obviously tax implications to such a strategy, but it is illustrative of the flexibility that existed with Hill House Limited Partnership.]

THE COURT'S ANALYSIS

The Court took elements from each of the appraisers in arriving at a value, before marketability discount, of $6.5 million as can be seen in Table 8. Note that this represents an effective minority interest discount of 37%. We will put this aspect of the Court's analysis into perspective below.

Hill House Limited Partnership
Summary of Valuation Methodology
Employed by the Court

				Weights	Product
Capitalization Approach					
Average distributions (1990-1992)		$683,333			
Percentage yield of single comp		9.7%			
Capitalized income indicator (Partnership Basis)			$7,044,674	75%	$5,283,505
Net Asset Value Approach					
Net Asset Value of Hill House		**$10,332,769**			
Less Discount from single comp	53.4%	($5,517,699)			
Net asset value			$4,815,070	25%	$1,203,768
Indicated value before marketability discount				100%	**$6,487,273**
Implied Minority Interest Discount		37%			
Marketability Discount				20%	-$1,297,455
Concluded value					$5,189,818
Value of the Subject Interest				25.235%	$1,309,651
Value as percentage of actual net asset value					50.2%
Yield based on average distributions					13.2%
Yield based on 1992 distributions					15.4%

Table 8

- From Siwicki, 3-year average distributions of $683,333. For some reason, the Court did not consider the higher level of distributions in 1992 or the prospects for even higher distributions upon pay-off of the mortgage in four months. [Note that this is one of the major swing elements in value differentials. $800,476 is 17% higher than $683,333. The former appears quite reasonable, and the selection of the latter was a very conservative assumption on the part of the Court.]

- From Kursh, an adjusted percentage yield for the income capitalization method of 9.7%.

- Similar to Siwicki, the Court applied a 53.4% (versus 51%) discount to NAV in a "net asset value method" (following the Siwicki methodology).

- Again following Siwicki, the Court used weights of 75% for the income capitalization and 25% for the net asset value method. The conclusion of $6.5 million represented a 37% discount from NAV of $10.3 million.

- Regarding the marketability discount, Judge Whalen did not agree with either expert. He dismissed Siwicki's reference to the standard restricted stock studies, indicating that he "failed adequately to take into account certain characteristics of the subject limited partnership interest that suggest a decrease in the marketability discount. These factors include consistent dividends, the nature of the underlying assets, and a low degree of financial leverage." Judge Whalen concluded, without further explanation, that the marketability discount should be 20%. This result was much closer to Kursh's 15% marketability discount than Siwicki's 35% conclusion and closely within a reasonable range at judgment.

The Court's conclusion of fair market value of Hill House was $5.2 million, or 50% of NAV. The fair market value of the 25.235% subject interest was therefore $1,309,651. The implied yields based 3-year average distributions and 1992 distributions were 13.2% and 15.4%, respectively.

PARTNERSHIP PROFILES DATA AND THE MINORITY INTEREST DISCOUNT

Mr. Siwicki and the Court (following Siwicki) used Partnership Profiles transaction data to determine a minority interest discount. In doing so, I believe they overstated the effective minority interest discount. Dr. Kursh could be criticized for making the same mistake but to a much lesser degree (because he did not combine his yield capitalization with a "net asset value method"). However, his use of the QMDM allowed him to derive a reasonable conclusion nonetheless.

We need some background regarding Partnership Profiles data to put these comments into perspective. They will assist in understanding the differences between Mr. Siwicki's 43% minority interest discount, the Court's 37% minority interest discount, and the 20% minority interest discount applied by Dr. Kursh.

It is generally recognized that, while there is a limited market for the publicly owned limited partnerships, the market is not considered to be overly active or efficient.

> Publicly traded limited partnership interests are thinly traded in the secondary market compared to the activity of stocks in the primary markets, such as the New York Stock Exchange (NYSE). When an investor sells shares of a company traded on the NYSE, he or she can receive the cash proceeds in three days. However, it typically takes 60 to 180 days for an investor in publicly traded limited partnership units to complete the transaction and receive the cash proceeds primarily because of the required paperwork with the general partner. Even with this delay, a public limited partnership interest is generally more liquid than a private limited partnership interest, causing the private interest to normally be worth less than a comparable publicly traded interest. [Fishman, Pratt, et al, GUIDE TO BUSINESS VALUATIONS (Fort Worth: Practitioners Publishing Company, 1999), p. 14-18].

In a recent presentation by Charles Elliott, ASA, of Howard, Frazier, Barker and Elliott, several aspects of the secondary market for limited partnership interests were discussed. The paper was presented at the 1998 Annual Business Valuation Conference of the AICPA [Elliott, "An Outline of Valuation Considerations Related to Limited Partnerships," which is available through SHANNON PRATT'S BUSINESS VALUATION UPDATE website (http://www.bvupdate.com). After subscriber login, click on Whitepapers and search for "Family Limited Partnerships, AICPA 1998 Conference"].

Elliott's analysis of the secondary market is consistent with the implications of the QMDM. We highlight certain sections and comment on their relationship to the QMDM factors noted above (these sections are found in Elliott's paper under the "Valuation 'sky hooks'/valuation reference points" heading).

> 4. Based upon input from the Secondary Market and from Partnership Profiles, Inc., the following conclusions are drawn regarding the basis upon which pricing of limited partnership units in the Secondary Market is determined.
>
> 4a. Cash distributions and therefore yield are most important; this is clearly the driver of pricing of partnerships in the Secondary Market. [Therefore, the QMDM's focus on expected distribution yields and distribution growth.]
>
> 4d. Underlying cash flow coverage of yearly distributions made to partners. [This goes to the riskiness of the expected earnings stream and would be considered in the development of the required holding period return of the QMDM.]
>
> 4f. Whether or not the assets of the partnership are well diversified. [Again, the mix and diversification of a partnership relate to its riskiness as well as general attractiveness.]

4h3. The time period until liquidation. [A critical focus of the QMDM is in making a realistic estimate of the expected holding period until an opportunity for liquidity may arise. Note that we can almost never know with certainty what the expected holding period will be. However, it is important to make a reasonable estimate based on the facts and circumstances of each case. There is an implicit holding period assumption (or range of assumptions) in every concluded marketability discount. The QMDM asks the appraiser to make reasoned and reasonable judgments regarding this factor and to make those judgments (and the rationales therefore) explicit.]

4h4. The universe of interested buyers. [In the QMDM, we consider the return requirements of relevant universe of buyers of particular interests in the development of the required holding period return. If the universe of buyers is very limited, well-heeled, and sophisticated, the required returns can be substantial (and therefore, the derived marketability discounts may be substantial, depending on the other relevant factors).]

4h6. The presence of rights of first refusal. [Rights of first refusal limit marketability and add to the riskiness of investments in illiquid minority interests. In addition, they can increase the expected holding period for an investment. Both of these aspects are considered in the QMDM.]

We could examine all of Elliott's observations and discuss each of them in the context of the QMDM. What Elliott is saying is that the secondary market prices limited partnership interests on a rational basis that considers the economics and riskiness of ownership. That is what the QMDM attempts to do.

Now, Elliott goes on further to discuss the secondary market, indicating a flaw with Mr. Siwicki's analysis regarding the marketability discount.

> Because our valuation reference source is the Secondary market, it is inappropriate to utilize traditional lack of marketability discounts in the 30-50 percent range. The reason is that the Secondary market is a "thin market." As a consequence, there is an element of illiquidity already expressed in the pricing of units in the Secondary Market.
>
> Various sources in the Secondary Market have suggested that additional yield of about 200 basis points may be required than otherwise because of the impaired liquidity of the Secondary Market. This translates into a range of lack of marketability discounts of 15-25%, to be applied to the value of a non-controlling interest in a real estate FLP.

Siwicki considered the "illiquidity already expressed" mentioned by Elliott in his capitalization of distributions. He then further discounted by weighting a price/NAV method. Finally, he discounted further by applying a "traditional lack of marketability discount" of 35%. The compounding of discounts resulted in a low value with a very high implied yield on expected distributions. This yield represented a premium to his 11% secondary market of about 1000 basis points, or far greater than Elliott's suggestion. The Court achieved a more reasonable result by applying a lower than "traditional" marketability discount.

By using market returns from Partnership returns applied to the expected distributions of Hill House, Dr. Kursh developed a value indication reflecting approximately a 20% minority interest discount from NAV. His minority interest discount may be overstated somewhat due to the thinness of the secondary market. However, by basing his expected yield on this value, the QMDM mitigated any overstatement of the marketability discount. Unfortunately, these relationships are not necessarily intuitive and are somewhat difficult to explain. [The calculations referenced in the "Alternative Calculations" section below provide some support for this observation.]

BASING ASSUMPTIONS ON "HARD DATA"

The Court "did not find the QMDM helpful in this case" because certain assumptions made by Dr. Kursh were "not based on hard data." So let's look at Dr. Kursh's QMDM assumptions and see where they came from [based on information reported in the decision and the Kursh report].

- The expected growth rate in value of 3% to 4% was consistent with recent historical growth in rental revenues and with expected inflation. That's pretty good data on which to rely.

- The distribution yield of 10% was based on the most recent year's distributions and his capitalized distribution result of $8.3 million as well as reference to market yields. While the Court used a recent average of distributions, Dr. Kursh's assumption was clearly observable and based on factual information.

- His expected holding period was between 10 and 15 years. There is little information in the Court's decision to support this; however, we note that the Court did not question this assumption. Assumptions about expected holding periods cannot be made based on hard data absent a contractual agreement for liquidity at a specific time and on a specific basis. Dr. Kursh was faced with making a decision based on available information. Note that the apartment building had been in the Weinberg family for 28 years as of the valuation date in 1992. [Hill House was formed in 1980. Dr. Kursh knew that the general partner was in his late 50s or 60s. There was no evidence of plans to sell the apartment building. It was in excellent condition and providing excellent cash flow. In short, it appeared reasonable for him to have assumed a relatively long holding period and unreasonable to assume a short one.]

- Finally, we come to Dr. Kursh's assumption about the required holding period return. The decision notes that he used a 16.4% required return and then refers to a range of discounts from 16% to 18%. We outlined his build-up methodology above. His judgments in this derivation were consistent with his judgments when developing his cash flow capitalization rate (which the Court adopted). In short, his required holding period return appeared to be well-supported by market evidence and reasonable judgments.

Referring back to the discussion from Fishman above, shortly following the passage cited, Fishman indicates: "Understanding how publicly traded limited partnership are priced is essential to determining the fair market value of FLP interests. The total expected return for publicly traded limited partnerships generally ranges from 16% to 22%."

> Examining Dr. Kursh's assumptions in this light, we see he has assumed a total rate of return in the range of 19% (16% lower range return plus 3% inflation) to 22% (18% higher range of return plus 4% inflation). While we sometimes see total returns somewhat higher than this, Dr. Kursh's results seem clearly within the range of known market data (and the same market data relied upon by the Court!).

Based on our review of the case and Dr. Kursh's report, it appears that Dr. Kursh used information that was factually based and within the range of reasonable comparisons with market data in his application of the QMDM. It is unfortunate, but the Court was apparently not convinced of the reasonableness of Dr. Kursh's assumptions and their consistency with "hard data" that was in his report and otherwise readily available.

ALTERNATIVE CALCULATIONS

Dr. Kursh used an effective 20% minority interest discount, with Mr. Siwicki and the Court advancing even higher minority interest discounts of 43% and 37%, respectively. I've suggested that the higher minority interest discounts are too high. In fact, many appraisers reference studies of closed-end funds and other market data to suggest minority discounts on the order of 10% to 15%. We developed a series of alternative calculations using this lower range of assumptions to show how the QMDM interrelates to differing minority interest discounts to develop appropriate marketability discounts. These calculations are in the context of the assumptions used in the case regarding distributions (either that a 3-year average was appropriate or that the 1992 level was appropriate).

They are further made in the context of Dr. Kursh's QMDM assumptions. While in an independent analysis, we might have made somewhat different assumptions, Kursh's assumptions appear generally reasonable and supported by the facts and circumstances of the case. See Table 9.

Hill House Limited Partnership
Alternative Calculations on Range of Assumptions in *Weinberg*

	Alternate Minority Interest Discounts			
		LOWER		HIGHER
Calculations in $M		10%		15%
Net Aset Value (Stipulated)		$10,332		$10,332
Minority Interest Discount		($1,033)		($1,550)
Marketable Minority Value (MM)		$9,299		$8,782
	3-Year	1992	3-Year	1992
Distributions	$683	$800	$683	$800
Implied Yield (MM)	7.3%	8.6%	7.8%	9.1%
Marketability Discount	32.0%	24.0%	29.0%	21.0%
$ Marketability Discount	($2,976)	($2,232)	($2,547)	($1,844)
Nonmarketable Minority	$6,323	$7,067	$6,235	$6,938
Discount from NAV	-39%	-32%	-40%	-33%
Yield on NAV	6.6%	7.7%	6.6%	7.7%
Yield on Concluded Value	10.8%	11.3%	11.0%	11.5%

Table 9

Since the relevant distribution yield in the QMDM is the yield at the marketable minority level, we might have used somewhat different distribution yields than Dr. Kursh. [We suggest performing a more detailed distribution analysis to convert the yield to a C Corporation equivalent yield.] So the distribution yields vary based on the indicated distributions (3-year and 1992) and minority interest discounts (10% and 15%), relative to the higher minority interest discounts and lower marketable minority indications used by the appraisers in *WEINBERG*.

We can now make several observations regarding the calculations.

- The calculations using minority interest discounts of 10% and 15% and expected distributions of $800,000 yield conclusions of $7.1 million and $6.9 million, respectively. These indications are virtually identical to Dr. Kursh's conclusion of $7.0 million using a 20% minority interest discount. All three calculations are valuing the same set of expected cash flows. The difference in the assumptions are reconciled by different concluded marketability discounts (15% for Kursh and 21% and 24% in the alternative calculations).

- This is not surprising. Hypothetical and real investors pay a price for an investment in the hope of achieving a target expected return. They do not care what the minority interest or marketability discounts might be. These discounts are tools used by appraisers to simulate the thinking of investors. As mentioned previously, all three calculations value the same expected cash flows and should yield similar results. In this regard, the QMDM is a forgiving tool. Misestimates in the minority interest discount tend to be offset by yield adjustments relative to the concluded marketable minority indications (for high distribution entities in particular).

- The calculations that assume the 3-year average distribution yield indications of $6.2 million and $6.3 million for assumed minority interest discounts of 15% and 10%, respectively. These are higher than the Court's conclusion of $5.2 million, and Siwicki's conclusion of $3.9 million.

Recall that I believe the Court, following Siwicki's methodology, overstated the minority interest discount. Because the Court's effective 37% minority interest discount includes significant elements of a marketability discount (see the Fishman and Elliott discussions above), the application of a 20% marketability discount (larger than Kursh's calculated discount of 15%) overstates the effective marketability discount relative to the alternate calculations with similar assumptions.

- To put some final perspective on this issue, the Court's conclusion represents a 13.2% yield based on capitalized distributions and 15.4% on likely distributions at the 1992 level of $800,000. It also represents a 50% discount to net asset value for an attractive, established, high distributing limited partnership interest. From an investment viewpoint, many taxpayers with much less attractive partnerships would be ecstatic with this result. The WEINBERG estate should definitely be pleased with the result.

[Readers should not infer that I am faulting the Court's conclusion. Judge Whalen relied on economic evidence that was presented by one expert (Siwicki). Dr. Kursh's report did not address the logical problems and theoretical issues with the use of Partnership Profiles data raised above by way of rebuttal. He did attempt to explain the problem in Court. However, as is seen by this E-LAW, whose length exceeds that of the Court's entire decision or Dr. Kursh's report, there is room for confusion. I do hope this E-LAW will help clarify the issues. We encourage all readers to review the cited sections of Fishman, Pratt and to access Elliott's analysis.]

CONCLUSION

I do believe that Dr. Kursh's analysis using the QMDM was helpful to the Court. It kept a clear focus in the impact of distribution yield on value. It allowed the Court for the first time (at least in a published decision) to focus on all the critical QMDM factors. It also gave the Court a basis to reach a conclusion of fair market value that was far more reasonable than that advanced by the taxpayer's expert. As should be clear from the analysis above, it appears that Dr. Kursh "won" the battle over the appropriate marketability discount. He "lost" the battle over the appropriate minority interest discount. It is unfortunate that the Court's comments seem critical of the QMDM, because the Court's conclusion is entirely consistent with its application by Dr. Kursh.

Two final notes. First, I approach case reviews with caution and considerable trepidation. As an appraiser and a writer, I know that I am subject to review and analysis by other appraisers and courts. I always try to treat the work of other appraisers with respect and hope to receive similar treatment.

Second, it is possible that a case review of mine could be interpreted as critical of a Court or a particular trier of fact. Again, I approach each case review with the utmost respect for the Court. In valuation cases, the trier of fact has a difficult job. He or she must deal with complex valuation issues, often presented in multiple valuation reports of varying quality, listen to and make judgments about expert testimony and factual issues, as well as deal with other relevant aspects of each case - and the judge has to write a decision that will be reviewed by multiple parties. I hope all readers of these case reviews will consider them in the context they are offered - as constructive and, hopefully, objective analyses to offer valuation insights to our readers.

JANDA

The Court criticized the assumptions used and not the QMDM.

The Court noted that "slight variations in the assumptions used in the QMDM Model produce dramatic differences in results" and that the "effectiveness of this model therefore depends on the reliability of the data input into the model."

Couldn't agree more re latter comment. Sensitivity to assumptions is an integral part of using any DCF model.

FOR MORE INFORMATION, PLEASE SEE:

- *Janda v. Commissioner*: The QMDM Appears in Tax Court Again
- *Janda*: *Valuation and Marketability Discounts* (Paul Hood, Jr., Esquire) "Damned if You Do" Valuation

Janda v. Commissioner: The QMDM Appears in Tax Court Again

by Matthew R. Crow, CFA, ASA and Kenneth W. Patton, ASA

This article originally appeared in Mercer Capital's newsletter BizVal.com – Vol. 13, No. 1, 2001

We believe the Quantitative Marketability Discount Model (QMDM) gained a significant amount of currency in a United States Tax Court decision (*JANDA V. COMMISSIONER* (T.C. Memo 2001-24)). As discussed below, although the Court took issue with the assumptions made in the use of the QMDM, it obviously carefully studied the model, and threw out the opposition's use of the same old studies with little comment.

This is a synopsis of what we now know; more will follow once we get a copy of the valuations referenced in the case. The primary themes from this case are:

1) The Court threw out using benchmark analysis for determining marketability discounts.

2) The Court carefully examined the QMDM, but disagreed with some of the assumptions used and, as a result, disagreed with the marketability discount implied by the model. Other than that, the principal criticism was that the facts of the case as input into the QMDM resulted in too large a marketability discount.

3) A modification of the assumptions used by the expert for the taxpayer, input into the QMDM, results in an implied marketability discount that reconciles with the Court's opinion. It also proves that "slight" changes don't result in "dramatic" differences in the marketability discount.

4) We are increasingly comfortable that the QMDM meets the challenges presented by *DAUBERT* because of the model's predictive power.

FINDINGS OF FACT

In *JANDA*, the Court decided as to the value of minority interests in the common stock of St. Edward Management Co. transferred by Mr. and Mrs. Janda to their children. In 1992, St. Edward Management Co. was a small bank holding company in an agricultural community in Nebraska, and both Mr. and Mrs. Janda were employed by the bank as president and vice president, respectively. The unadjusted book value of the bank was listed at $4,518,000, and the holding company, which owned 94.6% of the bank, had 130,000 shares issued and outstanding. In November, 1992, the Jandas each made gifts representing approximately 5.27% interests in the Company to their children.

THE EXPERTS AND THEIR REPORTS

The Jandas presented a valuation report prepared by Mr. Gary Wahlgren. The IRS presented a report prepared by Mr. Phillip J. Schneider. At trial, Mr. Schneider agreed to Mr. Wahlgren's conclusion of value on a marketable, minority interest basis of $46.24 per share, or a total value based on 130,000 shares issued and outstanding of about $6,011,000. The disagreement was over the marketability discount. Mr. Wahlgren used the QMDM and opined to a 65.77% discount, while Mr. Schneider relied upon the typical benchmark analysis and opined to a 20% marketability discount.

Mr. Wahlgren determined the applicable marketability discount using inputs to the QMDM as follows:

- **GROWTH IN VALUE OF 9.12%.** Based upon the historical ROE of the bank (13.54%) adjusted by dividing it by a factor of 1.4853 to take into account the difference between fair market value on a marketable, minority interest basis and the historical book value of the bank.

- **DIVIDEND YIELD OF 0%**. The bank apparently did not pay a dividend and did not intend to in the foreseeable future.

- **HOLDING PERIOD OF 10 YEARS**. Mr. Wahlgren reasoned that the Company would not be sold within ten years because the Janda family intended to continue to operate it for at least that long.

- **REQUIRED HOLDING PERIOD RETURN OF 21.47%**. This appears to have been determined using a build-up method similar to that described in *QUANTIFYING MARKETABILITY DISCOUNTS* (Peabody Publishing, LP, 2997).

A quick check of our own templates confirms that these inputs imply a discount of 65.77%, as was used by Mr. Wahlgren.

Mr. Schneider opined to a 20% marketability discount based upon the following factors identified in his report:

1) The asset type held
2) The time horizon until liquidation
3) Distribution of cash flow
4) Earned Cash Flow (after debt service)
5) Information Availability
6) Transfer Costs and/or requirements
7) Liquidity factors:
    a) Is the company large enough to be public?
    b) Is there a pool of potentially interested buyers?
    c) Is there a right of first refusal?

Mr. Schneider then quoted the restricted stock studies and pre-IPO studies listed in Shannon Pratt's *VALUING A BUSINESS*, and a few court cases. In other words, Mr. Schneider used the usual benchmark studies. He then stated that he believed that "a bank would be a highly marketable business and that the stock would be highly marketable." Based upon this, Mr. Schneider concluded that a 20% marketability discount was appropriate.

Echoing *DAUBERT* (*DAUBERT v. MERRELL DOW PHARMACEUTICALS, INC.* 113 S.Ct. 2786 (1993)), lawyers for the IRS also asserted that "there is no evidence that appraisal professionals generally view the QMDM model as an acceptable method for computing marketability discounts." We do not agree.

We have sold over 2,700 copies of *QUANTIFYING MARKETABILITY DISCOUNTS*. The QMDM has been written up in all major valuation publications. We have spoken to hundreds, if not thousands, of professionals in the appraisal community via dozens of speeches and seminars. We have used the model in thousands of appraisals. We have received hundreds of phone calls, emails, and other communications from valuation practitioners outside of Mercer Capital who use the QMDM regularly. And, yes, we have even been engaged by the Internal Revenue Service to perform valuations on their behalf using the QMDM (none of which have made it to the point of being a matter of public record). What else can we do?

The Court noted the IRS objection, but neither agreed nor disagreed with it. We have no interpretation regarding the inclusion of the comment in the opinion, but we are confident that the QMDM meets the challenges of *DAUBERT*.

THE COURT'S RULING

The Tax Court Memorandum demonstrated that the Court thoroughly studied and it appears well understood the QMDM. While the Court did not accept Mr. Wahlgren's 65.77% discount, the Court criticized the assumptions used, not the QMDM. Citing *ESTATE OF WEINBERG V. COMMISSIONER* (T.C. Memo. 2000-51), the Court noted that "slight variations in the assumptions used in the QMDM model produce dramatic difference in results" and that the "effectiveness of this model therefore depends on the reliability of the data input into the model."

We, of course, couldn't agree more - at least with the second comment. The model is effective when the inputs to the model are reasonable. UNREASONABLE INPUTS PRODUCE UNREASONABLE RESULTS, JUST AS IS THE CASE WITH A DISCOUNTED CASH FLOW MODEL, A SINGLE PERIOD CAPITALIZATION MODEL, A CAPITALIZATION MODEL USING PUBLICLY TRADED COMPANIES, ETC.

However, we disagree that "slight variations in the assumptions" result in "dramatic difference[s]" in the implied marketability discount. The comment in *WEINBERG* cannot be substantiated. Having used the QMDM in literally thousands of appraisals, we can attest that, as a valuation model, it is less sensitive than single period capitalization models or discounted cash flow models or most other valuation models. At the end of this article, we modify Mr. Wahlgren's assumptions to reconcile with the Court's opinion. Clearly, the change in the conclusion is proportionate to the change in the assumptions. "Slight" changes in assumptions used in the QMDM do not produce "dramatic" differences in the marketability discount.

The Court questioned whether or not it was proper to use an adjusted historical ROE to imply growth in value. It noted that Mr. Wahlgren's build-up of the required holding period return deviated from the method discussed in *QUANTIFYING MARKETABILITY DISCOUNTS* in that it didn't include adjustments for shareholder specific risks. It did not seem to take issue with the assumed 0% dividend yield or the ten-year expected holding period.

In summary, the Court wrote "we find Mr. Wahlgren's application of the QMDM model . . . not helpful in our determination of the marketability discount." Unfortunately, the Court went on to say "we have grave doubts about the reliability of the QMDM model to produce reasonable discounts, given the generated discount of over 65%." Obviously we would prefer this last section not be written, but we note that the argument is principally with the inputs and the level of discount reached. If by "reasonable discounts" the Court means 35% to 45%, then we are puzzled.

In the case, the Court characterizes Mr. Schneider's use of benchmark analysis as subjective and irrelevant to the facts of the case.

"We believe that he [Mr. Schneider] merely made a subjective judgment as to the marketability discount without considering appropriate comparisons. Mr. Schneider looked at only generalized studies which did not differentiate marketability discounts for particular industries. Further, although he stated that each case should be evaluated in terms of its own facts and circumstances, Mr. Schneider seems to rely on opinions by this court to describe different factual scenarios from the instant cases and generalized statistics regarding marketability discounts previously allowed by the Court. Finally, Mr. Schneider has failed to fully explain why he believes that bank stocks are more marketable than other types of stock. We therefore are unable to accept his recommendation."

Yet, the Court appears to be asking for a model that is results-oriented, and that would end up with a marketability discount in the range of 35% to 45%. If benchmark analysis is no good, and a marketability discount should be fact-based, then Mr. Wahlgren's analysis should win the day hands-down. If Mr. Wahlgren's inputs to the model were reasonable, then a 65.77% marketability discount would also be reasonable. It must be the case that the Court just disagreed with Mr. Wahlgren's interpretation of the facts, and therefore also disagreed with the inputs to the QMDM and the resulting marketability discount.

In the end, the Court split the baby, and declared a 40% combined minority interest and marketability discount. It did not differentiate as to what portion was attributable to the minority interest discount and what portion was attributable to the marketability discount.

ANALYSIS

We are excited that the Court appears to have carefully studied and understands the QMDM. The Court also appears to have not accepted Mr. Wahlgren's conclusion based upon the inputs used in the model which produced a 65.77% marketability discount.

We cannot comment at length on Mr. Wahlgren's report because we have not seen it, and we do not disagree with his analysis at this point because we have no basis to do so. However, we can infer a few things from the memorandum and postulate our own analysis. Mr. Wahlgren valued the Company at a multiple of reported and adjusted book value. Then, in his QMDM analysis, he derived an expected growth in value by adjusting the historical ROE by his multiple of book. This could be considered inconsistent unless an investor expected a contraction in the valuation multiples. Instead, the market value of an entity appraised at a multiple of book value will increase at the same rate as ROE if the multiples don't change.

In the case of St. Edward Management Company, Mr. Wahlgren capitalized reported and adjusted book values to arrive at a controlling interest value of $51.38 per share. He then applied a 10% minority interest discount to arrive at a marketable, minority interest value of $46.24, or about 1.4 times book value of $32.88 per share. If historical ROE was 13.54% and it was reasonable to expect that to continue, in ten years book value would be $117.06 per share. Assuming no changes in the multiples (none was discussed in the memo), the bank would then be valued at $163.89 per share (1.4x book value). This implies an expected growth in value at the marketable, minority interest level of 13.54% - the same as ROE. Leaving the rest of his QMDM analysis intact, and changing the expected growth in value from 9.12% to 13.54%, the implied marketability discount drops from 65.77% to 49.09%.

One more adjustment. The 1990s saw rapid consolidation in community banks, and many investors might have expected a shorter holding period on the order of, say, five to ten years. With this change, the implied marketability discount is 29% to 49%, and the average is, you guessed it, 40%, exactly what the Court ruled (albeit on a combined minority interest/marketability discount basis).

Note that these adjustments are not "slight" changes in the marketability discount analysis. We have increased the expected growth in value by 40%, and have cut the holding period as much as in half. The result is an implied marketability discount about one-third lower. The change in the marketability discount is proportionate to the change in the assumptions. It is not a "dramatic" difference resulting from "slight changes."

ANECDOTAL EVIDENCE: THE PREDICTIVE POWER OF THE QMDM

In about 1990, Mercer Capital was called upon for advice regarding the value of minority interests in the stock of an attractive community bank. The closely held bank had excellent fundamentals. However, it paid no significant dividends, and the Chairman and controlling shareholder of the bank had publicly declared over and over again that the bank would not be sold until he died and not even then if he could arrange it. What stunned our client was that they had bids for the stock, at that time, for about 20% of book value. How, they asked us, could that be? The answer, of course, can be derived using the QMDM. We didn't have the model at the time, but in retrospect it seems clear to us that the investment prospects of even an attractive closely held bank with limited liquidity prospects would result in a very, very large marketability discount. And that discount was imbedded in the bid for the minority interests in the bank at 20% of book value. This is what Mr. Wahlgren was trying to explain in his valuation, and what we will continue to do in our analyses until we see something better.

FINAL THOUGHTS

Winston Churchill once commented, "It has been said that democracy is the worst form of government except all those other forms ...."

The controversy about the QMDM may be much the same thing. On balance, the Court disagreed with Mr. Wahlgren's use of the QMDM and seemed to be uncomfortable with the size of the marketability discount his analysis implied. We were encouraged and gratified that the Court apparently spent significant time understanding the model and devoted so much of the written opinion to it. As for the alternative, the Court dismissed benchmark analysis as subjective and irrelevant with little comment.

At the same time the Court criticized the QMDM, it reiterated the call for a fact-based valuation discount methodology. Given the choice between the QMDM and benchmark analysis, we know where we stand.

JANDA: Valuation and Marketability Discounts: "Damned if You Do" Valuation

By L. Paul Hood, Jr., Esq.

This article originally appeared in Mercer Capital's E-Law Newsletter 2001-02, February 13, 2001

INTRODUCTORY COMMENTS FROM CHRIS MERCER

We began publishing E-LAW in 1998 and it has since grown to have one of the larger bases of subscribers of any publication dedicated to business appraisal issues. As many of our readers know, I have written most of the issues, but increasingly, the writing responsibilities are being shared by others at Mercer Capital.

Recently, I attended a conference in Cancun, Mexico and was away for six days (January 31 - February 5). On Friday, February 2, 2001, the Tax Court published a second opinion in which the Quantitative Marketability Discount Model (QMDM) was mentioned. This case was *JANDA V. COMMISSIONER* (T. C. Memo 2001-24). The first was *WEINBERG V. COMMISSIONER* (T.C. Memo. 2000-51).

When I called the office late on that Friday afternoon, no one told me about JANDA. Happily, the folks at the office decided to let me enjoy the warm sun in peace. Upon my return to work, I was casually informed that there had been a little excitement while I was away. As it turns out, Matt Crow and Ken Patton wrote E-Law 2001-01 and addressed some of the issues raised in *JANDA*. (See "*Janda v. Commissioner*, The QMDM Appears in Tax Court Again." After reading both the case and the E-LAW, I was pleased that Matt and Ken had responded so early and so well.

While others might see JANDA as "another rejection" of the QMDM, I disagree. In fact, the model was showcased in the opinion, with the Court providing an excellent, non-technical summary of how it works. More importantly, the Tax Court issued yet another in a growing list of rebukes for the typical benchmark analysis for marketability discounts that appraisers have been using for years.

Let me say that JANDA seems to have struck a nerve with readers of E-LAW. Our inbound telephone and e-mail traffic commenting on this case has been higher than on any since inception of the newsletter. It has been quite pleasing that the tone of this traffic has reflected the question: "WHAT IS THE MATTER WITH THE TAX COURT?" rather than: "WHAT IS THE MATTER WITH THE QMDM?"

As you might have guessed, I was planning to address *JANDA* in further detail but realized that anything I say might be interpreted as yet another of Mercer's "explanations" or "apologies." Then, along came Mr. Paul Hood, a prominent tax attorney and editor of THE LOUISIANA ESTATE PLANNER. Mr. Hood wrote about JANDA for another e-mail service, STEVE LEIMBERG'S NEWS OF THE WEEK NEWSLETTER. [Mr. Hood, I should point out, is neither a current nor former employee of Mercer Capital. He has received no compensation from Mercer Capital, other than my eternal appreciation, of course, for writing the attached article. In terms of fair market value, Mr. Hood can be described as a "hypothetical willing writer." I should also point out that Mr. Leimberg is in no way associated with Mercer Capital.]

Mr. Hood entitled his article: "*JANDA*: Valuation and Marketability Discounts: "Damned if You Do" Valuation." It, and other issues of STEVE LEIMBERG'S NEWS OF THE WEEK NEWSLETTER, can be found at: http://www.leimbergservices.com.

Mr. Hood's article is reprinted below with permission from both Mr. Leimberg and Mr. Hood.

Let me conclude my comments with a reminder to appraisers of another difficult issue we faced with the Tax Court. For years, every case involving imbedded capital gains taxes that rose to the Tax Court was lost on the issue. Yet many appraisers "kept the (economic) faith" and continued to treat these imbedded liabilities as real liabilities. Now, with *DAVIS, SIMPLOT*, and *EISENBERG* behind us, it is not only acceptable, but fashionable, to provide economic analysis of this liability.

We need to keep the faith a bit longer for the full acceptance of quantitative, rate of return analyses like the QMDM by the Tax Court. See what Paul Hood has to say in *JANDA*: Valuation and Marketability Discounts: "Damned if You Do" Valuation.

COMMENT FROM STEVE LEIMBERG

Like Martin Luther, who posted his 95 Theses criticizing the Roman Catholic Church's transgressions on the church door at Wittenberg way back in 1517, Paul emphatically posts these thoughts on the electronic door of valuation.

EXECUTIVE SUMMARY

This is a gift tax valuation case. It concerns the valuation of shares of a holding company that owned a one branch bank in rural Nebraska. The opinion contains the Tax Court's first in-depth review and analysis of the Quantitative Marketability Discount Model ("QMDM"), which was originally formulated and published in 1994 and is the brainchild of Z. Christopher Mercer and Mercer Capital Management, Inc.

In 1997, the QMDM concept was explained in a book entitled *Quantifying Marketability Discounts* (Peabody Publishing, 1997). QMDM presumably is the first (and possibly only) published model of its kind which attempts to mathematically determine the appropriate level of a lack of marketability discount, as opposed to the formerly common practice of estimating a discount for lack of marketability via the restricted stock studies and the pre-IPO studies, as well as resort to jurisprudence (collectively, "Benchmark Analysis").

The case predictably boiled down to a battle of valuation experts. The issue was the appropriate amount of discount for lack of marketability. The IRS trial expert, utilizing the Benchmark Analysis and Tax Court jurisprudence, opined that the proper lack of marketability discount was 20%. Utilizing QMDM, the taxpayer's expert opined that the proper discount was 65.77%.

The Tax Court disregarded the opinions of BOTH experts with respect to the marketability discount and determined that the appropriate marketability discount was 33%.

FACTS

The valuation date in question was in November 1992. Prior to the gifts in question, each donor parent owned 23.74% of the holding company stock. Each of their four children owned 13.13% of that stock. Following the equal gifts of 6850 shares to each child, each parent retained 2.67% of the holding company stock. Each child owned 23.67% of that stock.

The following valuation information/positions are important:

- Unadjusted holding company book value per share at the time of the gifts: $35.41
- Holding Company book value per share as adjusted by the taxpayer's trial valuation expert: $46.94
- Gift tax return value per share (which was arrived at by a CPA firm): $21.22
- Value per share position of the taxpayers' appraisal expert at trial (not the return preparer): $15.83
- Value per share position per the notice of deficiency: Not stated in the opinion
- Value per share position of the IRS appraisal expert at trial: $39.39
- Value per share determination by Tax Court: $30.83

COMMON GROUND

Despite representing competing interests, the trial court expert appraisers did find common ground on a number of points:

- First, the appraisers agreed that the net asset valuation method was the most appropriate method to value the underlying holding company.
- They also agreed on the value of the holding company at the enterprise (control) level.
- They likewise agreed that the appropriate minority interest Discount for the gifted shares was 10%.

WHERE THE VALUATION DISAGREEMENT WAS

But they did not agree on the appropriate level of discount for Lack of marketability.

The Tax Court first dealt with the position of the taxpayer's expert on the lack of marketability discount. The opinion then describes the expert's computation of the "required holding period rate of return," which, in QMDM, is the investor's required rate of return in an alternative, marketable investment over the particular expected holding period. The opinion levels separate and distinct criticisms at the appraiser's underlying assumptions that he put into QMDM as well as at QMDM itself. With respect to criticism of QMDM, the opinion repeated (without further comment) the IRS position on brief that the appraisal community had not embraced QMDM as an acceptable method of computing the lack of marketability discount.

The opinion also repeated a statement first made in *ESTATE OF WEINBERG V. COMMISSIONER* that "slight variations in the assumptions in the [QMDM] model produce dramatic difference in results." However, the opinion also stated "[w]e have grave doubts about the reliability of the QMDM model to produce REASONABLE discounts, given the generated discount of over 65 percent." [emphasis ours] Thus the court disregarded the taxpayer's expert appraiser's opinion about the lack of marketability discount.

The opinion also rejected the IRS appraiser's opinion as to the lack of marketability discount and was no less sanguine about the IRS appraiser's usage of the Benchmark Analysis in arriving at his 20% discount figure. The opinion dismissed the IRS appraiser's opinion as mere "subjective judgment" and reliance upon other Tax Court opinions concerning the level of lack of marketability discount.

With this said, the opinion launched off into a section entitled "The Court's Valuation" in which the opinion stated that "we also believe that most of the concerns regarding lack of marketability relate to the lack of control associated with any transferred block of stock." Thus the opinion arrived at a combined minority and lack of marketability discount of 40%.

COMMENT

In the A. Whitney Brown (a humorist/philosopher formerly of Saturday Night Live fame who used to tie seemingly unrelated events together) "big picture" as applied to valuation, *JANDA V. COMMISSIONER* also points out the significant risks of utilizing an expert who is advancing a position which is far better than the return valuation position. No better how credible that trial expert is or how incompetent the return appraiser was, taxpayers generally are as stuck to the return appraiser's conclusions as Br'er Rabbit was to the Tar Baby. And the trial appraiser's expert is likely to get caught in the crossfire. If I were an appraiser in this situation, I'd demand hazard pay.

Freud might have suspected this opinion of a smidgen of paranoid schizophrenia. On a lower mental plane, we found the discussion of the lack of marketability discount conflicting, unfortunate, and unhelpful. On the one hand, it has become clear that the courts want a more scientific approach to ALL facets of valuation, particularly the determination of the lack of marketability discount.

It is equally clear (at least to this author) that the use of and reliance upon the Benchmark Analysis for the purpose of determining the lack of marketability discount is as medieval, dangerous, and outdated as leeching or examining the entrails of a chicken.

Finally, a logical and scientific method is available that takes into consideration all of the key valuation facets AS APPLIED TO THE SUBJECT COMPANY, and the appraisal wizards on the Tax Court immediately begin to shoot at the method instead of nurturing it along. Maybe the courts really don't want that much specificity or definition in valuation methodology for fear that it will prevent them from reaching what they believe are equitable results on a case-by-case basis without concerning themselves with whether predictability in result is a useful public policy.

At the bare minimum, the opinion should have taken IRS to task for criticizing QMDM when just a few months earlier, QMDM was just peachy with IRS in *ESTATE OF WEINBERG*, where it was the IRS appraiser, not the taxpayer's appraiser, who was the one who used QMDM.

Isn't it deliciously ironic that the very same opinion which just scant paragraphs above criticized and dismissed one expert for relying upon prior Tax Court jurisprudence for guidance on lack of marketability discount would immediately thereafter roll up its sleeves and set that discount on its own? Has anyone stopped to ponder the possibility that people rely upon judicial discount pronouncements on discounts - if for no other reason - then because they see the courts doing it?

As for the comment repeated in this opinion (i.e., the criticism from *ESTATE OF WEINBERG V. COMMISSIONER* that slight variations in the assumptions going into QMDM lead to dramatic differences), it is noteworthy that this opinion points out NO such slight variations/dramatic differences. None!

Mercer Capital's E-LAW newsletter discussion of *JANDA V. COMMISSIONER* takes issue with whether QMDM is any more susceptible to changes in results based upon changes in assumptions then other methods. In fact, they argue that QMDM is LESS susceptible to such swings than, for example, the Capital Asset Pricing Model. We'll let the very capable folks at Mercer Capital defend themselves on this score.

However, were the changes in assumptions in *ESTATE OF WEINBERG* (which the *JANDA* Court's opinion termed "slight") really so slight? One so-called "slight change in assumption" was a change in the required holding periods from 10-15 years to 15-20 years. Is five extra years to cashout a "slight change?" We'd argue that such a change is anything but slight.

Even the most disinterested observer of the recent Super Bowl knows from McNews that a goodly number of the dot.coms which plunked out millions for TV ad time during the 2000 Super Bowl WERE OUT OF BUSINESS by the time that the 2001 Super Bowl mercifully arrived.

There are a number of studies indicating that volatility of even blue chips stocks has doubled over recent years. Keystone Capital Management issued a report indicating that volatility on the NASDAQ increased by over 100% during 2000, and volatility of the S&P 500 increased by over 50% during the same period. Evidence on selected stocks indicates significant trading ranges over just a 52 week period. And closely held, micro-cap, un-diversified, privately-held businesses would be less or more susceptible to volatility? Another change which the Estate of *WEINBERG* opinion termed "slight"- an 11-20% increase in the required holding period return. Slight? Hardly!

Perhaps even less defensible was the *JANDA* Court opinion's outright statement that "[w]e have grave doubts about the reliability of the QMDM model to produce REASONABLE discounts, given the generated discount of over 65%." [emphasis ours]

What praytell is a "reasonable discount?" Please! Should the good folks at Mercer build in a cap or maximum? If so, what should that ceiling be, and what is the basis in mathematics for the ceiling number selected?

As far as the valuation community's endorsement or lack of affirmative endorsement of QMDM goes, anyone with even a passing familiarity with the appraisal/finance industry literature (which is littered with multi-level, mathematical formulae) knows that appraisal types are not bashful when it comes to lambasting each other's theories in print, sometimes volleying between multiple authors in a series of articles almost reminiscent of a hillbilly feud, albeit an academic one.

QMDM has been "out there" looking for action for coming on seven years now. It has shied away from no one. Nevertheless, we are aware of not a single published piece which has been critical of QMDM. We have seen no alternative quantitative method for determining the appropriate level of lack of marketability discount (although we have heard rumblings of one for a long time which has yet to surface).

We prefer a mathematical, reasoned approach to determination of a discount for lack of marketability, tempered with the required skill and judgment of an appraiser, who has to be more than just a highly paid data input person, over the Benchmark Analysis. A scientific approach clearly is far preferable to the tired Benchmark Analysis. This clearly is consistent with the current trends in the law of expert witnesses requiring more true scientific evidence in the vein of Fed. Rule of Evidence 702, *DAUBERT V. MERRELL DOW PHARMECEUTICALS, INC.*, 509 U.S. 579 (1993) and its progeny.

A not-so-gentle suggestion to the valuation community and the potentates who fancy themselves at its intellectual fore: Either put up or shut up and publicly get on board when it comes to QMDM or expect to continue to be skewered on a routine basis at the altar of the Benchmark Analysis.

We're not claiming that QMDM is perfect or that it is the next best thing to baseball and sliced bread - and certainly not that it is as useful as a LISI subscription. We believe that refinements to QMDM are possible. In fact, we've thought of a few possibilities, and maybe we'll write about them later.

If the courts are going to keep us in the valuation dark ages, then we'll go back to our Gregorian chants...Do-o-o-o-min...

HOPE THIS GETS YOUR JUICES FLOWING!

TEMPLE

The Court did not criticize the QMDM as a model. Rather, the Court criticized assumptions used by the appraiser who employed the model.

FOR MORE INFORMATION, PLEASE SEE:

The Estate of Charlotte Dean Temple

Value Matters™

THE COMPLIMENTARY NEWSLETTER FOR ATTORNEYS AND OTHER PROFESSIONAL ADVISORS TO BUSINESSES

Volume 2006-07 » July 28, 2006
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The Estate of Charlotte Dean Temple

The Estate of Charlotte Dean Temple in United States District Court (No. 9:03 CV 165(TH) was adjudicated on March 10, 2006. This was a civil action for recovery of federal gift taxes and related interest. Plaintiff Arthur Temple ("Temple") individually and as executor of the estate of his wife, Charlotte Dean Temple paid gift taxes on various gifts during the period 1997 – 1998 which upon audit were deemed to be undervalued. Temple paid the assessments and filed claims for a refund.

There were four entities at issue in this case: Ladera Land, Ltd ("Ladera Land"); Boggy Slough West, LLC ("Boggy Slough"); Temple Investments, LP; and Temple Partners, LP (collectively the "Temple Partnerships"). All four entities were asset holding entities: one LLC and three partnerships, all appropriately valued based on the underlying net asset value approach. As the Court saw it, "A critical factor in this case is determining the appropriate diminution in value between a hypothetical willing buyer and a hypothetical willing seller." In other words, the key analytical factors in dispute were the prospects for a minority interest discount and a marketability discount.

Ladera Land

For an analysis of the appropriate discounts for Ladera Land, Temple engaged the services of appraiser Nancy M. Czaplinski. Net asset values do not appear to have been in dispute. Czaplinski utilized the net asset value approach to this entity, although the Court chided her for discussing the appraisal only with Temple's attorney, and not with any principals of the entity.

Minority Interest Discount

Czaplinski selected a 25% minority interest discount, based on "the inverse of the premium for control", which in turn was derived from Mergerstat data. Czaplinski testified in court that the Mergerstat data is a study of operating companies but that she classified Ladera Land as a holding company.

Marketability Discount

Czaplinski utilized the Quantitative Marketability Discount Model (QMDM) to assess the lack of marketability discount for Ladera Land. She assumed the following input items to implement the QMDM: 1) the holding period of a Ladera Land partnership interest is between 10 and 15 years; 2) the minority investor requires a holding period return on investment of 18-20%; 3) Ladera Land's distribution yield is 5%; and 4) the expected appreciation of Ladera Land's real property is 3%. These parameters provide a range of marketability discounts from 47% to 61%, as shown in Table 1.

INSIDE

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PAGE NINE
Mercer Capital On the Road

The Key Assumptions of the QMDM Relative to the Subject Interest		
	Base Value (Marketable Minority Interest)	$1.00
1	Expected Growth Rate of Value	3.0%
2	Expected Dividend/Distribution Yield	5.0%
3	Expected Growth Rate of Dividends	3.0%
4	Mid-Point Required Holding Period Return	19.0%
5a	Estimated Minimum Expected Holding Period	10
5b	Estimated Maximum Expected Holding Period	15

QMDM Modeling Assumptions		
A	Dividends at End of Year ("E") or Mid-Year ("M")	M
B	Adjustment to Marketable Minority Value at Exit	0.0%

Required Holding Period Return (Annual %)	Assumed Holding Periods in Years													
	1	2	3	4	5	6	7	8	9	**10**	**15**	20	25	30
	Implied Marketability Discounts													
15.0%	6%	11%	16%	20%	23%	27%	30%	32%	35%	37%	45%	49%	52%	53%
16.0%	7%	12%	18%	22%	26%	30%	33%	36%	38%	41%	49%	53%	56%	57%
17.0%	7%	14%	19%	25%	29%	33%	36%	39%	42%	44%	52%	57%	59%	60%
18.0%	8%	15%	21%	27%	31%	36%	39%	42%	45%	**47%**	**55%**	60%	62%	63%
19.0%	9%	17%	23%	29%	34%	38%	42%	45%	48%	**50%**	**58%**	62%	64%	65%
20.0%	10%	18%	25%	31%	36%	41%	45%	48%	51%	**53%**	**61%**	65%	66%	67%
21.0%	10%	19%	27%	33%	38%	43%	47%	50%	53%	56%	63%	67%	68%	69%
22.0%	11%	20%	28%	35%	41%	45%	49%	53%	55%	58%	65%	69%	70%	70%
23.0%	12%	22%	30%	37%	43%	47%	51%	55%	58%	60%	67%	70%	71%	72%

PV=100%

Note: This exhibit relies upon the methodology of the Quantitative Marketability Discount Model as published in Mercer, Z. Christopher, *Valuing Shareholder Cash Flows: Quantifying Marketability Discounts: 2005 E-Book* (Memphis, TN: Peabody Publishing, LP, 2005, 2001, 1997).

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TABLE 1

The Court was unconvinced on several assumptions, but not on the applicability of the model. The 5% yield assumption was made without talking to anyone at Ladera Land, and the entity was not making distributions (although the assumption of a 5% yield would tend to reduce, rather than increase, the marketability discount). The expected property appreciation at 3% was based on conversations at Czaplinski's own firm, not based on real estate appraisals. The Court did not understand the concept of the prospective holding period, saying "…the Court finds that it is inappropriate to assume a particular holding period for the hypothetical buyer" since there is no holding period requirement for the partnership interest.

It is on this last point that the Court missed the mark. As securities analysts, we make investment decisions in the marketplace every day, based on prospective holding periods. Life insurance policies are priced based on actuarial tables which clearly imply a holding period; corporate bonds are often priced at "yield-to-maturity" which thereby captures the current distribution yield as well as the implicit gain from a discount from par to maturity at par value. If you don't hold it until maturity, you don't get that full yield. Tax law recognizes holding period distinctions in the segregation of short-term gains from long-term gains. Common stock investors manage stock portfolios according to business, product cycle or interest rate cycle moves, with an investment time horizon in mind that dictates the relative mix of the portfolio.

In the case of closely held common stock, the analyst must make a reasonable assumption with regard to a prospective holding period; i.e., not necessarily until the termination of the partnership, but until that future date when some liquidity event occurs that may feasibly convert a security interest into cash. During that interim period, the investment has a security interest growing at some internal growth rate and possibly distributing some cash along the way. But a longer time horizon (holding period) implies a larger marketability discount, other things being equal.

The Court's Conclusion

Lacking specific testimony at the valuation date with regard to alternative minority interest discounts, the Court did not specify a minority discount. Rather, it combined the minority and marketability discounts into a single 33% discount for the limited partnership interests, and combined that with an "additional incremental marketability discount because of their status as private and non-registered interests." It is unclear how private and unregistered interests are distinguished from those impacted by the 33% marketability discount. Clearly, the Court was getting beyond its grasp in the application of this separate, ill-defined discount. The overall result is shown in Table 2.

Ladera Land, Ltd
Valuation date: February 24, 1997

	Appraiser Conclusion	Court Conclusion
MARKET VALUE BALANCE SHEET	Market Value	Market Value
Assets		
Cash & Equivalents	$13,709	$13,709
Tractors	42,355	42,355
Temple Ranch	3,600,000	3,600,000
Total Market Value of Assets	**$3,656,064**	**$3,656,064**
Liabilities		
Note Payable	$73,000	$73,000
Total Market Value of Liabilities	**$73,000**	**$73,000**
Net Assets	**$3,583,064**	**$3,583,064**
Less: Value Attributable to General Partners	1.0%	1.0%
Initial Indication of Total Value - Limited Partners	$3,547,233	$3,547,233
Minority Interest Discount	**25.0%**	**Combined with Marketability Discount**
Marketability Discount	**45.0%**	**33.0%**
Additional incremental marketability discount because of their status as private and non-registered interests	**na**	**7.5%**
Conclusion of Value	**$1,463,234**	**$2,198,398**
Impact of combined discounts:	58.75%	38.00%

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TABLE 2

RESOURCES

For other articles of interest, visit Mercer Capital's Library of Articles at www.mercercapital.com.

Boggy Slough West, LLC

For an analysis of the appropriate discounts for Boggy Slough, Temple also employed Czaplinski, who utilized the same assumptions as in Ladera Land, also without discussing the appraisal with management. She concluded a 25% minority interest discount and a 45% marketability discount, again utilizing the QMDM. The Court echoed its concern over the assumptions in the QMDM, but had additional testimony from another expert, William J. Lyon, who testified about the difficulties in partitioning the underlying properties. Based on this additional input, the Court concluded that "Lyon's valuations support Czaplinski's calculations", at least in the gift of larger interest. For four smaller gifts to grandchildren, the Court defaulted to its 38% overall discount as shown in Table 3.

Boggy Slough West, LLC
Valuation date: February 7, 1997

	Appraiser Conclusion	Court Conclusion for 76% Gift	Court Conclusion for four, 1.6% Gifts (6.4%)
MARKET VALUE BALANCE SHEET	Market Value	Market Value	Market Value
Assets			
Cash & Equivalents	$34,500	$34,500	$34,500
Boggy Slough Ranch	2,160,000	2,160,000	2,160,000
Total Market Value of Assets	**$2,194,500**	**$2,194,500**	**$2,194,500**
Liabilities			
Stated Liabilities	$4,919	$4,919	$4,919
Total Market Value of Liabilities	**$4,919**	**$4,919**	**$4,919**
Net Assets	**$2,189,581**	**$2,189,581**	**$2,189,581**
Initial Indication of Total Value - All Members	$2,189,581	$2,189,581	$2,189,581
Size of Gift in Percentage	83.0%	76.6%	6.4%
Size of Gift Before Discounts	$1,817,352	$1,677,219	$140,133
Minority Interest Discount	**25.0%**	**Combined with Marketability Discount**	**Combined with Marketability Discount**
Marketability Discount	**45.0%**	**60.0%**	**33.0%**
Additional incremental marketability discount because of their status as private and non-registered interests	**na**	**0.0%**	**7.5%**
Conclusion of Value	**$749,658**	**$670,888**	**$86,848**
Impact of combined discounts:	58.75%	60.00%	38.00%

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TABLE 3

Temple Partnerships

The Temple Partnerships include Temple Investments, LP and Temple Partners, LP, both asset holding partnerships owning marketable securities in public companies. For the assessment of appropriate discounts for these entities, Temple engaged Mr. Charles Elliott, and the government expert was Mr. Frances Burns. Details in the case write-up are sketchy with regard to the minority and marketability discounts, however, the Court favored the Burns approach.

Minority Discount

Burns relied on a published weekly list of closed end funds, which showed discounts or premiums to net asset value. He did not exclude any funds, and calculated the mean discount at the three valuation dates, showing that the discount varied by date: 7.5%, 10.1% and 3.3%. Elliott had excluded some funds without explanation. The Court concluded that "Burns properly examined transactions involving closed end funds" and the minority interests corresponded to the published mean discounts to net asset value. "This method was used by the Tax Court in *Peracchio v. Commissioner,* 86 T.C.M. (CCH) 412 (2003). The Court observed that this was 'an approach we have previously followed in the context of investment partnerships … and we shall do so again here.' "

Marketability Discount

The QMDM was not utilized for the Temple Partnerships by either appraiser. In the determination of the marketability discount, Burns considered and relied upon seven factors: 1) restricted stock studies; 2) academic research; 3) the costs of going public; 4) secondary market transactions; 5) asset liquidity; 6) partnership interest transferability; and 7) whether distributions were made. By contrast, Elliott used restricted stock sales but did not analyze them as fully as Burns. Rather than taking restricted stock sales and explaining its relation to the gifted interests, Elliott simply listed the studies and picked a discount based on the range of numbers in the studies. The Court concluded: "The better method is to analyze the data from the restricted stock studies and relate it to the gifted interests in some manner, as Burns did." The Court accepted the 12.5% marketability discount derived by Burns. The summary results are shown in Table 4.

"Temple Partnerships"
Including: Temple Investments, LP and Temple Partners, LP
Valuation Dates: April 11, 1997; June 5, 1997; January 9, 1998

	Appraiser Conclusion	Appraiser Conclusion	Court Conclusion	Court Conclusion
MARKET VALUE BALANCE SHEET	Market Value Temple Investments, LP	Market Value Temple Partners, LP	Market Value Temple Investments, LP	Market Value Temple Partners, LP
Assets				
Cash & marketable securities				
Including: Temple-Inland, Inc.				
Time Warner, Inc.				
Total Market Value of Assets	**$17,622,470**	**$17,704,956**	**$17,622,470**	**$17,704,956**
Liabilities				
None	$0	$0	$0	$0
Total Market Value of Liabilities	**$0**	**$0**	**$0**	**$0**
Net Assets	**$17,622,470**	**$17,704,956**	**$17,622,470**	**$17,704,956**
Less: Value Attributable to General Partners	1.0%	1.0%	1.0%	1.0%
Initial Indication of Total Value - Limited Partners	$17,446,245	$17,527,906	$17,446,245	$17,527,906
Minority Interest Discount (Varies by Date for Court Conclusion)	**na**	**na**	**7.5%; 10.1%; 3.3%**	**7.5%; 10.1%; 3.3%**
Marketability Discount	**na**	**na**	**12.5%**	**12.5%**
Conclusion of Value	**$4,254,000**	**$4,254,000**	**Varies by date**	**Varies by date**
Impact of combined discounts:	**46.00%**	**46.00%**	**Varies by Date, but clearly lower than 46%**	**Varies by Date, but clearly lower than 46%**

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TABLE 4

DID YOU KNOW?

The five most popular downloads from Mercer Capital's website for the first 6 months of 2006 are:

1. Sample Spreads 1,569
2. Southeast Bank Group 1,219
3. Purchase Price Allocation .. 1,141
4. Mercer Capital Investment Banking Qualifications 679
5. Mercer Capital Corporate Qualifications 271

Summary Comments

Minority Interest Discount

The Court here and with reference to prior cases has concluded that minority interest discounts (for investment companies) based on transactions involving closed end funds is an acceptable method. They focused on the mean as the statistical measure of central tendency. The median can also be useful, since it is not as distorted by extreme data at either end of the spectrum. The concept on both data bases is identical.

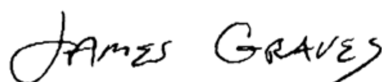
Marketability Discount

The Court is still struggling with this issue, and as jurists, cannot be expected to have a complete grasp of investment analysis. In the *Temple* case, they defaulted to the restricted stock studies, although concluding that the better approach was to "analyze the data" from the restricted stock studies to ensure applicability to the subject case. The Court appeared to be moving away from restricted stock studies in *Peracchio*, although it is clear overall that the Court is seeking more relevant analysis that it can apply directly to the facts and circumstances of a particular case.

At Mercer Capital, we have carefully reviewed the restricted stock studies and concluded that the dissection of academic studies into homogeneous sub-groups that can be applied with confidence to a particular case is not a helpful approach. The determination of a marketability discount is an investment decision, not an academic one, and it is necessarily based on investment facts and assumptions. These facts and assumptions include: competing rates of return for alternative investments; the growth rate of the underlying asset during the holding period; the expected dividend yield; the growth rate of the dividend; and yes, an expected holding period until some prospective liquidity event. As appraisers, we must deal with incomplete information all the time and base our analysis on the facts as we know them and on assumptions that are reasonable and defensible.

The QMDM fulfills the Court's demand for analysis, and provides a framework for making a reasonable investment decision that can be applied to the facts and circumstances of a particular case. Facts are a key part of this, but so are the assumptions, some of which can be based on relevant market data and some of which must be based on a discussion with management. Again, in the end, it's an investment decision, not an academic one. In the *Temple* case, the Court did not dismiss the QMDM, it just had a problem with the appraiser's assumptions; and it missed the important perspective of the holding period as a necessary component of any investment decision.

At Mercer Capital, we have used the QMDM to assess the prospects for a marketability discount for over 10 years. It forces us as securities analysts to consider the facts and circumstances of an individual case and make an informed investment decision. Please give us a call if we may help you in your investment decision process.



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NO CRITICISM OF QMDM

The QMDM was used in the following when there was no criticism of the model or the appraiser using it:

» *Thompson v. Commissioner*

» *Marmaduke v. Commissioner*

» *Noble v. Commissioner*

T.C. Memo. 1996-468

UNITED STATES TAX COURT

BETTY W. THOMPSON, Petitioner v.
COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket No. 18922-93. Filed October 17,1996.

David D. Aughtry and Donald P. Lancaster, for petitioner.

Julie M. T. Foster, for respondent.

MEMORANDUM OPINION

DAWSON, Judge: This case was assigned to Special Trial Judge John F. Dean pursuant to section 7443A(b)(4) and Rules 180, 181 and 183.[1] The Court agrees with and adopts the Special Trial Judge's opinion which is set forth below.

[1]Unless otherwise specified, all section references are to the Internal Revenue Code, as amended. All Rule references are to the Tax Court Rules of Practice and Procedure.

OPINION OF THE SPECIAL TRIAL JUDGE

DEAN, Special Trial Judge: This matter is before the Court on petitioner's Motion for Litigation and Administrative Costs pursuant to section 7430 and Rule 231.

In separate notices of deficiency addressed to Betty W. Thompson (hereinafter petitioner) and her husband, Lawrence N. Thompson (hereinafter Mr. Thompson), respondent determined a deficiency in and an addition to the Federal gift tax liability of each of them as follows:

Calendar Year Ended	Deficiency	Addition to Tax Sec. 6660
12/31/88	$398,683.08	$119,605

The adjustment in the respective notices of deficiency was primarily attributable to respondent's determination that the value of gifts of common stock made in the year 1988 was $3,163,500, instead of $1,260,072 as reported on the gift tax return signed by petitioner and Mr. Thompson.[2]

The petition in this case was filed on September 1, 1993. On November 5, 1993, the Court issued its notice setting petitioner's case and Mr. Thompson's case for trial at the April 11, 1994, trial calendar in Atlanta, Georgia. Within the period allowed by Rule 143(f), petitioner and Mr. Thompson submitted an expert witness report on the valuation of the

[2]The notices also determined that there were taxable gifts from prior periods in the amount of $27,575.33 and not "$0.00" as reported on the return.

closely held stock which was the subject of respondent's deficiency notices. Shortly before trial, respondent accepted the valuation contained in the expert witness report. A stipulation of settled issues and a revised stipulation of settled issues were filed with the Court in May and August of 1994, respectively.[3]

Concurrently with the filing of the stipulation of settled issues, petitioner filed her motion for litigation and administrative costs. Respondent filed a response to petitioner's motion, and petitioner filed a reply to respondent's response to petitioner's motion. Also, since the filing of the motion and responses, the parties have stipulated additional facts and petitioner has filed an additional affidavit[4].

Neither party initially requested a hearing in this matter. Respondent eventually requested a hearing on the element of petitioner's payment of legal fees, but the Court concludes that a hearing is not necessary for the proper consideration and disposition of this motion. Rule 232(a).

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[3]The parties have agreed that there is a deficiency in gift tax due from petitioner for the taxable year 1988 in the amount of $24,942 and that there is no addition to tax due from petitioner for the taxable year 1988 under the provisions of sec. 6660.

[4]Petitioner supplied an additional affidavit attesting to the attorney's fees that she allegedly paid or incurred.

The Court decides the motion for litigation and administrative costs based upon the pleadings, petitioner's motion with attached exhibits, respondent's response with attached exhibits, petitioner's reply to respondent's response with attached exhibits, the parties' stipulations, and petitioner's additional affidavit. The relevant facts as drawn from the record are set out below.

Background

Petitioner and Mr. Thompson resided at Milledgeville, Georgia, at the time the petition in this case was filed. Mr. Thompson is the chief executive of and principal shareholder in T & S Hardwoods, Inc. (the Company). The Company is a closely held family corporation located in Milledgeville, Georgia. The Company is engaged in the operation of hardwood sawmills.

On August 8, 1988, Mr. Thompson made gifts of stock in the Company to his son and two daughters.[5] On April 18, 1989, the Internal Revenue Service received a Form 709, United States Gift and Generation-Skipping Transfer Tax Return, signed by L. N. Thompson, Jr., as donor. Petitioner also signed the return indicating her consent to "split-gift" treatment under section

[5]Petitioner and Mr. Thompson had given "split gifts" of stock in the Company to their children in the years 1986 and 1987 that reduced the amount of unified credit available for application to the tax on the gifts made in 1988. See sec. 2505(a). This issue has been settled by agreement of the parties.

2513.[6] On a schedule attached to the return, gifts of 9,000 shares of the Company to Lawrence N. Thompson III, 1,050 shares to Barbara E. Thompson, and 1,050 shares to Ann W. Jefferson were reported. All of the shares were valued at $113.52 per share, and the valuation was supported by the computations of James M. Grant, C.P.A. (hereinafter Mr. Grant), the return preparer.

Mr. Grant valued the Company stock by capitalizing the 1984-88 yearly average net profit per share at 15 percent, and comparing the resulting figure of $189.80 to the book value per share as of August 31, 1988, which was $159.48. After finding the average of the two figures, $174.64, Mr. Grant then deducted a discount of 35 percent for lack of marketability and the transfer of a minority interest. The deduction for the discount of $61.12, from the average of $174.64, resulted in the reported valuation of $113.52 per share.

Both gift tax returns were selected for examination by respondent. On August 1, 1991, Mr. Thompson and his accountant, Mr. Grant, met with respondent's examining agent at the Company's facilities in Milledgeville, Georgia. Respondent's examining agent, an estate and gift tax attorney, was primarily interested in discussing with Mr. Thompson and Mr. Grant the level of the

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[6]Part I, line 16 of Mr. Thompson's Form 709 was marked with an "X" in the "yes" column indicating that his spouse, petitioner, intended to file a separate gift tax return for the calendar year. The parties have stipulated that petitioner, in fact, filed a Form 709 reporting the subject gifts.

discount taken in determining the value of the Company's shares when the 1986, 1987, and 1988 gifts were made to the Thompson children.

Respondent's examining agent made his own computation of the value of the Company stock. The agent, using what he considered to be a comparable publicly traded corporation, determined in his report that the hypothetical market value of the Company on the valuation date was $300 per share. He then discounted that value by 20 percent, or $60 per share, to reflect the lack of marketability of closely held stock. To the discounted value of $240 he applied a "control"[7] premium of 20 percent, or $48, which he added to the marketability discounted value of $240 to arrive at a figure of $288 per share. Finally, he rounded to the amount of $285 as his proposed per-share value of the Company stock to a hypothetical buyer.

In August of 1991, Mr. Thompson engaged attorney J. René Hawkins (hereinafter Mr. Hawkins). In connection with representing Mr. Thompson in the examination of the gift tax return, Mr. Hawkins suggested that Mr. Thompson hire an independent appraiser to value the shares that Mr. Thompson had given to the children. Based upon this advice, Mr. Thompson hired John O. Batson (hereinafter Mr. Batson) to perform an appraisal of the Company stock.

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[7] "Control" here represents ownership of more than 50 percent of the stock of a corporation by a single family.

Mr. Batson prepared an appraisal report and submitted it to the Company. Mr. Batson's fee was paid by the Company and charged as compensation to Mr. Thompson. It was Mr. Thompson's understanding that both Mr. Batson and Mr. Hawkins, although formally engaged by him, were also representing his wife, here petitioner, with respect to her potential gift tax liability.

In due course, petitioner and Mr. Thompson received the revenue agent's report and filed a protest. In May of 1992, Mr. Hawkins, by letter, submitted the appraisal prepared by Mr. Batson to the Appeals Office.

On or about August 11, 1993, statutory notices were issued to petitioner and Mr. Thompson determining gift tax deficiencies and additions to tax under section 6660 based on respondent's valuation of the Company stock.

The petition was filed on September 1, 1993. Upon the filing of respondent's answer on November 1, 1993, the case was at issue. A Notice Setting Case for Trial, dated November 5, 1993, set the case for trial on April 11, 1994, and the Standing Pre-Trial Order directed the parties to file expert witness reports no later than 30 days prior to the first day of the trial session.

On or about February 16, 1994, Mr. Thompson hired attorney David Aughtry (hereinafter Mr. Aughtry) to represent Mr. Thompson and petitioner at trial. A valuation expert, Z. Christopher Mercer (hereinafter Mr. Mercer), of Mercer Capital Management,

Inc., was in turn engaged by Mr. Aughtry to prepare an appraisal of the shares of the Company for use in the gift tax valuation cases of Mr. Thompson and petitioner.

Mr. Mercer prepared an appraisal report and submitted it to Mr. Thompson. Mr. Mercer's fee was paid by the Company and charged as compensation to Mr. Thompson.[8] Although Mr. Aughtry and Mr. Mercer were formally engaged by Mr. Thompson, it was understood that they would also represent petitioner's interests in her separate gift tax case. Mr. Aughtry entered his appearance in petitioner's case on March 15, 1994.

Petitioner provided a copy of the valuation report prepared by Mr. Mercer to respondent within the time required under Rule 143(f). Respondent, on the record at a hearing in Atlanta, Georgia, on April 22, 1994, accepted the per-share value of the Company stock as determined by Mr. Mercer, $124.50 for the year 1988, and lesser values for gifts in the 2 previous years. Respondent also conceded on the record that the addition to tax under section 6660 would not apply. It was agreed that the settlement would apply to both petitioner's and Mr. Thompson's case. Since Mr. Thompson had a net worth in excess of $2 million, he did not file a motion for fees and costs in his case.

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[8]The Company advanced other litigation costs and charged them as compensation to Mr. Thompson.

The Court ordered the parties to meet and attempt to prepare a stipulation of agreed facts "relevant to the issue of petitioner `paying' or `incurring' the costs claimed in petitioner's motion". In response thereto, petitioner filed an affidavit with the Court. The affidavit, sworn "to the best of her knowledge and belief" on January 30, 1995, states in paragraph 5 that petitioner has "incurred and paid" fees and costs in the amount of $67,371.

On April 3, 1995, the Court, once again, ordered the parties to file a stipulation of facts "regarding whether petitioner `paid' or `incurred' the litigation and administrative costs" at issue. On May 2, 1995, the parties filed a stipulation of facts. Attached to the stipulation, as Joint Exhibit 7-G, is a copy of a check drawn by petitioner to her husband in the amount of $67,371, dated February 1, 1995.

Petitioner is not employed, and although she receives occasional dividend income, most of her income and assets have come from Mr. Thompson directly or indirectly.

Discussion

Section 7430(a) provides that, in the case of any administrative or court proceedings brought by or against the United States in connection with the determination, collection, or refund of any tax, interest, or penalty, the "prevailing party" may be awarded a judgment for reasonable administrative costs incurred in connection with any administrative proceedings

within the IRS, and reasonable litigation costs incurred in connection with any court proceeding. To qualify as a prevailing party under the statute, petitioner must establish that: (1) The position of the United States in the proceeding was not substantially justified; (2) she substantially prevailed with respect to the amount in controversy or with respect to the most significant issue presented; and (3) she met the net worth requirements of 28 U.S.C. sec. 2412(d)(2)(B) (1994) on the date the petition was filed. Sec. 7430(c)(4)(A).

To recover litigation costs, petitioner must also establish that she exhausted the administrative remedies available to her within the Internal Revenue Service and that she did not unreasonably protract the proceedings. Sec. 7430(b)(1), (4). Petitioner bears the burden of proof with respect to each of the preceding requirements. Rule 232(e).

Petitioner's motion in this case seeks litigation and administrative costs paid or incurred beginning with the examination of the returns of petitioner and of Mr. Thompson on which the split gifts were reported through the filing of petitioner's reply to respondent's response to petitioner's motion for litigation and administrative costs.

Respondent agrees in her response to petitioner's motion for litigation and administrative costs that petitioner has substantially prevailed with regard to the amount in controversy, and that petitioner meets the net worth requirement.

For the reasons stated below, we find it unnecessary to address the issues of whether the position of respondent was substantially justified in this matter, whether petitioner exhausted administrative remedies, and whether petitioner unreasonably protracted the Court and administrative proceedings.

Petitioner Must Pay or Incur Fees and Costs

Upon examination of the record in this case, we conclude that petitioner has not carried her burden of proving that she has paid or incurred any costs in connection with these administrative or judicial proceedings as required by statute and the Rules of this Court. Sec. 7430(a)(1) and (2) (reasonable litigation and administrative costs "incurred"); Rule 231(d) (reasonable litigation and administrative costs "paid or incurred").

In Hong v. Commissioner, 100 T.C. 88 (1993), a husband and wife filed a joint Federal income tax return, were issued a joint statutory notice, filed a joint petition, and had a combined net worth greater than $2 million, but less than $2 million each. This Court held that each petitioner met the net worth requirements of 28 U.S.C. sec. 2412(d)(2)(B) (1994), incorporated into section 7430(c)(4)(A)(iii). The latter section, we said, speaks in terms of an individual. However, an individual must demonstrate that he or she has incurred or paid the costs and fees for which an award is sought. See Prager v. Commissioner, T.C. Memo. 1994-420; cf. Hong v. Commissioner, supra at 92 n.2.

As an initial matter we note that, like section 7430, the Equal Access to Justice Act (EAJA), codified at 5 U.S.C. section 504 and 28 U.S.C. section 2412 (1994), allows courts to award attorney's fees and other expenses to a prevailing party in actions against the Government. At times we will draw on the more extensive case law under the EAJA in order to interpret an analogous provision in section 7430. Kenagy v. Unites States, 942 F.2d 459 (8th Cir. 1991) (where wording is consistent, courts read the EAJA and sec. 7430 in harmony); United States v. Balanced Fin. Management, Inc., 769 F.2d 1440, 1451 n.12 (10th Cir. 1985); Powell v. Commissioner, 91 T.C. 673, 682 (1988), revd. on another issue 891 F.2d 1167 (5th Cir. 1990).

Meaning of "Paid or Incurred"

By virtue of its requirement that attorney's fees have been "incurred" by the party, section 7430 differs from some other fee-shifting statutes. For example, unlike the Civil Rights Attorneys Fees Awards Act of 1976, which provides for allowance of "a reasonable attorney's fee as part of the costs", section 7430 is more narrowly drawn and requires that to receive an award, attorney's fees must have been paid or incurred. Frisch v. Commissioner, 87 T.C. 838, 846 (1986). This is an important distinction. To be eligible for an award of fees under section 7430, petitioner must be able to show that she has paid those

fees or incurred an obligation to pay them. Id. at 845-846 (plain language of section 7430 indicates that recovery is limited to actual expenditures).[9]

The Court has observed that the meaning of "incurred" in the context of section 7430 is "'to become liable or subject to: bring down upon oneself.'" Id. at 846. In analogous circumstances, it has been held that fees are incurred when there is a legal obligation to pay them. United States v. 122.00 Acres of Land, 856 F.2d 56 (8th Cir. 1988) (applying sec. 304(a)(2) of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. sec. 4654(a); fees must be "actually incurred"); accord SEC v. Comserv Corp., 908 F.2d 1407, 1414 (8th Cir. 1990) (construing the EAJA to a similar effect).

The fact that petitioner here may have "retained" and was represented by attorneys and other professionals in the administrative and judicial proceedings is not sufficient to meet the requirements of section 7430. See, e.g., Unification Church v. INS, 762 F.2d 1077, 1082-1083, 1092 (D.C. Cir. 1985)

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[9]There is a well-recognized exception (not pertinent here) to this requirement in proceedings under the EAJA. In light of the legislative history of the Act and for reasons of public policy, parties who are represented by a legal services organization or by an attorney pro bono are not precluded from an award of fees and costs under the EAJA. Awards are routinely made in those circumstances even though the claiming party did not pay or incur fees. See, e.g., Phillips v. GSA, 924 F.2d 1577, 1582-1583 (Fed. Cir. 1991); SEC v. Comserv Corp., 908 F.2d 1407, 1415 (8th Cir. 1990); American Association of Retired Persons v. EEOC, 873 F.2d 402, 406 (D.C. Cir. 1989); Watford v. Heckler, 765 F.2d 1562, 1567 n.6 (11th Cir. 1985).

(individual plaintiffs "retained" attorney and received representation, but payment was made by another, the Unification Church).

Payment of Fees and Costs

The issues involved in the gift tax deficiency cases of petitioner and her husband were identical. The primary question to be answered was, on the valuation date, what was the value of stock in the Company given as split gifts by Mr. Thompson and petitioner to their children. Both petitioner and her husband were represented by the same legal counsel. Under these circumstances, close scrutiny of the record before us is warranted to determine what fee arrangement in fact existed. See American Association of Retired Persons v. EEOC, 873 F.2d 402, 405-406 (D.C. Cir. 1989) (concern about evasion of party eligibility requirements is highest where one counsel represents more than one party, especially where the wealth of one or more of those parties would likely cause disqualification from recovering fees).

Mr. Thompson engaged Mr. Hawkins and hired Mr. Batson. The Company, of which Mr. Thompson is chairman and principal shareholder, paid Mr. Batson's fee, and the payment was charged as compensation to Mr. Thompson.

The evidence further shows that Mr. Thompson hired Mr. Aughtry, who, in turn, hired Mr. Mercer, the valuation expert who represented petitioner and Mr. Thompson after the filing of the

petition in this case. Mr. Mercer's fee was paid by the Company and the payment charged as compensation to Mr. Thompson. Moreover, the company advanced other litigation costs in an unspecified amount and charged them as compensation to Mr. Thompson. The only evidence in this record that petitioner paid any of the fees and costs in this case is her February 1, 1995, check to Mr. Thompson in the amount of $67,371 that bears the notation "Reimburse Legal Exp." As demonstrated by the date, February 1, 1995, the check was written after the Court's order requesting stipulated facts concerning whether petitioner had paid or incurred fees and costs. We also note that the check is dated 2 days after the sworn affidavit dated January 30, 1995, in which petitioner stated that, to the best of her knowledge and belief, she had incurred and "paid" attorney's fees and costs of $67,371.

The date of petitioner's check is not its only questionable characteristic. Petitioner submitted a summary of assets as of the end of the year 1993 attached to her affidavit of May 19, 1994. An examination of the summary of assets fails to reveal any apparent source of liquid funds[10] from which petitioner could write a check for $67,371 to Mr. Thompson. Since petitioner is not employed and most of her assets have come from Mr. Thompson, we are reluctant to place much weight on her check to him as

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[10]Petitioner has not stated that she converted any of her other assets into cash.

evidence that she has "paid" the subject fees and costs. On the contrary, the "reimbursement" check written by petitioner to Mr. Thompson is additional evidence that he is the person who paid the fees and costs in this case.

The conduct of petitioner and Mr. Thompson strongly suggests that it was never intended that petitioner would incur or pay any fees in this matter. In our judgment the timing of the "reimbursement" check and petitioner's lack of liquid funds strongly suggest an attempt by petitioner and her husband to circumvent the net worth requirement for a section 7430 award, rather than her bona fide payment of an obligation. We must look to the substance of what occurred. Allowance of a fee award to petitioner would effectively allow her to recover costs incurred by Mr. Thompson, an ineligible litigant, who actually absorbed the financial burden of the litigation.

In addition, we need not address petitioner's arguments sounding in contract, including quantum meruit, at any length. Suffice it to say that payment to a creditor discharges a debtor's obligation. See Ga. Code Ann. sec. 13-4-40 (Michie 1982). Unlike Christoph v. United States, 931 F. Supp. 1564 (S.D. Ga. 1996), payments of all the litigation costs here at issue were made by the company and charged as compensation to Mr. Thompson.

Based on the record before us, we hold that petitioner has failed to carry her burden of showing that she paid or incurred,

within the meaning of section 7430, any fee or cost[11] identified in her motion.

To reflect the foregoing,

An appropriate order and decision will be entered.

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[11]We have considered whether petitioner has paid any miscellaneous administrative or litigation cost. In an attempt to determine whether petitioner is entitled to recover the fee for filing her petition, we discovered that petitioner's petition and that of her husband, Mr. Thompson, were sent to the Court by Federal Express in a single envelope. The receipt attached to the envelope indicates the sender to be Mr. Hawkins. The "internal billing reference" is listed as "L. N. Thompson, Jr." Also, the parties have stipulated that in addition to the fees of Mr. Batson and Mr. Mercer, "T & S Hardwoods, Inc. advanced other [unspecified] litigation costs and charged them as income to Mr. Thompson".

T.C. Memo. 1999-342

UNITED STATES TAX COURT

ESTATE OF SAM HOMER MARMADUKE, DECEASED, JOHN H. MARMADUKE, INDEPENDENT EXECUTOR, Petitioner v. COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket No. 17047-97. Filed October 14, 1999.

William R. Cousins III, Robert Don Collier, and Robert M. Bolton, for petitioners.

Audrey M. Morris, for respondent.

MEMORANDUM FINDINGS OF FACT AND OPINION

SWIFT, Judge: Respondent determined a deficiency of $1,809,921 in the Federal estate tax of the Estate of Decedent Sam Homer Marmaduke.

Unless otherwise indicated, all section references are to the Internal Revenue Code in effect as of September 7, 1993 (the

date of decedent's death or the valuation date), and all Rule references are to the Tax Court Rules of Practice and Procedure.

After settlement of some issues, the sole remaining issue for decision is the fair market value, as of the date of decedent's death, of 366,385 shares of common stock of a closely held corporation.

FINDINGS OF FACT

Some of the facts have been stipulated and are so found.

At the time of decedent's death, decedent resided in Amarillo, Texas. At the time the petition was filed, John H. Marmaduke, the executor of decedent's estate, resided in Amarillo, Texas.

Upon his death in 1993, decedent owned 366,385 shares or approximately 22 percent of the total outstanding common stock in Hastings Books, Music & Video, Inc. (Hastings). Other members of the Marmaduke family owned another 957,685 shares or 57 percent of the total outstanding common stock in Hastings. Together, the Marmaduke family (including decedent's wife, children, and grandchildren) owned 79 percent of the total common stock in Hastings.

Shareholders unrelated to the Marmaduke family, comprising Hastings employees and a qualified employee benefit plan covering

Hastings employees (the ESOP), owned the remaining 21 percent of the total outstanding shares of common stock in Hastings.

The stock in Hastings is not listed on any stock exchange and is not traded over the counter.

As of the valuation date, Hastings was engaged throughout the Southern and Southwestern United States in the business of operating 103 retail stores that sold prerecorded music, books, and video cassettes.

Hastings was originally created in the 1960's as a retail subsidiary of Western Merchandisers, Inc. (Western). Western, in turn, was a wholesaler and distributor of similar merchandise to stores such as Wal-Mart Stores, Inc. (Wal-Mart). In 1991, Hastings was split off from Western in a tax-free reorganization. Following the reorganization, Western was sold to Wal-Mart, and Western's former shareholders held stock in both Hastings and Wal-Mart. Pursuant to a 5-year branch service agreement, however, Hastings' management remained dependent upon Western's headquarters and distribution facilities, information systems, and accounting functions.

From the date of the 1991 reorganization until the valuation date of September 7, 1993, Hastings was in excellent financial condition with both sales and profits increasing significantly.

In January of 1993, A.G. Edwards & Sons, Inc. (A.G. Edwards), a valuation company, prepared a valuation report of the

fair market value of common stock in Hastings. The purpose of the A.G. Edwards' report was to establish the fair market value of an approximate 3-percent interest in Hastings common stock held by the ESOP plan. When ESOP plan participants purchased a new home, needed money for a child's education, or terminated employment, they had the right to direct the plan to sell shares of Hastings stock back to Hastings at the then current fair market value. This "put" option provided liquidity for small blocks of stock in Hastings held by the ESOP.

Before any discount for lack of marketability, the A.G. Edwards' report calculated the total value of Hastings as of January of 1993 to be $100 million. The A.G. Edwards' report then applied a 40-percent discount for lack of marketability that would have reflected a value for Hastings stock of $35.45 per share. However, due to the above-described liquidity of ESOP plan shares provided by the put option, the A.G. Edwards' report reduced the 40-percent lack-of-marketability discount in half to 20 percent and opined that the fair market value of Hastings stock held by the ESOP was $47 per share.

In 1993, 18 separate transactions involving small blocks of Hastings stock occurred between employees, officers, and other individuals with an ongoing relationship with Hastings or Western, cumulatively representing approximately 1 percent of the total issued and outstanding shares of stock in Hastings. All

but two of these transactions occurred at a price per share of $47.

In June of 1993, decedent sold 7,000 shares of his common stock in Hastings at $47 per share. Decedent sold 2,000 of these shares to an officer and treasurer of Western who possessed full knowledge of the financial affairs of Hastings. In November of 1993, petitioner, who is decedent's son and president and CEO of both Western and Hastings, sold 2,000 shares of his stock in Hastings at $47 per share.

On June 7, 1994, petitioner timely filed decedent's Federal estate tax return. Based on a valuation report of Gibbs, Smith & Schwartzman, a valuation company, the fair market value of decedent's 366,385 shares of stock in Hastings was reported on decedent's estate tax return at $13,384,044, or $36.53 per share.

On audit, based largely on the transactions in Hastings stock that occurred in 1993, respondent determined that the total fair market value of decedent's shares of stock in Hastings was $17,220,095, or $47 per share. Based thereon, respondent determined an increase in the value of decedent's gross estate of $3,836,050.

OPINION

For Federal estate tax purposes, property is generally included in a gross estate at its fair market value on the date

of death. See sec. 2031(a); sec. 20.2031-1(b), Estate Tax Regs. Fair market value is defined as the price at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts. See United States v. Cartwright, 411 U.S. 546, 551 (1973); Estate of Brookshire v. Commissioner, T.C. Memo. 1998-365; sec. 20.2031-1(b), Estate Tax Regs.

Fair market value involves a question of fact, and facts reasonably known on the valuation date are particularly relevant. See Estate of Newhouse v. Commissioner, 94 T.C. 193, 217-218 (1990); Estate of Brookshire v. Commissioner, supra. Arm's-length sales of stock within a reasonable time before and after the appropriate valuation date are strong indicators of fair market value. See Estate of Andrews v. Commissioner, 79 T.C. 938, 940 (1982); Estate of Brookshire v. Commissioner, supra.

Additional factors that are relevant in valuing shares of stock in closely held corporations are: The financial condition of the corporation, the value of listed stock of corporations engaged in similar lines of business, the corporation's net worth, the size of the block of stock to be valued, and the earning and dividend paying capacity of the corporation. See Estate of Newhouse v. Commissioner, supra at 217-218; Estate of Hall v. Commissioner, 92 T.C. 312, 336 (1989); Estate of Wright

v. Commissioner, T.C. Memo. 1997-53; sec. 20.2031-2(f)(2), Estate Tax Regs.; Rev. Rul. 59-60, 1959-1 C.B. 237, 238-239. Also, in valuing closely held corporations, discounts may be warranted to reflect the stock's lack of marketability and limitations on transferability. See Estate of Newhouse v. Commissioner, supra at 249; Estate of Andrews v. Commissioner, supra at 953; Estate of Brookshire, supra.

We weigh expert witness testimony offered by the parties in light of particular facts and circumstances of each case. See Helvering v. National Grocery Co., 304 U.S. 282, 294-295 (1938); Seagate Tech., Inc. & Consol. Subs. v. Commissioner, 102 T.C. 149, 186 (1994); United Parcel Serv. of Am., Inc. v. Commissioner, T.C. Memo. 1999-268.

Petitioner's first expert, using a 60-percent discount for lack of marketability, values the shares of decedent's stock in Hastings at $9,210,000, or $25.15 per share. Petitioner's first expert reached this opinion by: (1) Using the guideline company method of valuation and comparing Hastings to several publicly traded corporations engaged in similar lines of business; (2) using the guideline merged-and-acquired company method and comparing similar corporations that were bought or sold within a reasonable time of the valuation date; and (3) using the discounted cash-flow method. Due to alleged lack of independent bargaining and negotiations relating to the $47 price reflected

in the 1993 transactions involving Hastings stock, petitioner's first expert entirely rejects the transaction method.

Petitioner's second expert, using a 40-percent lack-of-marketability discount, values the shares of decedent's stock in Hastings at $12,658,602, or $34.55 per share. Petitioner's second expert relies solely on the guideline company and discounted cash-flow methods while rejecting the transaction and other valuation methods as inappropriate indicators of value.

Respondent's expert, using a 15-percent lack-of-marketability discount, values decedent's shares of stock at $17,220,095, or $47 per share. Respondent's expert utilizes the guideline company, the discounted cash-flow, and the transaction methods of valuation.

In the schedule below, we summarize the total equity value of the Hastings corporation, the discount for lack of marketability, and the per-share value of the Hastings stock as reflected in the 1993 A.G. Edwards' report and in the reports of the parties' expert witnesses. With regard to the A.G. Edwards' report, in the schedule we reflect separately the indicated value for the Hastings shares of stock owned in general and for those stocks held by the ESOP.[1]

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1 At trial and on brief, neither party relies on the $36.53 per-share value of decedent's Hastings stock reflected on decedent's Federal estate tax return. Accordingly, we do not (continued...)

	A.G. Edwards General	A.G. Edwards ESOP	Petitioner's First Expert	Petitioner's Second Expert	Respondent's Expert
Equity Value	$100,000,000*	$100,000,000*	$106,000,000*	$97,740,000*	$115,175,500*
Discount	40%	20%	60%	40%	15%
Value Per Share	$35.45	$47	$25.15	$34.55	$47

* Represents the approximate average equity value for Hastings from all methods utilized by each expert.

We conclude that the total equity value of Hastings was $100 million on the valuation date. This falls within the range for the estimated equity value of Hastings reflected in the reports of each of the experts and in particular is supported by the 1993 A.G. Edwards' report.

As indicated, in determining the fair market value of decedent's 366,385 shares of stock in Hastings, the parties' experts all agree that some discount reflecting lack of marketability is appropriate. They disagree, however, as to the percentage -- suggesting 15 to 60 percent.

With regard to the appropriate marketability discount for small blocks of stock in Hastings, the testimony of the officer and treasurer of Western is significant. He testified that $47 per share (reflecting a 20-percent discount) was a fair and accurate price for the 2,000 shares of stock he purchased from

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(...continued)
reflect that valuation in the schedule, nor do we refer to it again in the opinion.

decedent shortly before the valuation date. He stated that at no time was he under compulsion to buy or sell the shares of stock.

The value, however, of decedent's large, minority block of 366,385 shares of stock in Hastings is not controlled by the value of 2,000 shares nor by the other 1993 transactions involving small blocks of Hastings stock. Respondent's expert relies heavily on transactions cumulatively representing less than 1 percent of Hastings common stock. Decedent's stock, on the other hand, represents some 14 times the total number of shares of stock exchanged during 1993.

We note that the A.G. Edwards' report reduced the 40-percent discount for lack of marketability that it would use for Hastings stock in general to a 20-percent discount only because of the liquidity available to the Hastings stock held by the ESOP.

We regard a 15- or 20-percent lack-of-marketability discount as inadequate in valuing decedent's shares. It is clear that decedent's large, minority block of Hastings stock was not readily marketable and that a significant lack-of-marketability discount is appropriate. Several studies in evidence confirm that discounts for lack of marketability of stock in closely held corporations often exceed 30 percent.

In reaching our conclusion as to the appropriate lack-of-marketability discount to apply to decedent's stock in Hastings, we regard the following factors as supporting a significant

discount: The lack of a ready market for the Hastings shares, the comparatively small size of prior transactions relative to the size of decedent's block of stock, the continued dependence of Hastings on the branch service agreement with Western, and the general credibility of the A.G. Edwards' report.

Other factors, however, also indicate to us a marketability discount considerably less than the 40- and 60-percent discounts suggested by petitioner's experts. The several transactions of Hastings stock that did occur in 1993 at $47 per share were not in any way factored into the calculations of petitioner's experts, and Hastings was in excellent financial condition as of the valuation date.

Based on the evidence, we conclude that the appropriate discount for lack of marketability of decedent's 366,385 shares of common stock in Hastings is 30 percent.

Applying the 30-percent lack-of-marketability discount to the $100 million total equity value of Hastings yields a fair market value of $41.51 per share. We conclude that, as of September 7, 1993, the value of decedent's 366,385 shares of common stock in Hastings was $15,208,641 ($41.51 times 366,385 equals $15,208,641).

To reflect the foregoing,

Decision will be entered

under Rule 155.

T.C. Memo. 2005-2

UNITED STATES TAX COURT

ESTATE OF HELEN M. NOBLE, DECEASED, LESLIE H. NOBLE, JR., AND JOHN R. NOBLE, CO-PERSONAL REPRESENTATIVES, Petitioners v. COMMISSIONER OF INTERNAL REVENUE, Respondent

Docket No. 12606-01. Filed January 6, 2005.

Daniel J. Duffy, for petitioners.

J. Anthony Hoefer, for respondent.

MEMORANDUM FINDINGS OF FACT AND OPINION

LARO, Judge: Petitioners petitioned the Court to redetermine respondent's determination of a $223,207 deficiency in the Federal estate tax of the Estate of Helen M. Noble (the estate) and a $50,221.57 addition to tax under section 6651(a)(1). Following concessions, we must decide the

September 2, 1996, fair market value of the 11.6-percent interest in Glenwood State Bank (Glenwood Bank) that Helen N. Noble (decedent) owned. The estate's Form 706, United States Estate (and Generation-Skipping Transfer) Tax Return (estate tax return), reported the fair market value as $903,988. Respondent determined in the notice of deficiency that the fair market value was $1.1 million. Petitioners currently argue that the fair market value was $841,000 or less. Respondent argues that the fair market value was $1.1 million, as determined.

We hold that the fair market value of the interest was $1,067,000. Unless otherwise noted, section references are to the applicable versions of the Internal Revenue Code, and Rule references are to the Tax Court Rules of Practice and Procedure.

FINDINGS OF FACT

The parties filed with the Court a stipulation of 14 facts and 2 accompanying exhibits; namely, the estate tax return and the notice of deficiency. We have found the stipulated facts accordingly and have found other facts from the two exhibits. Decedent died on September 2, 1996, while residing in Gage County, Nebraska. John R. Noble and Leslie H. Noble, Jr., the co-personal representatives of the estate, resided in Lincoln, Nebraska, when the petition was filed in this Court.

The estate filed the estate tax return on July 23, 1998. Estate tax return reported that decedent's gross estate included

116 shares of stock in Glenwood Bank. Those shares were part of 1,000 nonpublicly traded shares of the only class of stock that Glenwood Bank had outstanding at the time of decedent's death and represented an 11.6-percent interest in Glenwood Bank. The estate tax return reported that the fair market value of each of the 116 shares equaled its 1996 book value ($14,169) less a 45-percent minority interest discount, resulting in a reported total fair market value of $903,988.

When decedent died, Glenwood Bancorporation (Bancorporation) owned the remaining 88.4-percent interest in Glenwood Bank. The shareholders of Bancorporation were John Dean (Dean), Dean's son, and Dean's son-in-law. Dean owned 69 percent of Bancorporation's stock, and he was unrelated familially to decedent.

Bancorporation purchased two blocks of Glenwood Bank stock during the 15-month period ending on the date of decedent's death. First, in June 1995, Bancorporation purchased 10 shares of Glenwood Bank stock at $1,000 per share. Second, in July 1996, Bancorporation purchased 7 shares of Glenwood Bank stock at $1,500 per share.

After decedent died, Dean sought to buy the 116 Glenwood Bank shares held by the estate. On May 15, 1997, Dean obtained from the accounting firm of Seim, Johnson, Sestak & Quist, LLP (Seim Johnson), a written appraisal (appraisal) of the fair market value of those shares as of December 31, 1996. Seim

Johnson issued the appraisal to Dean solely to assist the management of Glenwood Bank in making a cash purchase of the shares. The appraisal was prepared on behalf of Seim Johnson by Dennis R. Hein (Hein) and concluded that the fair market value of the 116 Glenwood Bank shares held by the estate was $878,004 ($7,569 per share) as of December 31, 1996. The appraisal stated that this fair market value included a 29-percent discount for minority interest and a 35-percent discount for lack of marketability. The estate declined to sell its Glenwood Bank shares to Dean at this appraised price. The estate sold those shares to Bancorporation on October 24, 1997, for $1.1 million ($9,483 per share).

On July 18, 2001, respondent issued to the estate a notice of deficiency in which he determined, among other things, that the fair market value of decedent’s 116 Glenwood Bank shares was $1.1 million. The notice states that “The value of the decedent’s stock was adjusted to the fair market value as determined by Shenehon Company.”

At trial, respondent called William C. Herber (Herber) as an expert witness, and the Court over the objection of petitioners recognized him as an expert on the valuation of financial institutions. The Court also over the objection of petitioners accepted into evidence Herber’s expert report under Rule 143(f) (Shenehon report), written on behalf of his employer, Shenehon

Co., stating that the applicable fair market value of an 11.6-percent ownership interest in Glenwood Bank was $1.1 million. The Shenehon report was a second expert report prepared by Herber on behalf of Shenehon Co. as to the fair market value of the 11.6-percent interest. Shenehon Co.'s first report indicated on its face that it had been prepared by three individuals, but only one of those individuals was available to testify at trial. We excluded the first report from evidence on the basis of our Opinion in Bank One Corp. v. Commissioner, 120 T.C. 174 (2003). There, we excluded from evidence the rebuttal report of the taxpayer's expert that was alleged by the Commissioner to be tainted in its preparation by the significant participation of the taxpayer's counsel. Id. at 278. We held that the rebuttal report was inadmissible because the expert had not established that the words, analysis, and opinions in that rebuttal report were his own work. Id. (citing Daubert v. Merrell Dow Pharm. Inc., 509 U.S. 579, 592 n.10 (1993)). As is equally true here, we were not persuaded by a preponderance of proof that the words, analysis, and opinions in the excluded report were the work of Herber.

The Shenehon report ascertained the fair market value of the subject shares by considering four valuation methods (book value method, discounted cashflow method, public guideline market method, and private guideline market method) and applying a

15-percent minority interest discount and a 30-percent lack of marketability discount to the values derived under those methods. The book value method reflected Glenwood Bank's reported equity as of June 30, 1996, the most current data available as of decedent's date of death. The discounted cashflow method applied a 14.5-percent discount rate to Glenwood Bank's projected annual income for each of the years during a 10-year period ending in December 2005 and an 11.5-percent rate to the bank's residual value. The public guideline market method reflected prices paid for companies which were engaged in a business similar to Glenwood Bank's and whose stock was actively traded in a public market. The private guideline market method reflected transactions involving acquisitions of privately held banks comparable to Glenwood Bank. The resulting values derived under these four methods were as follows:

	Book Value	Discounted Cash Flow	Public Guideline Market	Private Guideline Market
Value before discounts	$14,135,000	$11,100,000	$14,000,000	$18,200,000
15-percent minority interest discount	2,120,250	n/a	n/a	2,730,000
Marketable minority interest value	12,014,750	11,100,000	14,000,000	15,470,000
30-percent lack of marketability discount	3,604,425	3,330,000	4,200,000	4,641,000
Nonmarketable minority interest value	8,410,325	7,770,000	9,800,000	10,829,000
Subject percentage interest	11.6	11.6	11.6	11.6
Resulting value of subject interest	975,598	901,320	1,136,800	1,256,164

The average of the resulting values is $1,067,470.50 ((975,598 + 901,320 + 1,136,800 + 1,256,164)/4).

At trial, petitioners called three experts to testify in support of petitioners' challenge to respondent's determination of the fair market value of decedent's shares. Each of these

experts, namely, Hein, Janet M. Labenz (Labenz), and Z. Christopher Mercer (Mercer), also prepared an expert report under Rule 143(f). Hein's expert report (Seim Johnson report) was merely the appraisal with a February 8, 2003, cover letter stating in relevant part that "Our opinion is the same opinion as it was as of December 31, 1996". The cover letter also stated that Seim Johnson had been

> engaged with the management of the [Glenwood] Bank to value the [estate's 116 Glenwood Bank] shares as of December 31, 1996. * * * We have inquired as to significant items for the last quarter of 1996 that would have a material effect on the valuation of the stock from the time of Mrs. Noble's death and the date of our original valuation. We were informed that there are no such items which would have materially affected the valuation from the time of death to the valuation date.

Labenz's expert report (Labenz report) was accepted into evidence as a rebuttal to the opinion of respondent's expert. The Labenz report addressed the differences between the Shenehon report and the Seim Johnson report.

The Court with no objection from respondent recognized Mercer as an expert on the valuation of financial institutions and with no objection from respondent accepted Mercer's expert report (Mercer report) into evidence. The Mercer report concluded that the fair market value of the estate's 11.6-percent interest in Glenwood Bank was $841,000. The Mercer report generally arrived at this fair market value through a two-step process. First, the Mercer report ascertained the marketable

minority value for Glenwood Bank by considering five methods (a transaction value method, a net asset value method, a discounted future earnings method using a 10-percent earnings growth and a 20-percent earnings growth, and two guideline company methods, one using a regional peer group, the other a high-equity assets group, and both using capitalized earnings and capitalized book value). The transaction method recognized the two sales of Glenwood Bank stock happening before the valuation date and reflected the $1,500-per-share price paid in the more recent second sale. The net asset value method reflected Glenwood Bank's reported equity as of June 30, 1996, as adjusted to take into account an unrealized $128,000 gain in bond portfolio and a 38-percent related tax adjustment ($48,640). The discounted future earnings method reflected earnings growth rates of 10 percent and 20 percent and a present value rate of 14.1 percent. The guideline company methods reflected a regional group of 11 financial institutions similar to Glenwood Bank and a nationwide group of 19 banks that reported total assets of less than $1 billion and an asset/equity ratio of greater than 12 percent. The resulting values derived under these five methods were as follows:

Method	Resulting Value
Transaction value	$1,500,000
Net asset value	14,124,000
Discounted future earnings:	
10-percent earnings growth	11,364,000
20-percent earnings growth	14,224,000
Guideline company regional peer group:	
Capitalized earnings	8,306,000
Capitalized book value	17,174,000
Guideline company high/equity assets group:	
Capitalized earnings	8,543,000
Capitalized book value	16,860,000

The Mercer report gave no weight to the transaction value method, the net asset value method, or the discounted future earnings method, and ascertained the value of the marketable minority interest to be $12,721,000 by averaging the other four amounts (8,306,000 + 17,174,000 + 8,543,000 + 16,860,000)/4 = 12,720,750) and rounding the resulting average to the nearest thousand. The Mercer report as a second step in the valuation process then ascertained the applicable fair market value of decedent's 11.6-percent interest by applying a 43-percent lack of marketability discount to the marketable minority interest value of $12,721,000 (12,721,000 x 43% = 5,470,030) and multiplying the resulting rounded number of $7,251,000 (12,721,000 - 5,470,030 = 7,250,970) by 11.6 percent. The Mercer report derived the 43-percent lack of marketability discount by applying a quantitative marketability discount model (QMDM) adopted and advocated by Mercer. The Mercer report noted that the estate had

sold its 116 Glenwood Bank shares after decedent died and that relative to certain assumptions in the QMDM analysis as of September 2, 1996, the selling price for those 116 shares should have been approximately $1.9 million, rather than the $1.1 million actually received. The Mercer report "ignored" this postdeath sale because hypothetical investors would not have known about it when decedent died.

OPINION

I. Preliminary Statement

Neither party called a fact witness to testify at trial. (Each expert who testified at trial testified solely as an expert and not as both a fact witness and an expert witness.) Nor did either party introduce at trial any exhibit other than the expert reports, the two stipulated exhibits, and a statement listing one of the expert's qualifications. Most of the facts which we find in this case come from the stipulation of facts and the two accompanying exhibits. While the parties invite the Court to find additional facts solely from data relied upon by the experts in forming their expert opinions, we decline to do so. As the Court has stated previously in a similar setting:

> Much of the purported data that * * * [the expert] relied upon in reaching his conclusion also never made its way into evidence. Although an expert need not rely upon admissible evidence in forming his or her opinion, Fed. R. Evid. 703, we must rely upon admitted evidence in forming our opinion and, in so doing, may not necessarily agree with an expert whose opinion is not supported by a sufficient factual record. The mere

> fact that the Court admits an expert's opinion into evidence does not mean that the underlying facts upon which the expert relied are also admitted into evidence. Anchor Co. v. Commissioner, 42 F.2d 99 (4th Cir. 1930); Rogers v. Commissioner, 31 B.T.A. 994, 1006 (1935); see United States v. Scheffer, 523 U.S. 303, 317 n.13 (1998) (whereas expert opinion is considered evidence, the facts upon which such an expert relies in forming that opinion are not considered evidence until introduced at trial by a fact witness); see also United States v. 0.59 Acres of Land, 109 F.3d 1493, 1496 (9th Cir. 1997). In a case such as this, where an expert witness relies upon facts which are critical to the Court's analysis of an issue, we expect that the party calling the witness will enter into evidence those critical facts. * * * [Haffner's Serv. Stations, Inc. v. Commissioner, T.C. Memo. 2002-38, affd. 326 F.3d 1 (1st Cir. 2003).]

II. Rules on Valuation

The value of property for Federal estate tax purposes is a factual inquiry in which the trier of fact must weigh all relevant evidence and draw appropriate inferences to arrive at the property's fair market value. Commissioner v. Scottish Am. Inv. Co., 323 U.S. 119, 123-125 (1944); Helvering v. Natl. Grocery Co., 304 U.S. 282, 294 (1938); sec. 20.2031-1(b), Estate Tax Regs. For this purpose, fair market value is the price that a hypothetical willing buyer would pay a hypothetical willing seller, both persons having reasonable knowledge of all relevant facts and neither person under a compulsion to buy or to sell. Sec. 20.2031-1(b), Estate Tax Regs.; see also United States v. Cartwright, 411 U.S. 546, 551-552 (1973); Estate of Fitts v. Commissioner, 237 F.2d 729, 731 (8th Cir. 1956), affg. T.C. Memo. 1955-269; Estate of Scanlan v. Commissioner, T.C. Memo. 1996-331,

affd. without published opinion 116 F.3d 1476 (5th Cir. 1997). The particular characteristics of these hypothetical persons are not necessarily the same as those of any specific individual or entity and are not necessarily the same as those of the actual buyer or the actual seller. Estate of Curry v. United States, 706 F.2d 1424, 1428-1429, 1431 (7th Cir. 1983); Estate of Bright v. United States, 658 F.2d 999, 1005-1006 (5th Cir. 1981); Bank One Corp. v. Commissioner, 120 T.C. at 305. Nor are these hypothetical persons considered to be compelled to buy or to sell the property in question. These hypothetical persons are considered to know all relevant facts involving the property. Bank One Corp. v. Commissioner, supra at 304-306. Each of these hypothetical persons also is presumed to be aiming to achieve the maximum economic advantage (i.e., maximum profit) from the hypothetical sale of the property. Estate of Watts v. Commissioner, 823 F.2d 483, 486 (11th Cir. 1987), affg. T.C. Memo. 1985-595; Estate of Curry v. United States, supra at 1428; Estate of Davis v. Commissioner, 110 T.C. 530, 535 (1998); Estate of Newhouse v. Commissioner, 94 T.C. 193, 218 (1990); Okerlund v. United States, 53 Fed. Cl. 341, 345 (2002), affd. 365 F.3d 1044 (Fed. Cir. 2004).

Special rules apply when valuing the stock of a closely held corporation. See Estate of Scanlan v. Commissioner, supra. While listed market prices of publicly traded stock are usually

representative of the fair market value of that stock for Federal tax purposes, the fair market value of nonpublicly traded stock is "best ascertained" through arm's-length sales near the valuation date of reasonable amounts of that stock, as long as both the buyer and the seller were willing and informed and the sales did not include a compulsion to buy or to sell. Polack v. Commissioner, 366 F.3d 608, 611 (8th Cir. 2004), affg. T.C. Memo. 2002-145; accord Estate of Fitts v. Commissioner, supra at 731 (such arm's-length sales are the "best criterion of market value"); Estate of Hall v. Commissioner, 92 T.C. 312, 336 (1989) (same); Estate of Andrews v. Commissioner, 79 T.C. 938, 940 (1982) (same); Duncan Indus., Inc. v. Commissioner, 73 T.C. 266, 276 (1979) (same); Palmer v. Commissioner, 62 T.C. 684, 696-698 (1974) ("Ordinarily, the price at which the same or similar property has changed hands is persuasive evidence of fair market value. * * * Where the parties to the sale have dealt with each other at arm's length and the sale is within a reasonably close period of time to the valuation date, the price agreed upon is considered to have accurately reflected conditions in the market."), affd. 523 F.2d 1308 (8th Cir. 1975). When nonpublicly traded stock cannot be valued from such arm's-length sales, its value is then best determined by analyzing the value of publicly traded stock in comparable corporations engaged in the same or a similar line of business, as well as by taking into account all

other relevant factors bearing on value that would be considered by an informed buyer and an informed seller. Polack v. Commissioner, supra at 611; Estate of Fitts v. Commissioner, supra at 731-732; Estate of Hall v. Commissioner, supra at 336. In this regard, section 20.2031-2(f), Estate Tax Regs., states that

> If * * * actual sale prices and bona fide bid and asked prices are lacking, then the fair market value is to be determined by taking the following factors into consideration:
>
> * * * * * * *
>
> (2) In the case of shares of stock, the company's net worth, prospective earning power and dividend-paying capacity, and other relevant factors.
>
> Some of the "other relevant factors" * * * are: the goodwill of the business; the economic outlook in the particular industry; the company's position in the industry and its management; the degree of control of the business represented by the block of stock to be valued; and the values of securities of corporations engaged in the same or similar lines of business which are listed on a stock exchange. However, the weight to be accorded such comparisons or any other evidentiary factors considered in the determination of a value depends upon the facts of each case. In addition to the relevant factors described above, consideration shall also be given to nonoperating assets, including proceeds of life insurance policies payable to or for the benefit of the company, to the extent such nonoperating assets have not been taken into account in the determination of net worth, prospective earning power and dividend-earning capacity. Complete financial and other data upon which the valuation is based should be submitted with the return, including copies of reports of any examinations of the company made by accountants, engineers, or any technical experts as of or near the applicable valuation date.

The Commissioner has also set forth in a longstanding ruling, Rev. Rul. 59-60, 1959-1 C.B. 237, certain criteria to consider in determining fair market value. That ruling, which is widely accepted in the valuation community and which is regularly referenced by the judiciary and the Commissioner alike, Polack v. Commissioner, supra at 611, states that the

> Valuation of securities is, in essence, a prophesy as to the future and must be based on facts available at the required date of appraisal. As a 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 represented. When a stock is closely held, is traded infrequently, or is traded in an erratic market, some other measure of value must be used. In many instances, the next best measure may be found in the prices at which the stocks of companies engaged in the same or a similar line of business are selling in a free and open market. [Rev. Proc. 59-60, sec. 3.03, 1959-1 C.B. at 238.]

The ruling then states that in the absence of relevant market quotations, all available financial data and all relevant factors affecting fair market value must be considered in valuing the stock of a closely held corporation. Id. sec. 4.01. The ruling lists as relevant eight specific factors. These factors, which are virtually identical to the factors referenced in section 20.2031-2(f), Estate Tax Regs., are:

> (a) The nature of the business and the history of the enterprise from its inception.
>
> (b) The economic outlook in general and the condition and outlook of the specific industry in particular.

(c) The book value of the stock and the financial condition of the business.

(d) The earning capacity of the company.

(e) The dividend-paying capacity.

(f) Whether or not the enterprise has goodwill or other intangible value.

(g) Sales of the stock and the size of the block of the stock to be valued.

(h) The market price of stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a free and open market, either on an exchange or over-the-counter. [Rev. Proc. 59-60, sec. 4.01.]

III. Approaches to Valuation

In the case of nonpublicly traded stock the value of which cannot be determined by relevant arm's-length sales, fair market value is generally determined by using three approaches. The first approach is the market approach. The second approach is the income approach. The third approach is the asset-based approach. Each of these three approaches includes various valuation methods. The approach to apply in a given case is a question of law. Powers v. Commissioner, 312 U.S. 259, 260 (1941); Bank One Corp. v. Commissioner, 120 T.C. at 306. Litigants in this Court are usually assisted by experts in applying these approaches.

1. Market Approach

The market approach values a company's nonpublicly traded stock by using one or more methods to compare that stock to the same or comparable stock that has sold in arm's-length transactions in the same timeframe. The nonpublicly traded stock subject to valuation is valued by adjusting the sales price of the same or comparable stock to reflect any differences between that stock and the nonpublicly traded stock.

2. Income Approach

The income approach values a company's nonpublicly traded stock by using one or more methods that convert anticipated economic benefits into a single present amount. Valuation methods under this approach may directly capitalize earnings estimates or may forecast future benefits (earnings or cashflow) and discount those future benefits to the present.

3. Asset-Based Approach

The asset-based (or cost) approach values a company's nonpublicly traded stock by using one or more methods which look to the company's assets net of its liabilities.

IV. Value of the Subject Shares

The stock of Glenwood Bank was not publicly traded. Thus, we look first to see whether there were any arm's-length sales of that stock near the applicable valuation date. Because neither coexecutor elected to value the estate's property under section

2032(a), that applicable valuation date is the date of decedent's death; i.e., September 2, 1996. See sec. 20.2031-1(b), Estate Tax Regs.

The record reflects three sales of Glenwood Bank stock near the applicable valuation date. The first two sales involved the 10 shares and 7 shares, respectively, which were sold before the valuation date. The third sale involved the 116 shares sold by the estate after the valuation date. In each of these sales, the buyer was Bancorporation.

Petitioners conceded at trial that they bear the burden of proof in this case. They acknowledge that an arm's-length sale of property near the valuation date is the best indicium of its fair market value on the valuation date, but, they assert, only certain sales near a valuation date are "competent, substantial and persuasive evidence" of that fair market value. According to petitioners, sales may be probative of fair market value only if they occur within a reasonable time before the valuation date. Petitioners primarily support this position with a citation of Douglas Hotel Co. v. Commissioner, 190 F.2d 766, 772 (8th Cir. 1951), affg. 14 T.C. 1136 (1950). They also assert that a prior sale of property conclusively sets the fair market value of that property on a later valuation date even if the seller was not knowledgeable of all relevant facts as to that property and even if the property that was the subject of the sale was not of

comparable size to the property subject to valuation. They recognize that a determination of fair market value on the basis of actual sales has often been said to include requirements that a seller be knowledgeable and that the seller's property be comparable to the property subject to valuation. They assert, however, that the Court of Appeals for the Ninth Circuit in Morrissey v. Commissioner, 243 F.3d 1145, 1149 (9th Cir. 2001), revg. Estate of Kaufman v. Commissioner, T.C. Memo. 1999-119, eroded these requirements to now make them irrelevant.

We disagree with petitioners' assertion that the two prior sales of 10 shares and 7 shares, either separately or together, are an accurate measure of the applicable fair market value of decedent's 116 shares. In Morrissey, the Court of Appeals for the Ninth Circuit held that sales of 10,000 and 6,960 shares of stock on May 12 and June 16, 1994, respectively, at $29.70 per share, reflected the fair market value of 46,020 shares of that stock as of an earlier valuation date of April 14, 1994. The Court of Appeals stated that the sellers were under no compulsion to sell their shares and that they did so at the price that the buyer had represented was the price listed in a recent appraisal. The Court of Appeals stated that each seller testified at trial that the price was fair and that the sale had not been compelled.

Contrary to petitioners' assertion, we read nothing in Morrissey to indicate that the Court of Appeals for the Ninth

Circuit eroded the requirements that a seller of stock be knowledgeable and that the seller's shares be comparable in number to the shares subject to valuation in order for the sale to be probative of a valuation of the latter shares.[1] In fact, the Court of Appeals noted specifically as to the knowledge requirement that both sellers had sold their stock at approximately the same price as listed in the appraisal and that both sellers were aware that dividends had been meager even in prosperous years. Id. at 1148. The Court of Appeals also indicated as to the comparable property requirement that the prior sales of stock were not unrepresentative of the stock subject to valuation. Id.

As to the two prior sales of stock in this case, we also are unpersuaded that either of those sales was made by a knowledgeable seller who was not compelled to sell or was made at arm's length. See Estate of Fitts v. Commissioner, 237 F.2d at 731 (taxpayer bears the burden of establishing that sales are made at arm's length and in the normal course of business). In addition, contrary to the factual setting of Morrissey v. Commissioner, supra, the two prior sellers in this case did not sell their stock for the amount set forth in an appraisal. They

[1] We use the term "comparable in number" to mean that in this respect, as in others, the characteristics of the property offered as a comparable must not diverge so far from those of the property being valued that they cannot be taken into account by adjustments.

sold their stock for much less than the per-share value set forth in the later appraisal; the estate, in turn, sold its shares after the appraisal for more than the fair market value set forth therein. Moreover, the two respective prior sales represented 1 percent and .7 percent of Glenwood Bank's outstanding stock. Decedent's 116 shares, by contrast, represented 11.6 percent of that outstanding stock and were the only shares of Glenwood Bank stock not owned by the other shareholder. Mercer testified credibly that it was reasonably foreseeable as of the applicable valuation date that the other shareholder, Bancorporation, would eventually want to buy that 11.6-percent interest at some unknown time and that this added a special value to the interest. Our hypothetical seller would have known the same at the time of the hypothetical sale and as part of that hypothetical sale would have demanded compensation for this special value so as otherwise to not equate the selling price for the 10 shares and 7 shares with the hypothetical selling price of decedent's 116 shares.[2]

As to the third sale, which occurred on October 24, 1997, approximately 14 months after the applicable valuation date, we disagree with petitioners that only sales of stock that predate a valuation date may be used to determine fair market value as of

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[2] In fact, petitioners are the only ones who have suggested that one or both of the two prior sales is an accurate measure of the fair market value of decedent's 116 shares as of the applicable valuation date.

that valuation date. The Court of Appeals for the Eighth Circuit, the court to which an appeal of this case most likely lies, has held specifically that "In determining the value of unlisted stocks, actual sales made in reasonable amounts at arm's length, in the normal course of business, within a reasonable time before or after the basic date, are the best criterion of market value." Estate of Fitts v. Commissioner, supra at 731; accord Rubber Research, Inc. v. Commissioner, 422 F.2d 1402, 1405-1406 (8th Cir. 1970), affg. T.C. Memo. 1969-24; see also Estate of Jung v. Commissioner, 101 T.C. 412, 430-432 (1993); Estate of Scanlan v. Commissioner, T.C. Memo. 1996-331. Although petitioners observe correctly that the Court of Appeals for the Eighth Circuit stated in Douglas Hotel Co. v. Commissioner, 190 F.2d at 772, that "Evidence of what property sold for within a reasonable time before the material date upon which its fair value is to be determined is universally considered competent, substantial, and persuasive evidence of its fair value on the material date", this statement was made solely with respect to the evidentiary value of a sale that predated the date of valuation there. The Court of Appeals did not state as petitioners ask us to hold that only sales which occur before a valuation date are probative as to fair market value on the valuation date. In fact, the Court of Appeals went on to state specifically as to prior sales that "It is, of course, not the

only evidence which may be considered on the subject" of valuation. Id.; accord Polack v. Commissioner, 366 F.3d at 612 ("subsequent events that shed light on what a willing buyer would have paid on the date in question are admissible, such as 'evidence of actual sales prices received for property after the date [in question], so long as the sale occurred within a reasonable time ... and no intervening events drastically changed the value of the property.'" (quoting First Natl. Bank v. United States, 763 F.2d 891, 894 (7th Cir. 1985))); see also Estate of Jung v. Commissioner, supra at 431-432; Estate of Scanlan v. Commissioner, supra.

Generally speaking, a valuation of property for Federal tax purposes is made as of the valuation date without regard to any event happening after that date. See Ithaca Trust Co. v. United States, 279 U.S. 151 (1929). An event occurring after a valuation date, however, is not necessarily irrelevant to a determination of fair market value as of that earlier date. An event occurring after a valuation date may affect the fair market value of property as of the valuation date if the event was reasonably foreseeable as of that earlier date. First Natl. Bank v. United States, supra at 894; Bank One Corp. v. Commissioner, 120 T.C. at 306. An event occurring after a valuation date, even if unforeseeable as of the valuation date, also may be probative of the earlier valuation to the extent that it is relevant to

establishing the amount that a hypothetical willing buyer would have paid a hypothetical willing seller for the subject property as of the valuation date.[3] Polack v. Commissioner, supra at 612; First Natl. Bank v. United States, supra at 893-894; Estate of Gilford v. Commissioner, 88 T.C. 38, 52-54 (1987); Estate of Jephson v. Commissioner, 81 T.C. 999, 1002-1003 (1983); Estate of Scanlan v. Commissioner, supra. Unforeseeable subsequent events which fall within this latter category include evidence, such as we have here, "'of actual sales prices received for property after the date [in question], so long as the sale occurred within a reasonable time ... and no intervening events drastically changed the value of the property.'" Polack v. Commissioner, supra at 612 (quoting First Natl. Bank v. United States, supra at 894); First Natl. Bank v. United States, supra at 893-894; see also Estate of Jung v. Commissioner, supra at 431-432; Estate of Scanlan v. Commissioner, supra.

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[3] Subsequent events may be considered as evidence of value if they are relevant. Federal law favors the admission of probative evidence, and the test of relevancy under Federal law is designed to reach that end. Sabatino v. Curtiss Natl. Bank, 415 F.2d 632, 636 (5th Cir. 1969). Fed. R. Evid. 401, a rule that applies to this Court under Rule 143(a), states broadly that evidence is "relevant" if it has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed. R. Evid. 401 favors a finding of relevance, and only minimal logical relevance is necessary if the disputed fact's existence is of consequence to the determination of the action. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 587 (1993).

Petitioners try to downplay the importance of the subsequent (third) sale of the estate’s 116 Glenwood Bank shares by characterizing it as a sale to a strategic buyer who bought the shares at greater than fair market value in order to become the sole shareholder of Glenwood Bank. Respondent argues that the third sale was negotiated at arm’s length and is most relevant to our decision. We agree with respondent. Although petitioners observe correctly that an actual purchase of stock by a strategic buyer may not necessarily represent the price that a hypothetical buyer would pay for similar shares, the third sale was not a sale of similar shares; it was a sale of the exact shares that are now before us for valuation. We believe it to be most relevant that the exact shares subject to valuation were sold near the valuation date in an arm’s-length transaction and consider it to be of much less relevance that some other shares (e.g., the 10 shares and 7 shares discussed herein) were sold beforehand. The property to be valued in this case is not simply any 11.6-percent interest in Glenwood Bank; it is the actual 11.6-percent interest in Glenwood Bank that was owned by decedent when she died. See Bank One Corp. v. Commissioner, supra at 311-312.[4] The two prior sales of 10 shares and 7 shares, respectively, left decedent’s 11.6-percent interest as the only interest not owned by the other

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[4] Of course, we value that actual 11.6-percent interest in the context of a hypothetical willing buyer and a hypothetical willing seller.

shareholder. The fact that decedent's specific 11.6-percent interest may have included a unique attribute that added value to that interest vis-a-vis another 11.6-percent interest in Glenwood Bank does not detract from the fair market value of decedent's interest. That attribute would continue to be retained by the hypothetical buyer in our analysis following our hypothetical sale just as it had been retained by decedent at the time of her death.

Moreover, as to petitioners' argument, we are unpersuaded by the evidence at hand that Glenwood was a strategic buyer that in the third sale paid a premium for the 116 shares. The third sale was consummated by unrelated parties (the estate and Bancorporation) and was prima facie at arm's length. In addition, the estate declined to sell its shares at the value set forth in the appraisal and only sold those shares 5 months later at a higher price of $1.1 million. Although the estate may have enjoyed some leverage in obtaining that higher price, as suggested by Mercer by virtue of the fact that the subject shares were the only Glenwood Bank shares not owned by the buyer, this does not mean that the sale was not freely negotiated, that the sale was not at arm's length, or that either the estate or Bancorporation was compelled to buy or to sell. In fact, Mercer through his own analysis pegged the fair market value for those shares as of the time of the third sale at approximately $1.9

million, or, in other words, almost twice the amount of the price actually received. Given the additional facts that the third sale occurred sufficiently close to the applicable valuation date and that the record does not reveal any material change in circumstances that occurred between that date and the date of the third sale that would have affected the fair market value of the subject shares, we conclude on the basis of the limited evidentiary record before us that the third sale is the best indicium of the fair market value of decedent's shares at the time of her death.[5] See Estate of Fitts v. Commissioner, 237 F.3d at 731; Rubber Research, Inc. v. Commissioner, 422 F.2d at 1406; Ward v. Commissioner, 87 T.C. 78, 101 (1986); Estate of Andrews v. Commissioner, 79 T.C. at 940; see also Silverman v. Commissioner, 538 F.2d 927, 931 n.7 (2d Cir. 1976) ("Arm's length sales of the stock to be valued are, of course, the best evidence

[5] We find nothing in the record to support the conclusion which we draw from the Mercer report that the fair market value of the subject shares almost doubled from the applicable valuation date to the time of the third sale and, in light of the third sale, are unpersuaded by that report's conclusion as to the applicable fair market value of those shares. Mercer opined that the third sale was an arm's-length sale that involved a seller who at the time of the third sale lacked knowledge that the value of its stock exceeded the $1.1 million sale price. The fact that a more knowledgeable seller might have extracted a higher sale price for the subject shares does not on the record before us detract from the probative value of the third sale. At the least, the price in that sale serves as a floor to the fair market value of the subject shares and, given that respondent does not request a higher value, serves in our opinion as the best measure of the fair market value of the subject shares as of the applicable valuation date.

of value."(citing Elmhurst Cemetery Co. v. Commissioner, 300 U.S. 37, 39 (1937), and Rubber Research, Inc. v. Commissioner, supra at 1406))), affg. T.C. Memo. 1974-285; accord Estate of Scanlan v. Commissioner, T.C. Memo. 1996-331. To be sure, petitioners even advocate that an actual sale is the best indicium of that fair market value. They state in brief that expert testimony need not be considered upon the finding of a contemporaneous, arm's-length sale; such a sale of property, they state, is "indicative of its fair market value as a matter of law".

When a subsequent event such as the third sale before us is used to set the fair market value of property as of an earlier date, adjustments should be made to the sale price to account for the passage of time as well as to reflect any change in the setting from the date of valuation to the date of the sale. See Estate of Scanlan v. Commissioner, supra. These adjustments are necessary to reflect happenings between the two dates which would affect the later sale price vis-a-vis a hypothetical sale on the earlier date of valuation. These happenings include: (1) Inflation, (2) changes in the relevant industry and the expectations for that industry, (3) changes in business component results, (4) changes in technology, macroeconomics, or tax law, and (5) the occurrence or nonoccurrence of any event which a hypothetical reasonable buyer or a hypothetical reasonable seller would conclude would affect the selling price of the property

subject to valuation (e.g., the death of a key employee). See Estate of Jung v. Commissioner, 101 T.C. at 431.

The record before us does not establish the presence of any material change in circumstances between the date of the third sale and the applicable valuation date. On the basis of the record before us, we believe that the sole adjustment that must be made to the $1.1 million sale price in order to arrive at the fair market value of the subject shares as of the applicable valuation date is for inflation. While the record does not accurately pinpoint the appropriate rate to apply for that purpose, the Bureau of Labor Statistics has stated that the rate of inflation during each of the years 1996 and 1997 was slightly less than 3 percent. See generally Handbook of U.S. Labor Statistics, Employment, Earnings, Prices, Productivity, and Other Labor Data 342 (7th ed. 2004). On the basis of a 3-percent rate, we conclude that the applicable fair market value of decedent’s 116 shares was $1,067,000 ($1,100,000 x (1 - .03)).[6] We so hold.

[6] Although we do not determine this fair market value on the basis of the methodology applied by Herber, we note that this fair market value approximates the average of the resulting values derived by Herber through the application of his four methods.

All arguments made by the parties have been considered and, to the extent not discussed herein, are irrelevant and/or without merit. To reflect concessions,

Decision will be entered under Rule 155.

CASE AFFIRMING THE QMDM

ARMSTRONG V. LASALLE BANK NATIONAL ASSOCIATION

In *Juan Armstrong v. LaSalle Bank National Association*, No. 05-3417 (7th Cir. May 4, 2006), the U.S. Court of Appeals for the Seventh Circuit determined that the appropriate standard of review to apply when considering whether an employee stock ownership plan trustee adopts a valuation of the subject stock is the abuse of discretion standard. It noted that one method for testing a trustee's abuse of discretion is whether a marketability discount should have been applied. In making this recommendation, the opinion, written by Judge Posner, stated, "There are techniques for calculating a marketability, or illiquidity, discount, see Z. Christopher Mercer, "A Primer on the Quantitative Marketability Discount Model," *CPA Journal*, July 2003, www.nysscpa.org/cpajournal/2003/0703/dept/d076603.htm, visited Apr. 6, 2006…."

In the
United States Court of Appeals
For the Seventh Circuit

No. 05-3417

JUAN ARMSTRONG, *et al.*, on behalf of themselves and others similarly situated,

Plaintiffs-Appellants,

v.

LASALLE BANK NATIONAL ASSOCIATION,

Defendant-Appellee.

Appeal from the United States District Court
for the Northern District of Illinois, Eastern Division.
No. 01 C 2963—**James B. Moran**, *Judge*.

ARGUED JANUARY 17, 2006—DECIDED MAY 4, 2006

Before CUDAHY, POSNER, and WOOD, *Circuit Judges*.

POSNER, *Circuit Judge*. Amsted Industries, Inc., a manufacturer of railroad and other transportation equipment, has for many years been owned entirely by its employees (including retired employees) through an Employee Stock Ownership Plan (an ESOP), which is subject to ERISA. 29 U.S.C. §§ 1104(a)(2), 1107(b), (d)(6); *Steinman v. Hicks*, 352 F.3d 1101, 1102-03 (7th Cir. 2003); *In re Merrimac Paper Co.*, 420 F.3d 53, 63 (1st Cir. 2005). Employees begin receiving stock shortly after they join the company, and over the years

the value of an employee's holding can grow to a considerable amount. When an employee leaves Amsted's employ, his stock is (or rather was until recent changes in the plan that have precipitated this litigation) redeemed in full and at once by the company for cash. The plaintiffs, representing a class consisting of all participants in the ESOP, charge that the ESOP's trustee, LaSalle National Bank, made an imprudent valuation of the company's stock, causing heavy losses to the class members. The district court granted summary judgment for LaSalle.

A critical stage in the administration of an ESOP of a company whose shares are not traded is establishing the price at which an employee who leaves the company can redeem his shares. If the price is set too low, employees who leave will feel short-changed. If it is set too high it may precipitate so many departures that it endangers the firm's solvency. Setting a price for redemptions is difficult because by definition there is no market valuation of stock that isn't traded.

The price of Amsted's stock was reset every year. Before the recent amendments to the ESOP, it was set on September 30 but an employee had until June 30 of the following year to decide whether by quitting the company to redeem his stock at the September 30 value. Thus a drop in the stock's value between September 30 and the following June 30 would increase the departure rate because employees who didn't expect the value to recover could truncate their loss by redeeming their stock at the higher September value.

In August 1999 Amsted bought Varlen Corporation, a manufacturer of trucking equipment, for some $800 million. This was a big acquisition for Amsted; Amsted's value on the eve of the acquisition probably did not exceed the

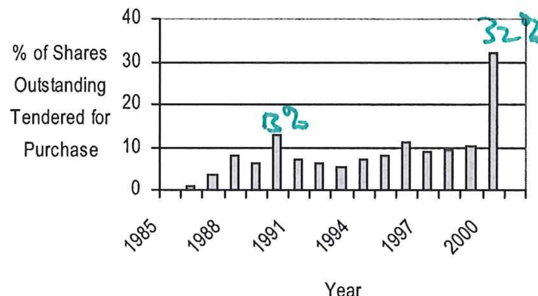
purchase price of Varlen. There is no contention that Amsted overpaid, however; it outbid the next highest bidder by only fifty cents a share.

Amsted financed the acquisition by taking out a $1 billion unsecured bank loan, which replaced its previous debt; so after completing the acquisition it had a $200 million unused line of credit ($1 billion minus $800 million). We do not know how much additional credit it could have obtained, and on what terms, but apparently not much, as we shall see. What is certain is that the acquisition increased Amsted's debt-equity ratio, and hence the risk to its employee-shareholders, assuming they could not offset it by altering their stock portfolios; presumably most of the employees had the bulk of their financial assets in the ESOP.

On September 30, 1999, a month after the acquisition, a consulting firm (Duff & Phelps) hired by LaSalle valued Amsted's stock at $184 a share. This was 32 percent higher than the previous year's valuation. The Dow Jones index of 30 industrials had increased by that amount, though we have no reason to think that Duff & Phelps was merely assuming that Amsted was about as good a performer as the average company in the index. (More on valuation later.) LaSalle accepted Duff & Phelps's valuation.

Given Amsted's limited unused credit line, it was important that its shares not be valued at a price that would precipitate so many employee departures, and therefore so many redemptions, as to create financial problems for the company. In recent years (1996 to 1999), the annual percentage of the workforce that had left the company, weighted by stock ownership, had, as shown in the following chart, varied in a tight band between about 9 and 11 percent. But

back in 1990 it had hit 13 percent, more than double the rate the year before.



If the percentage of redemptions in 2000 had turned out to be 10 percent, the average for the previous four years, the cost of redemptions would have been only about $100 million. Amsted could easily have financed that expense by borrowing against its unused line of bank credit, or alternatively out of its cash flow. Amsted had earned net income of $56 million in 1999; in addition it made annual cash contributions, equal to 10 percent of each employee's compensation, to the ESOP in lieu of contributing to a pension plan for its employees, though the record does not indicate the total amount of those annual contributions and diverting them to redemptions would hurt current employees.

The redemption rate in 2000 turned out to be not 10 percent but 32 percent. Redeeming cost the company $330 million, creating liquidity problems that caused Amsted to amend the ESOP to eliminate departing employees' right to a lump-sum distribution (their shares would henceforth be redeemed over four years), to defer eligibility for distributions generally to five years after the employee left the company, and to make other changes

in the plan—all adverse to the members of the plaintiff class. Amsted's shares were revalued that year at only $90 and the next year at $44.

The reason for the surge in departures and therefore redemptions is not entirely clear. But the Dow Jones Industrial average, although it actually rose by 2 percent between September 30, 1999, the date on which Amsted's stock was valued, and June 30, 2000, the date on which employees could by quitting redeem their shares at the price that had been set on September 30, fell 12 percent between January 1, 2000, and June 30, 2000. That may have made the employees skittish about continuing to own Amsted stock. Of course Amsted might do better than the companies in the Dow Jones index—but it might also do worse.

In addition, many workers were reaching an age at which they would want to retire, and many of them had accumulated substantial amounts of Amsted stock through the ESOP. Of Amsted's 3,000 employee-shareholders, 735 owned in the aggregate $560 million worth of Amsted stock at the $184 redemption price set in September of 1999. And the 800 employee-shareholders who were at least 55 years old or had more than 30 years of service with the company had amassed Amsted stock worth almost $300 million. The average annual number of redemptions in previous years had been 485, so it is easy to see how a surge in departures could quickly swallow up the $200 million unused line of credit plus other available cash; apparently Amsted was not able to cover the expense of the redemptions with additional borrowing.

Assuming that Amsted stock was the principal financial asset of most employees, they were underdiversified and therefore at risk of experiencing a large decline in their overall wealth if the price of the stock fell. One cannot infer from the concentration of their wealth in the stock of

one company that they *liked* risk and were therefore indifferent to the risk imposed on them by the lack of diversification. Remember that Amsted contributed an amount equal to 10 percent of the employee's salary to the purchase of stock in the ESOP; there is no suggestion that an employee could have persuaded Amsted to give the money to him instead so that he could purchase a diversified portfolio. Nor is it suggested that risk-averse workers shy away from working for companies that have ESOPs.

For the reasons just indicated, the Amsted ESOP was ripe for a "run" in 2000; and the more employees who left, redeeming their shares for cash at $184 a share, the more acute Amsted's liquidity problem would be and therefore the greater the incentive of other employees to leave before the house caved in. The question is whether LaSalle, as the ESOP's trustee, behaved imprudently in the face of this risk.

The duty of an ERISA trustee to behave prudently in managing the trust's assets, which in this case consisted of the assets of the ESOP, is fundamental. This is true even though, by the very nature of an ESOP, the trustee does not have a *general* duty to diversify, though such a duty can arise in special circumstances. *Steinman v. Hicks*, *supra*, 352 F.3d at 1106. The duty to diversify is an essential element of the ordinary trustee's duty of prudence, given the risk aversion of trust beneficiaries, but the absence of any general such duty from the ESOP setting does not eliminate the trustee's duty of prudence. If anything, it demands an even more watchful eye, diversification not being in the picture to buffer the risk to the beneficiaries should the company encounter adversity. There is a sense in which, because of risk aversion, an ESOP is imprudent per se, though legally authorized. This built-in "imprudence"

(for which the trustee is of course not culpable) requires him to be especially careful to do nothing to increase the risk faced by the participants still further.

Before proceeding further we must consider whether our review of the trustee's decisions in administering an ESOP, particularly the choice of a redemption price, should be deferential or plenary.

In general, judicial review of the decisions of an ERISA trustee as of other trustees is deferential unless there is a conflict of interest, which there is not here. *Firestone Tire & Rubber Co. v. Bruch*, 489 U.S. 101, 111-15 (1989); *Rud v. Liberty Life Assurance Co.*, 438 F.3d 772, 775-76 (7th Cir. 2006). And an ESOP trustee is an ERISA trustee. Yet in *Eyler v. Commissioner*, 88 F.3d 445, 454-56 (7th Cir. 1996), we conducted a plenary review of the performance of the decisions of an ESOP trustee (though without discussion of the standard of review), as did the Ninth and Fifth Circuits in *Howard v. Shay*, 100 F.3d 1484, 1488-89 (9th Cir. 1996), and *Donovan v. Cunningham*, 716 F.2d 1455, 1473-74 (5th Cir. 1983), respectively, though other courts have in similar cases applied the deferential standard of abuse of discretion. *Kuper v. Iovenko*, 66 F.3d 1447, 1458-60 (6th Cir. 1995); *Moench v. Robertson*, 62 F.3d 553, 571 (3d Cir. 1995); *Ershick v. United Missouri Bank, N.A.*, 948 F.2d 660, 666-67 (10th Cir. 1991).

It may seem odd to speak of standards of judicial review in the present context. Such standards are usually meant to guide an appellate tribunal asked to overturn the rulings or findings of a trial-level adjudicator, such as a judge or jury or administrative law judge, or (coming closer to home) an ERISA trustee asked to determine a beneficiary's entitlement under a welfare plan. LaSalle was doing nothing analogous to adjudication in fixing a $184 redemption price of Amsted shares in 1999. Still,

there are rules as to how much deference a court should give nonadjudicators, a pertinent example being the business-judgment rule, which decrees a light hand for a court asked to invalidate a business decision. E.g., *Omnicare, Inc. v. NCS Healthcare, Inc.*, 818 A.2d 914, 927-28 (Del. 2003). Whether a valuation is prudent seems rather similar in character to whether a business decision is sensible. They are both judgmental.

But there is a difference. A trustee is not an entrepreneur. His services are more like those of a professional. He is supposed to be careful rather than bold. And care is something that courts are more comfortable in appraising than entrepreneurial panache, as when they decide that a driver was negligent because he failed to exercise due care and as a result injured a pedestrian. It is natural for a court to consider whether a trustee was prudent rather than whether he abused his discretion.

In arguing that LaSalle placed the ESOP's participants at unnecessary risk, the plaintiffs emphasize LaSalle's seeming failure to consider the effect on the liquidity of the ESOP's assets of Amsted's having taken on so much debt in order to buy Varlen. It was obvious that if redemptions exceeded $300 million, Amsted might encounter a serious liquidity problem that would force it to change the ESOP to the detriment of the remaining employees. There is no evidence that LaSalle thought about this possibility, let alone that it tried to reduce the risk by lowering the redemption price, which by dampening the redemption rate would reduce the threat to liquidity. LaSalle appears to have been confident that the future would be just like the past. That may have been the best prediction, but it may have been incautious for LaSalle to act on it. The best prediction may be that one's house will not burn down,

but that doesn't means that it's prudent to allow one's fire-insurance policy to lapse.

LaSalle had, it is true, a balancing act to perform. For if it slashed the redemption price, departing employees would have cause for complaint and LaSalle might find itself sued, just as it has been, only by another set of plaintiffs. We must not seat ESOP trustees on a razor's edge. We agree therefore with those courts that review the ESOP trustee's balancing decision deferentially. *Caterino v. Barry*, 8 F.3d 878, 883 (1st Cir. 1993); *Edwards v. Wilkes-Barre Publishing Co. Pension Trust*, 757 F.2d 52, 56-57 (3d Cir. 1985); *Foltz v. U.S. News & World Report, Inc.*, 865 F.2d 364, 374 (D.C. Cir. 1989); *Northeast Dept. ILGWU Health & Welfare Fund v. Teamsters Local Union No. 229 Welfare Fund*, 764 F.2d 147, 162-63 (3d Cir. 1985); *Ganton Technologies, Inc. v. National Industrial Group Pension Plan*, 76 F.3d 462, 466-67 (2d Cir. 1996). Even if, as we assumed in *Eyler*, the *general* standard of review of an ESOP's decisions for prudence is plenary, a decision that involves a balancing of competing interests under conditions of uncertainty requires an exercise of discretion, and the standard of judicial review of discretionary judgments is abuse of discretion.

But a discretionary judgment cannot be upheld when discretion has not been exercised. *United States v. Cunningham*, 429 F.3d 673, 679 (7th Cir. 2005); *Miami Nation of Indians of Indiana, Inc. v. U.S. Dept. of Interior*, 255 F.3d 342, 350 (7th Cir. 2001). We cannot find in the record as now constituted (a significant qualification, since the case is before us as a result of a grant of summary judgment) any indication that LaSalle considered how best to balance the interests of the various participants in the ESOP in the novel circumstances created by Amsted's acquisition of Varlen. LaSalle acted as if nothing had changed, without (so far as

appears) attempting to determine the consequences of the acquisition for the risk borne by the ESOP's participants. A trustee must discharge his duties "with the care, skill, prudence, and diligence *under the circumstances then prevailing* that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims." 29 U.S.C. § 1104(a)(1)(B) (emphasis added); see also *Moench v. Robertson*, *supra*, 62 F.3d at 572-73. A trustee who simply ignores changed circumstances that have increased the risk of loss to the trust's beneficiaries is imprudent. Whether that is an accurate characterization of LaSalle's conduct is a critical issue requiring exploration by the district court.

Should that issue be resolved in LaSalle's favor, the court will have to consider whether LaSalle, although exercising discretion, abused it. One way to pose the question—we do not say the only way—is to ask whether it was unreasonable for LaSalle, in the circumstances that confronted it, to fail to apply a "marketability discount" to the redemption price.

We do not know how Duff & Phelps arrived at the $184 figure for the value of Amsted stock on September 30, 1999. A likely possibility is that it computed the average price-earnings ratio of companies that are in businesses similar to Amsted's but the stock of which is publicly traded, and that it then multiplied Amsted's earnings by that ratio and finally that it adjusted the ratio (and hence the valuation of Amsted's stock) on the basis of factors that distinguish Amsted from the average firm in the comparison group. See generally Daniel Bayston, "Valuation of Closely Held Companies," Duff & Phelps, LLC, http://www.duffandphelps.com/3_0_index.htm?3_3_1_content_arc, visited Apr. 7, 2006. One of those factors was the relative illiquidity of Amsted stock.

The less marketable a property is, the lower its market value; shares in closed-end mutual funds typically trade at prices lower than the prices of the stocks held by the funds because the mutual-fund investor cannot sell his share of the stocks in the mutual fund's portfolio other than by selling shares of the fund. A participant in an ESOP is in a parallel position: he can sell his shares of his employer's stock only by quitting his job. And the ESOP could always be changed by Amsted—ultimately it was—to limit redemptions in the event of a run, thus further reducing the liquidity of the participant's investment. The average person would therefore prefer to own shares in a publicly traded company than in Amsted (if they were priced the same) even if the two companies had identical cash flows and risk profiles. And so they wouldn't be priced the same. By increasing the probability of a run, the Varlen acquisition increased the probability that rights of redemption by Amsted's employee-shareholders would be further restricted, and so the acquisition created a further threat to liquidity.

There are techniques for calculating a marketability, or illiquidity, discount, see Z. Christopher Mercer, "A Primer on the Quantitative Marketability Discount Model," *CPA Journal,* July 2003, www.nysscpa.org/cpajournal/2003/0703/dept/d076603.htm, visited Apr. 6, 2006, but we shall not speculate on what they might have yielded if applied to Amsted, or on how far a trustee can deviate from them before he can be adjudged imprudent. These are issues for exploration on remand if it is determined that LaSalle did not fail to exercise discretion.

REVERSED AND REMANDED.

A true Copy:

Teste:

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Clerk of the United States Court of Appeals for the Seventh Circuit

ARTICLES FROM THE ARCHIVES

» Tax Court Perspectives (December 1998)

» Restricted Stock Studies' Typical Results Do Not Provide "Benchmark" for Determining Marketability Discounts – But They Help! (September 2000)

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Tax Court Perspectives

By Z. Christopher Mercer, ASA, CFA

This article originally appeared in Mercer Capital's E-Law Newsletter 1998-4, December 10, 1998

The Honorable Judge David Laro of the U.S. Tax Court spoke at the recent AICPA National Business Valuation Conference (PGA National Resort and Spa, Palm Beach Gardens, Florida, November 15-17, 1998). During his informative and entertaining talk, Judge Laro provided a number of "perspectives" on valuation issues before the Tax Court.

Judge Laro is, at least among business appraisers, one of the best-known judges on the U.S. Tax Court, and has written some widely read and discussed opinions addressing issues fundamental to business valuation. As such, his views should be of interest to our E-Law Business Valuation Perspective readers.

Judge Laro has been generous with his time for the business appraisal community. The AICPA presentation marks the third time I have heard Judge Laro speak. In June 1995, he addressed the International Conference of the American Society of Appraisers in Denver. The *Mandelbaum* case had recently been published and he reviewed some of his logic for the opinion on the marketability discount in that case.

In August of 1997, he spoke at the CPA Associates International Business Valuation Seminar in Baltimore. I was also on the program to speak at this conference. During his remarks, Judge Laro spoke generally about Tax Court issues and answered questions from the floor. Our book, "Quantifying Marketability Discounts" had just been published and I spoke on the development of marketability discounts. Judge Laro attended my two hour session, after which we had an opportunity to share some ideas on the subject of marketability discounts.

This issue of the E-Law Newsletter will summarize Judge Laro's comments made at the recent AICPA Business Valuation Conference.

VALUATION BASICS

In his introductory remarks, Judge Laro mentioned five basic valuation ideas that appraisers and users of appraisal services should keep in mind.

- "Each valuation case is unique." - Any one case is rarely on point with another, and the facts of one case will almost always distinguish it from the facts of another.
- "In valuation, there are no absolutes." - There are, however, general rules within which judgments are made.
- "There is no irrefutable right answer."

- "Experts will and do differ." - He quoted an old Supreme Court case which recognized that experts could be found who would testify to any amount. Judge Laro was not being critical of business appraisers here, but was offering one of many humorous perspectives for the group.

- "There are available methods that are generally recognized." - Business appraisers should be grounded in those methods and exercise their judgment in the context of those recognized methods.

Judge Laro went on to address the following topics through his prepared comments and by answering questions from the floor. We will summarize and comment below.

Fair Market Value is the Starting Point

Judge Laro read the definition of fair market value to the group. Those familiar with gift and estate tax matters know that the appropriate standard of value is fair market value. Surprisingly, experts occasionally come to Tax Court with reports not citing fair market value. Such reports are not allowed into evidence in his Court and belated efforts to fix the problem will likely not be considered curative.

The Court looks at each and every element of the definition of fair market value. Judge Laro focused on the hypothetical willing buyer AND the hypothetical willing seller and encouraged business appraisers to consider both hypothetical parties in their appraisal reports. He mentioned the possible consideration of a "fair rate of return" for the willing seller.

COMMENT. The issue of the appropriate consideration of the hypothetical willing seller is a thorny one. I have dealt with the issue at length in Chapter 6 of "Quantifying Marketability Discounts" (Peabody Publishing 1997). My conclusion, after a fairly extensive analysis of situations that might be faced by hypothetical willing sellers, is that the same economic factors influence the thinking of both hypothetical buyers and sellers.

Strictly speaking, sellers, either hypothetical or real, do not have a rate of return requirement. Sellers are in the process of realizing the rate of return that they have experienced during the course of their ownership of an asset. Sellers do have reinvestment opportunities and they will have rate of return requirements on those opportunities. But they are separate from rate of return issues related to the subject asset. Alternatively, the willing seller may simply have consumption desires or opportunities.

From the viewpoint of financial theory, there can be an intersection of the needs of hypothetical willing buyers and sellers if, facing the same economic facts about an investment, either/both can make a rational investment/sale decision at the indicated price (or in an indicated range).

The Court's Consideration of Events Occurring After the Valuation Date

In addressing the issue of the Court's consideration of events occurring after the valuation date, Judge Laro posed these questions, "Can the Court and should the Court be able to consider events which occur after the valuation date? Indeed, are they admissible into evidence? Are those events determinative, partially determinative of what is fair market value?"

After noting that the issue arises frequently, he went on to say, "The common answer might be to say 'No, they are not admissible. That you look at valuation as of a certain date. Whatever transpires on that date is so. Whatever transpires after that date is not admissible.' But actually, the law has developed differently and the answer to the question really is that if you can reasonably foresee as of the valuation date an event which would transpire thereafter, then, in that event, it is permissible that that subsequent event be admitted into evidence to help determine valuation."

COMMENT. We have long advocated the position that information known or reasonably knowable at the valuation date should be considered in a valuation. For a simple example, consider an estate tax valuation of a company as of December 31, 1997. As of the valuation date, the company's 1997 audit was not available. But appraisers typically would rely on the 1997 audit, which would not be available until perhaps April 1998, as reflecting information that was "known or reasonably knowable" as of the valuation date.

But the standard of "known or reasonably knowable" can be abused. After the fact, it is too easy to suggest that an event was foreseeable and then try to peg an historical valuation based on that event. Appraisers are sometimes required to reconcile a valuation date minority interest opinion with an unexpected (or low probability) strategic sale of the business 18 or 24 months later. After something has happened, it is obvious to all that it has happened. That's not the issue.

Judge Laro's comments suggest that appraisers should use common sense, informed judgment and reasonableness (key elements of consideration in Revenue Ruling 59-60) in using post-valuation date information. It is important to remember that hypothetical willing buyers and sellers involved in a hypothetical fair market value transaction as of any valuation date cannot consider ANY post-dated information. All they have is the actual information available at the time and a reasonable ability to assess the probabilities of future events.

Splitting the Baby

Judge Murdock, a former Tax Court judge who served many years ago, is credited with the concept of "splitting the baby," or picking a valuation conclusion about midway between the opinions of the experts. Then, in the Buffalo Tool & Die decision (*Buffalo Tool & Die Manufacturing Co. v. Commissioner*, 74 T.C. 441 (1980)), the Court suggested that it might pick one expert or the other.

Judge Laro said that he, and possibly some of his colleagues, might have a different perspective. According to Judge Laro, "It may not come down to a question of simply picking one expert over another. It may then come down to a question that the judge may pick information from one expert over another or may pick information from more than one expert and develop the judge's own idea of what the value is."

It is, after all, the Court's job to determine value. If Judge Laro is not comfortable with any one expert's opinion, he indicated that he may go to the underlying data and develop his own opinion.

COMMENT. It sounds like Judge Laro would like to see well-reasoned, well-supported, well-written and reasonable valuation opinions. This will help judges in their analysis and in making their decisions.

Financial or Strategic Values

There has been some confusion among appraisers and courts as to whether fair market value should reflect financial value or strategic value. The issue most often arises in controlling interest appraisals.

Judge Laro went to the definition of fair market value on this issue and stated that willing buyers and willing sellers are HYPOTHETICAL buyers and sellers and not specific, or strategic buyers. In appraisal terms, hypothetical willing buyers are TYPICAL buyers and not buyers with specific strategic or synergistic intent. He further indicated that he would not place great emphasis on evidence of strategic values.

COMMENT. We largely agree with Judge Laro's position. However, there are occasional circumstances where the typical buyers may well be strategic, or synergistic buyers, and there are lots of them. For the most part, this is true in the consolidating financial institutions market today, where most buyers are looking at acquisition targets with a view towards eliminating overhead (synergies) or towards entering new markets (strategic reasons).

The issue is further confused by the fact that much, if not most, of the control premium data relied upon by appraisers may reflect the actions of strategic or synergistic purchasers. [I recently spoke at the American Society of Appraisers Business Valuation Conference on the subject with Michael Annin, CFA from Ibbotson Associates.] Appraisers need to be clear in their valuation reports about the position they are taking on this issue in controlling interest appraisals.

Weighing of Factors

Revenue Ruling 59-60 provides an admonition against averaging factors in valuation. Judge Laro indicated that there were court decisions which considered specific weights and others which did not and that appraisers were understandably confused on the issue. He then gave an example of the precariousness of weighing factors. He suggested that each factor should be discussed in terms of its pros and cons, and then a decision might be reached without specific weights.

COMMENT. In *Valuing Financial Institutions*, published in 1992 (currently out of print), I wrote on this issue:

> "This section of Revenue Ruling 59-60 suggests that a process using an average of various valuation approaches, or a weighted average of approaches, 'excludes active consideration of other pertinent factors.' More correctly, an appropriately selected set of weights may be necessary in order to develop a reasonable valuation opinion and may be the process whereby ‘all relevant factors' are brought together into a unified valuation conclusion.
>
> Many analysts, including those who work at Mercer Capital and many other appraisal firms, as well as those who work for the government, utilize averages or weighted averages of valuation approaches. Regardless of the valuation approach(es), however, it remains the responsibility of the analyst not to exclude pertinent factors and, indeed, to consider all relevant factors in the process of developing valuation conclusions."

My opinion has not changed.

Valuation Discounts for FLPs

Judge Laro posed the question of whether the Court would allow discounts for transfers of interests of FLPs. Having enticed his audience with the question, he indicated that it was not the role of the Court to tell how it will rule in the future.

Judge Laro did indicate that the realization of valuation discounts in FLP valuations lies in the quality of the analysis presented to the Court. He indicated that legitimate business purposes for the formation of FLPs were likely to be respected by the Court. He referred to the ACM Partnership case (*ACM Partnership v. Commissioner*, T.C. Memo 1997-115).

Specific advice was offered to appraisers and other professionals involved in FLP valuation. First, consider the use of valuation discounts in moderation. Second, be sure that all transactions are extremely well-documented.

Judge Laro was quite specific in suggesting that attorneys and clients get timely appraisals to support transactions. He indicated that ultimate success or failure in Court may likely turn on timely appraisals.

Valuation Discounts, Generally

Judge Laro noted that some cases have combined the minority interest and marketability discounts into a single discount. He admonished appraisers to recognize each discount separately in their analyses, if appropriate.

Regarding the marketability discount, he indicated that historical cases have been "all over the place." In referring to his decision in *Mandelbaum* (*Mandelbaum v. Commissioner*, T.C. Memo 1995-254, 69 T.C.M. (CCH) 2852 (1995), aff'd., 91 F 3d (24(3d Cir. 1996))). Judge Laro indicated that he had tried to develop a list of specific factors for consideration and said that *Mandelbaum* stands for a focus on specific factors (relevant to each particular valuation situation).

He mentioned the *Auker* case as also attempting to provide a methodology for market absorption discounts for real estate, which he likened to blockage discounts for securities (*Auker v. Commissioner*, T.C. Memo 1998-195).

COMMENT. Judge Laro noted that some of the factors specified in *Mandelbaum* have been criticized as "double-counting" (I have made this criticism myself in Chapter 4 of "Quantifying Marketability Discounts"). Yet, Judge Laro is not convinced of the double-counting argument. Regardless of a debate regarding any specific factors affecting marketability discounts, we are now talking about specific factors and have, since *Mandelbaum*, taken a giant step forward.

Valuation Experts

Judge Laro cited a 1992 Indiana Law Review study which found that in over 65% of valuation cases, the judge did not accept the opinions of the experts.

Judge Laro noted that appraisers are hired by clients who may have their own objectives. But he emphasized the minute an expert walks into Tax Court, he or she “belongs to the judge,” because the judge is looking to the expert for instruction regarding valuation. In the final analysis, he stressed, the only reason that expert testimony is admitted into evidence in any Federal court is if the judge finds the evidence helpful.

He also indicated that the Court is looking to the specific credentials of individual experts.

COMMENT. Valuation experts and experts in other fields must walk through a landmine of advocacy and still maintain their independence and credibility. Business appraisers are often hired by attorneys on tax matters. Attorneys must be advocates for their clients’ positions. In tax matters, this is generally true whether the appraiser works for the IRS or for the taxpayer.

Attorneys want to think that their experts are "on the team," and they are. We are part of a team that is presenting evidence to the Tax Court. But the business appraiser can be an advocate of nothing other than his or her own independent valuation opinions. Experts who become defensive or argumentative about their own opinions, or seemingly advocative of a client's position, will lose credibility in court. Business appraisers have to maintain and advance our independent opinions of value regardless of client expectations.

On Settling Cases

Judge Laro suggested that Tax Court judges use at least two techniques to help the parties resolve valuation cases. Some judges prefer to have the experts meet informally and attempt to resolve the valuation issues. (I recently had this experience, which occurred unexpectedly to every single participant in the courtroom except, perhaps, for the judge and his clerk.)

Judge Laro, on the other hand, said he often asks for rebuttal reports from the experts that focus on the significant differences in the assumptions of the appraisers.

He acknowledged that some Tax Court judges may encourage participants to settle, but indicated that parties should expect reasonable treatment and results if matters are ultimately taken to trial.

The Court’s Experts

Judge Laro indicated that under the Federal Rules of Evidence (Rule 706), federal courts have the right to appoint their own experts in litigated matters. He also said that this had never been done in U.S. Tax Court yet said "it needs to be." Judge Laro indicated that this practice might be "perhaps the wave of the future."

Conclusions

Judge Laro called the present time a "dynamic moment" with respect to valuation. Things are happening and new perspectives are being acquired. Implicitly, he encouraged business appraisers to stick to their economic and financial guns (on issues like imbedded capital gains taxes in C corporations). Courts are slow to overturn prior precedent, but they cannot do so in the absence of good economic and valuation evidence.

Restricted Stock Studies' Typical Results Do Not Provide "Benchmark" for Determining Marketability Discounts – But They Do Help!

By Z. Christopher Mercer, ASA, CFA and Timothy R. Lee, ASA

This article originally appeared in Mercer Capital's E-Law newsletter 2000-09, September 21, 2000

"Restricted Stock Discounts Decline As Result Of 1-Year Holding Period" reads the title of the lead article in the May 2000 issue of *SHANNON PRATT'S BUSINESS VALUATION UPDATE*. The subtitle reads: "Studies After 1990 'No Longer Relevant' For Lack Of Marketability Discounts."

The reporting of a new restricted stock study is certainly of interest, yet the subtitle is confusing because it basically said that the new study is itself not relevant for developing marketability discounts!

The study in question was conducted by Columbia Financial Advisors, Inc. ("CFAI"). Its lower discounts for a shorter holding period (one year rather than two) were predictable. Financial theory and common sense suggest this result.

Based on our analysis (not provided in the CFAI study), the implied required rates of return of investors in stock restricted for one year are a bit less than the implied required returns of earlier studies when Rule 144 mandated a two year holding period. Nevertheless, they are substantial.

A comparison of the "one year" and "two year" restricted stock studies begs appraisers to focus on the economics of restricted stock and marketability discounts rather than on the absolute values of typical study results. [For a bibliography of the previous studies, see the end of this E-LAW.]

The absolute values of typical results of restricted stock studies have absolutely nothing to do with marketability discounts for private company interests. The relevant information relates to the period of restriction and the implied required rates of return that created the discounts on restricted shares relative to freely trading alternative investments.

The new study IS directly relevant because it proves the inappropriateness of using NOMINAL DISCOUNTS from any study from any year as the basis for determining marketability discounts for private business interests. The evidence for marketability discounts nonetheless is real and consistent.

This issue of E-LAW should be a wake-up call to appraisers and attorneys regarding the importance of the restricted stock studies and how their results should be used in developing marketability discounts for non-publicly traded securities.

THE NEW STUDY'S CONCLUSION

The CFAI article concludes, in part:

> "Appraisers have often quoted the well-known studies of restricted stock conducted prior to the Rule 144A amendment in 1990 in determining the appropriate discount for lack of marketability for privately held securities. THESE STUDIES ARE STILL APPLICABLE FOR THIS PURPOSE TODAY.
>
> Many 'rumblings' in the appraisal community have centered around the fact that discounts for restricted stock have been declining, and many appear to be concerned about what this might mean in valuing privately held securities. It makes perfect sense that the discounts for restricted securities have generally declined since 1990 as the market (and liquidity) for these securities has increased due to Rule 144A and the shortening of the restricted stock holding periods beginning April 29, 1997. THUS, WHILE THE NEWER STUDIES ARE SPECIFICALLY RELEVANT FOR DETERMINING THE APPROPRIATE DISCOUNTS FOR RESTRICTED SECURITIES, THE STUDIES CONDUCTED AFTER 1990 ARE NOT RELEVANT FOR PURPOSES OF DETERMINING DISCOUNTS FOR LACK OF MARKETABILITY FOR PRIVATELY HELD STOCK, BECAUSE THEY REFLECT THE INCREASED LIQUIDITY IN THE MARKET FOR RESTRICTED SECURITIES. SUCH INCREASED LIQUIDITY IS NOT PRESENT IN PRIVATELY HELD SECURITIES." [emphasis added.]

CFAI is to be applauded for conducting a current restricted stock study and the *BUSINESS VALUATION UPDATE* should also be applauded for publishing it. However, we believe that the author of the article, Kathryn F. Aschwald, CFA, ASA of CFAI, Dr. Pratt (based on his title selection and brief editorial comments at the end of the article), and many other business appraisers continue to focus on the wrong aspect of market evidence suggested by the restricted stock studies in the development of marketability discounts for privately owned securities.

Many business appraisers still think that the restricted stock studies, or rather, their medians or averages, provide some type of ABSOLUTE BENCHMARK of discounts from the public markets that are somehow, mysteriously, applicable to investments in privately owned securities. This benchmark concept is also at the heart of Judge Laro's *Mandelbaum* analysis. Unfortunately, the absolute values of studies do not provide a benchmark for anything. We'll see why momentarily.

The "rumblings" referred to in the CFAI article apparently relate to the concern that lower average discounts in restricted stock studies AUTOMATICALLY translate into lower marketability discounts for private business interests. In fact, these lower average discounts DO NOT automatically translate into lower marketability discounts. (We will attempt to refrain from suggesting that the "rumblers" read *QUANTIFYING MARKETABILITY DISCOUNTS*, and especially Chapter 8. Well, we just couldn't refrain! [*QUANTIFYING MARKETABILITY DISCOUNTS*, Peabody Publishing, LP.])

Unfortunately, we don't believe that the misapplied focus noted above falls into the realm of "appraiser judgment." It is simply a residue of unclear thinking that gripped appraisers (myself included, Tim is too young for that!) in the 1970s and 1980s. The economics of restricted stock discounts should now be quite clear based on the application of accepted financial theory. They are a function of fundamental concepts of present value, risk, cash flow expectations, expected growth, and the public markets' ability to capitalize expected future cash flows into realizable value today.

THE NEW STUDY'S CONCLUSION

The Gordon Dividend Growth Model is generally recognized as a summary of how the public securities markets price stocks. The model is summarized by the general equation:

I. $\text{Value}_{(\text{Public, Today})} = \text{Cash Flow}_{(\text{Next Period})} / (\text{Discount Rate} - \text{Expected Growth})$

Equation I is a short-hand way of saying that value, today, for a public security, is the present value of all expected future cash flows (growing at an assumed constant rate, beginning with the next period), discounted to the present at an appropriate discount rate. We will use simplifying nomenclature as follows: Cash Flow (for next year) (CF_1); Discount Rate (R); and Expected Growth of CF (G). Therefore, Equation I becomes:

II. $\text{Value}_{(\text{Public, Today})} = CF_1 / (R - G)$

Assume we have a publicly traded company that is in the process of issuing restricted shares in a private offering. Assume further, that the applicable Rule 144 holding period is two years before an investor can begin to sell stock (i.e., prior to April 1997). For simplicity, assume that the particular restricted shares in question will become freely tradable in exactly two years, CF represents the cash flow of the business (which is all reinvested), and that there are no interim dividends to shareholders. Under these assumptions, a first pass at an algebraic representation of the value of the restricted shares is:

III. $\text{Value}_{(\text{2 Yr Restricted, No Interim Risks})} = CF_1/(1 + R)^1 + CF_2/(1 + R)^2 + (CF_3 / (R-G)) / (1+ R)^2$

Equation III represents the discounted cash flows of periods one and two, plus the expected capitalized value of the third period's expected cash flow, discounted to the present to the end of the second period (i.e., the freely tradable value at that time), with all discounting done at R, the discount rate of the public security.

We have assumed that there are no interim dividends to shareholders during the period of restriction; therefore, there are no interim cash flows for the investor. So, CF_1 and CF_2 are both equal to zero from the perspective of investors. Therefore, Equation III collapses to Equation IV from the perspective of investors in the illiquid stock:

IV. $\text{Value}_{(\text{2 Yr Restricted, No Interim Risks})} = (CF_3 / (R–G)) / (1+R)^2$

While Equations I and II may be broadly applicable in the valuation of freely tradable securities, there is an important differential to investors in restricted stock. An investor who purchases the restricted shares of Equations III and IV does, in fact, assume more risk than an investor acquiring the freely tradable, but otherwise identical, alternative shares. We refer to these risks as HOLDING PERIOD RISKS, which include such possibilities as performance below expectations, the need for liquidity during the holding period, and the like. Investors in restricted stocks have historically required a premium over the expected return of their freely traded alternatives. For purposes of this discussion, we call this conceptual premium the HOLDING PERIOD PREMIUM, ("HPP"). Equation IV can now be modified to reflect HPP:

V. $\text{Value}_{(\text{2 Yr Restricted})} = (CF_3 / (R–G)) / (1+(R + HPP))^2$

(R + HPP) is the sum of the public security's enterprise level discount rate and the holding period premium investors require to tie their funds up for a two-year period of illiquidity. We can observe the following implications regarding restricted stock values from Equation V:

- Other things being equal, there will be a restricted stock discount relative to the freely traded price (Equation II) EVEN IF HPP = 0. This conclusion results from the fact that buyers lack access to cash flows OR TO THE CAPITALIZED VALUE OF FUTURE CASH FLOWS during the period of restriction. It also assumes that the constant growth G of period three is the same as for period one.

- As HPP increases, other things remaining the same, the value of the restricted security becomes lower relative to the freely traded alternative security. This is another way of saying that the restricted stock discount would be expected to increase as the perception of holding period risks (HPP) rises.

Finally, we can represent the restricted stock discount for the two-year restricted period described above symbolically as:

VI. Restricted Stock Discount $= 1 – [((CF_3 / (R – G)) / (1 + (R + HPP))^2) / CF_1/(R-G)]$

Equation VI makes clear that the restricted stock discount is a function of the expected value of the public security at the end of two years, discounted to the present at a discount rate adjusted for holding period risks (Equation III collapsed), in relationship to the value of the public security today (Equation II). For purposes of illustration, we can use some "random" assumptions:

R = 16%

G = 10%

Dividends = 0

CF_1 = \$1.00 per share (thus, CF_2 = \$1.10, and CF_3 = \$1.21)

HPP = 10%

Period of illiquidity = two years, then the security becomes freely tradable

Based on these assumptions, according to Equation II the freely traded security is trading at a value of \$16.67 per share (\$1.00 / (16% - 10%)). Using the components of Equation VI, we can calculate the expected value of the restricted security at the end of year two as \$20.17 per share (or \$1.21 / (16% - 10%)). Then, given an expected (marketable) value of \$20.17 per share in two years, the value of the restricted security is discounted to the present at 26% (i.e., the discount rate, R, of 16%, plus the holding period premium, HPP, of 10%). The resulting present value is \$12.70 per share.

These example calculations for Equation VI suggest that the appropriate restricted stock discount based on the assumptions above is 24%, or (1 - \$12.70/\$16.67). (By the way, this calculated result based on "random" assumptions is at the lower end of the median results of the pre-1990 restricted stock studies mentioned above.)

Curious business appraisers can see just how random the assumptions are by reading the section in Chapter 8 of *QUANTIFYING MARKETABILITY DISCOUNTS* called "Testing the Reasonableness of the Required Holding Period Rate of Return" (pages 252-256). A careful reading of this section in conjunction with Chapter 2, which is the summary of historical restricted stock studies, and in conjunction with the preceding text of this article, should clarify the meaning of the term MARKETABILITY DISCOUNT. This reading should also clarify the importance of key concepts in determining the level of a marketability discount in a specific circumstance; the cash flow to be received by investors; the required holding period return (R + HPP); the holding period (the period of restricted marketability); and the expected growth rate in earnings (or value).

WHAT IF THE RESTRICTED HOLDING PERIOD IS ONE YEAR?

Equations V and VI suggest that if the Rule 144 holding period is one year rather than the pre-1997 two year holding period, the resulting restricted stock discount would be lower.

VII. Restricted Stock Discount = $1 - [(CF_2 / (R - G)) / (1 + (R + HPP)) \; / \; CF_1/(R-G)]$

Based on the previous assumptions, the freely traded security is trading at a value of \$16.67 per share (\$1.00 / (16% - 10%)). We can calculate the expected marketable value of the restricted security at the end of year one as \$18.33 per share (or \$1.10 / (16% - 10%)). Given an expected value of \$18.33 per share in one year, the value of the restricted security is then discounted to the present at 26% (i.e., the discount rate, R, or 16%, plus the holding period premium, HPP, of 10%). The resulting present value is \$14.55 per share.

The calculations for Equation VII suggest that the appropriate restricted stock discount based on the assumptions above is 13% (or (1 - $14.55/$16.67)). It is important to note the obvious: the expected restricted stock discount of 13% based on a one-year restricted holding period is lower than the 24% expected restricted stock discount for a two-year holding period. This comports with common sense: assuming no change in HPP, there is a shorter period for discounting value based upon the risks associated with illiquidity. Further, given a shorter period "at risk" the level of HPP might be reduced somewhat by rational investors.

A CLOSER LOOK AT THE CFAI ARTICLE

Columbia Financial Advisors, Inc. conducted two studies of restricted stock transactions. The first dealt with transactions in 1996 and through April 1997, when the Rule 144 holding period was changed from two years to one year. The second study covered transactions beginning May 1997 through year-end 1998, after the change to a one-year holding period. Their search methodologies were similar for both:

- Search Securities Data Corporation's U.S. NEW ISSUES PRIVATE PLACEMENT DATABASE for private placements of restricted shares of public companies
- Eliminate those transactions for which no offer price or public market pricing information was available
- Eliminate all foreign securities and those securities not traded in the U.S.

CFAI reported the following results for the two studies:

Table 1

CFAI Study Results	1/96 to 4/97	5/97 to 12/98
Median	14.0%	9.0%
Average	21.0%	13.0%
Low Transaction	0.8%	0.0%
High Transaction	67.5%	30.0%

The article discussed the results, comparing the two studies:

> "These discounts [5/97 to 12/98] are generally lower than the discounts recorded in CFAI's earlier study [1996 to 4/97], which indicated an overall average of 21%. The lower discounts in this study in all probability reflect the market's reaction to the SEC's change in the holding period from two years to one year. The reduction in the holding period exposes the owner of the restricted security to less investment risk, as it is less likely that the price would fall in a one-year period versus a two-year period."

Both CFAI study results indicate lower restricted stock discounts, on average, than the previously reported studies, all of which dealt with transactions occurring no later than 1995, as will be seen below.

RESTRICTED STOCK STUDIES IN PERSPECTIVE

We have been analyzing restricted stock studies at Mercer Capital for a number of years. In Chapter 2 of *QUANTIFYING MARKETABILITY DISCOUNTS*, those studies that had been published by 1997 were reviewed in as much depth as the information in the studies allowed. The following table is reproduced in part from *QUANTIFYING MARKETABILITY DISCOUNTS*, and is supplemented by information in the CFAI study regarding more recent articles.

Table 2

	Summary of Published Restricted Stock Study Results						
Pre-1990*	**Period Covered**	**No. of Observations**	**Medians**	**Means**	**Standard Deviations**	**Low**	**High**
SEC Study	1966-1969	398	24%	26%	na	-15%	80%
Gelman	1968-1970	89	33%	33%	na	<15%	>40%
Moroney	1968-1972	146	34%	35%	18%	-30%	90%
Maher	1969-1973	34	33%	35%	18%	3%	76%
Trout	1968-1972	60	na	34%	na	na	na
Stryker/Pittock	1978-1982	28	45%	na	na	7%	91%
Willamette Mgt	1981-1984	33	31%	na	na	na	na
Silber	1981-1988	69	na	34%	24%	-13%	84%
FMV Opinions	1969-1992	100+	na	23%	na	na	na
Management Planning	1980-1995	49	29%	28%	14%	0%	58%
1990 to 1995**							
Management Planning*	1980-1995	20	29%	27%	13%	3%	50%
FMV Opinions	1991-1992	na	na	21%	na	na	na
Johnson (BVR)	1991-1995	72		20%		-10%	60%
CFAI Studies**							
1996 to 4/97	1996-1997	23	14%	21%	na	1%	68%
5/97 to 1998	1997-1998	15	9%	13%	na	0%	30%

* *Quantifying Marketabiltiy Discounts*, pp. 45, 365
** CFAI Study in *Pratt's Business Valuation Update, May 2000*

We can make several observations from this summary analysis in Table 2 of the results of restricted stock studies:

- We lack the transactional detail for several of the studies which makes detailed analysis of these studies problematic. The only recently published study for which transactional detail was provided is the Management Planning Study, which was published as Chapter 12 of *QUANTIFYING MARKETABILITY DISCOUNTS*.

- The studies in Table 2 are presented in order of their publication. It is clear that the business appraisal profession has seized on those studies listed at the top (SEC Study through Silber). Clearly, these study results are the source of the unmistakable notion held by many appraisers that marketability discounts for private companies should be 35%, plus or minus a bit, i.e., based on the absolute values of the median and average results.

- The Silber study was published in *FINANCIAL ANALYSTS JOURNAL* in 1991. While the average discount was "in line" further comments are appropriate. Without providing transactional detail, the Silber study broke the sample studied into two groups. Larger, more profitable companies sold restricted securities at lower typical discounts than smaller, less profitable, less attractive, and more risky companies. But the overall average was still 34%. Most appraisers continued to focus on this overall average, rather than the new perspectives provided by the Silber study.

- The studies published since the Silber study have all found average and median restricted stock discounts of less than 30%. Given the lack of transactional information provided, it is not possible to reconcile the differences, but the range, rather than 35%, plus or minus, is clearly more like 20% to 30%.

- While the average of the first CFAI study was 21%, the median was considerably lower at 14%. Market participants knew in advance of the pending reduction in the Rule 144 holding period, and likely transacted at somewhat lower discounts based on that information (See Equation VII).

- The second CFAI study, covering transactions subsequent to the reduction in the Rule 144 holding period, resulted in the lowest average or median indications of any study to date. As the analysis above indicates, this result was predictable. A shorter holding period until potential liquidity and potentially lower holding period risks because of the shorter holding period suggest lower discounting would be required (from the freely traded alternative price). Both of these observations were made in the CFAI article.

Now we will ask a question that will trouble many business appraisers: What do the average or median restricted stock study results (or pre-IPO study results) tell business appraisers about the appropriate marketability discount applicable to privately owned business interests under study?

The answer is: Nothing, directly.

This answer will seem like heresy to some. However, it is true. It is not, we repeat, not, appropriate to suggest that because a typical restricted stock study (with a two-year minimum holding period) results in a 30% discount, that such a discount is appropriate, generally, to nonmarketable, closely held business interests. [Even though, before developing the Quantitative Marketability Discount Model, we sometimes made the very same argument. Confession is good for the soul. So is growth.]

We have to ask the question: Why do restricted stock discounts exist? The answer lies in how investors think about the investments. We saw in the math above that certain key assumptions drive restricted stock discounts:

- The expected holding period until liquidity can be achieved;

- The expected growth rate in earnings/value of the subject public company;

- The expectations for interim dividends (none in our examples); and

- The required return during the period of illiquidity. This holding period return incorporates risks to the shareholder that differ from the risks of the enterprise.

These elements, by the way, are the key elements of the Quantitative Marketability Discount Model (QMDM) as described in *QUANTIFYING MARKETABITY DISCOUNTS*.

How, then, are the results of the restricted stock studies helpful to business appraisers who use their market evidence in the process of deriving marketability discounts applicable to private business interests? THEY ARE HELPFUL BECAUSE THEY PROVIDE INSIGHT INTO THE KEY ELEMENTS THAT REQUIRE DISCOUNTS, ON AVERAGE. For example, based on any particular study:

- We can determine the approximate holding period until liquidity - for example, two years, or one year.
- We can make estimates about the expected growth in earnings/value for the public companies.
- We can consider interim dividends (none in our examples).
- Importantly, given these facts and/or assumptions, WE CAN ESTIMATE THE REQUIRED RETURNS FOR THE HOLDING PERIOD BEFORE LIQUIDITY IS ACHIEVED.

The implied evidence regarding required returns or discount rates during an illiquid holding period is critical for business appraisers. Unfortunately, many business appraisers (those who do not embrace the QMDM or other quantitative methods) are not focusing on this critical aspect of the market evidence.

In Table 3, we develop the implied holding period returns for investments in typical restricted stocks based on the average discounts of the various studies (and medians, as indicated). For purposes of the table, we have assumed that typical expectations for growth in earnings (value) are in the range of 10% to 15% per year. Further, we have assumed a current value of $1.00 per share for the freely tradable security, which is to grow during the period of restriction at the expected growth rates.

Table 3

Analysis of Implied Required Returns of Restricted Stock Investors Based on Typical Study Results								
Pre-1990	Period Covered	Means	Minimum Expected Holding Period (Years)	Typical Purchase Price Based on $1.00/Share	10% Expected Value	Growth Expected Return (CAGR)	15% Expected Value	Growth Expected Return (CAGR)
SEC Study	1966-1969	26%	2.0	$0.74	$1.21	28%	$1.32	34%
Gelman	1968-1970	33%	2.0	$0.67	$1.21	34%	$1.32	40%
Moroney	1968-1972	35%	2.0	$0.65	$1.21	36%	$1.32	43%
Maher	1969-1973	35%	2.0	$0.65	$1.21	36%	$1.32	43%
Trout	1968-1972	34%	2.0	$0.66	$1.21	35%	$1.32	42%
Stryker/Pittock*	1978-1982	45%	2.0	$0.55	$1.21	48%	$1.32	55%
Willamette Mgt*	1981-1984	31%	2.0	$0.69	$1.21	32%	$1.32	38%
Silber	1981-1988	34%	2.0	$0.66	$1.21	35%	$1.32	42%
FMV Opinions	1969-1992	23%	2.0	$0.77	$1.21	25%	$1.32	31%
Management Planning	1980-1995	28%	2.0	$0.72	$1.21	30%	$1.32	36%
1990 to 1995								
Management Planning	1980-1995	27%	2.0	$0.73	$1.21	29%	$1.32	35%
FMV Opinions	1991-1992	21%	2.0	$0.79	$1.21	24%	$1.32	29%
Johnson (BVR)	1991-1995	20%	2.0	$0.80	$1.21	23%	$1.32	29%
CFAI Studies**								
1996 to 4/97	1996-1997	21%	1.5	$0.79	$1.15	29%	$1.23	35%
5/97 to 1998	1997-1998	13%	1.0	$0.87	$1.10	26%	$1.15	32%
5/97 to 1998 (Median)	1997-1998	9%	1.0	$0.91	$1.10	21%	$1.15	26%

We can make several observations based on Table 3:

- Pre-1990, the typical mean restricted stock discount was about 30% to 35% (with one outlier). Assuming expected growth in value of 10% and no dividends, we calculate expected returns, on average, of 32% to 38% for the assumed two-year holding period. Pre-1990, investors in restricted shares of public companies clearly demanded significant returns to induce their investments.

- More recent studies, but prior to the change by the SEC in the period of restriction in sale to one year, indicate typical discounts of 20% to 30% (for expected growth of 10% per year). For the respective holding periods, the implied required returns are in the range of 23% to 30% per year, lower than for the pre-1990 studies, but still substantial.

- The median and average of the post-4/97 CFAI study suggest required returns of 21% to 26% for a public security with expected growth of 10%. These implied returns are lower than for the earlier studies, but they still remain substantial relative to current small public company discount rates. (Note that the lower required returns may also be an indication of lower HPP)

CONCLUSIONS

Let us offer a set of conclusions based on our review of the CFAI article.

- The fact that the CFAI study reflects lower restricted stock discounts post-4/97 DOES NOT SUGGEST that "typical" marketability discounts applicable to minority interests of private companies should be lower. The ABSOLUTE LEVEL of restricted stock study results since the lowering of Rule 144 holding period requirements to one year is not (directly) any more relevant to the level of marketability discounts than were the typical results of the pre-1995 studies when the holding period was at least two years.

- The lower typical restricted stock discounts in the CFAI post-4/97 study are consistent with basic financial theory. Any other result would not comport with theory or common sense (i.e., shorter holding period and lower risks, therefore higher prices, therefore lower restricted stock discounts).

- The post-4/97 CFAI study results, like all the pre-1995 studies, suggest significant required holding period returns during the relevant periods of illiquidity (20% to 30% or more based on reasonable analytical assumptions).

- Appraisers who focus on the ABSOLUTE VALUE of typical results of restricted stock studies are looking at the wrong aspect of market data provided by the studies. As we hope is clear from this article, the focus should be on the implied required returns for the relevant holding periods. These economic factors can be compared with the facts and circumstances facing investors in nonmarketable private securities. An absolute value of a study result cannot.

- Appraisers who use the ABSOLUTE VALUES will be under great pressure to prove the relevancy of these restricted stock studies to support marketability discounts when valuing illiquid interests of private companies.

- Based on this review of the CFAI published study, we would suggest a different subtitle:

  ORIGINAL - Studies After 1990 No Longer Relevant For Lack of Marketability Discounts

  SUGGESTED REVISION - New Study After Rule 144 Holding Period Reduction Affirms Economic Evidence of Earlier Restricted Stock Studies: Required Returns of Investors in Restricted Shares of Public Companies Reflect Significant Incremental Returns.

If we appear to be gently chiding business appraisers, we have not been misinterpreted. In the year 2000 we fail to understand the lingering desire held by many business appraisers to ignore basic financial theory in the interpretation of restricted stock studies and in the application of their market evidence in the development of marketability discounts for private business interests.

With no apologies for what some could interpret as self-promotion, let us suggest that readers who are confused over the issue discussed in this article or who think they disagree with us:

- Read the CFAI – Aschwald article in the May 2000 issue of *SHANNON PRATT'S BUSINESS VALUATION UPDATE*.

- Obtain a copy of *QUANTIFYING MARKETABILITY DISCOUNTS* from a friend or, as a last resort, buy it! Then read and study chapters 1-8 in conjunction with this article [Available from Peabody Publishing, LP.]

We look forward to receiving your questions, and to any constructive, written critical analysis of this article.

BIBLIOGRAPHY

CFAI Study, Aschwald, Kathryn F., "Restricted Stock Discounts Decline as Result of 1-Year Holding Period – Studies After 1990 'No Longer Relevant' for Lack of Marketability Discounts", *SHANNON PRATT'S BUSINESS VALUATION UPDATE*, Vol. 6, No. 5, May 2000, pp. 1-5.

Gelman Study, German, Milton, "An Economist-Financial Analyst's Approach to Valuing Stock of a Closely Held Company," *JOURNAL OF TAXATION*, June 1972, at p. 353.

Hall/Polacek (FMV) Study (1969-1992), Hall, Lance S. and Polacek, Timothy C., "Strategies for Obtaining the Largest Valuation Discounts," *ESTATE PLANNING*, January-February, 1994, pp. 38-44.

Johnson Study, Johnson, Bruce, "Restricted Stock Discounts, 1991-95", *SHANNON PRATT'S BUSINESS VALUATION UPDATE*, Vol. 5, No. 3, March 1999, pp. 1-3.

Maher Study, Maher, J. Michael, "Discounts for Lack of Marketability for Closely Held Business Interests," *TAXES – THE TAX MAGAZINE*, September, 1976, pp. 562-571.

Management Planning Study, Mercer, Z. Christopher, *QUANTIFYING MARKETABILITY DISCOUNTS: DEVELOPING AND SUPPORTING MARKETABILITY DISCOUNTS IN THE APPRAISAL OF CLOSELY HELD BUSINESS INTEREST*, Memphis, Tennessee: Peabody Publishing, LP, 1997, pp. 345-370.

Moroney Study, Moroney, Robert E., "Most Courts Overvalue Closely Held Stocks," *TAXES – THE TAX MAGAZINE*, March, 1973, pp. 144-155.

SEC Study, *INSTITUTIONAL INVESTOR STUDY REPORT OF THE SECURITIES AND EXCHANGE COMMISSION* (Washington, D.C.: U.S. Government Printing Office, March 10, 1971). The portion relating to the discounts observed with the issuance of restricted stocks is titled "Discounts Involved in Purchases of Common Stock," at Volume 5:2444-2456, Document No. 92-64, Part 5.

Silber Study, Silber, William L., "Discounts on Restricted Stock: The Impact of Illiquidity on Stock Prices," *FINANCIAL ANALYSTS JOURNAL*, July-August, 1991, pp. 60-64.

Stryker/Pittock Study, Pittock, William F. and Stryker, Charles H., "Revenue Ruling 77-287 Revisited," *SRC QUARTERLY REPORTS*, Spring, 1983, pp. 1-3.

Trout Study, Trout, Robert R., "Estimation of the Discount Associated with the Transfer of Restricted Securities," *TAXES*, June, 1977, pp. 381-385.

Willamette Management Study, Pratt, Shannon P., *VALUING A BUSINESS*, Third Edition, p. 341.

Rule 702, *Daubert*, *Kuhmo Tire Co*. and the Development of Marketability Discounts

By Z. Christopher Mercer, ASA, CFA

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The premise of this E-Law is simple: there is a trend towards using some type of quantitative approach when developing marketability discounts and you, as either users of appraisal reports or preparers of those reports, need to understand this. How will we back up this assertion?

- We will look at Rule 702, DAUBERT, and KUHMO TIRE
- We will review a couple of court cases that help us make the point
- And finally we'll talk about the only quantitative approach that we know of, the Quantitative Marketability Discount Model ("QMDM").

Now, it is not our intention to use this issue to sell more copies of our book, *QUANTIFYING MARKETABILITY DISCOUNTS* (of which John Wiley & Sons has agreed to publish the 2nd Edition) but to go on record as a proponent of a quantitative approach and to caution you if you are married to the restricted stock and pre-IPO studies as the sole basis of your marketability discount - the times they are a-changin'.

RULE 702, *DAUBERT* & *KUHMO*

Rule 702

Rule 702 of the Federal Rules of Evidence states:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise,
>
> (1) The testimony is based on sufficient facts or data,
>
> (2) The testimony is the product of reliable principles and methods, and
>
> (3) The witness has applied the principles and methods reliably to the facts of the case.

It seems to me that merely comparing any evidence regarding a closely held business interest to the averages of studies for which the appraiser has no knowledge of the underlying transactions should fail all three tests. Let's see what DAUBERT and KUHMO TIRE have to say.

Daubert v. Merrell Dow Pharmaceuticals, Inc.

In *Daubert* (*DAUBERT v. MERRELL DOW PHARMACEUTICALS, INC.* 113 S.Ct. 2786 (1993)), the Supreme Court noted several factors that might be considered by trial judges when faced with a proffer of expert (scientific) testimony. Several factors were mentioned in DAUBERT which can assist triers of fact in determining the admissibility of evidence under Rule 702, including:

- Whether the theory or technique in question can be (and has been) tested
- Whether it has been subjected to peer review and publication
- The known or potential error rate of the method or technique
- The existence and maintenance of standards controlling its operation
- And the underlying question: Is the method generally accepted in the technical community?

Kuhmo Tire Co., Ltd. V. Carmichael

In *KUHMO TIRE CO* (*KUHMO TIRE CO., LTD. V. CARMICHAEL*, 119 S.Ct. 1167 (1999)), the Supreme Court held that the DAUBERT factors may apply to the testimony of "engineers and other experts who are not scientists." Presumably, this categorization could include business appraisal experts.

Business appraisers who perform tax-related appraisals should read the *GROSS* case (*GROSS v. COMMISSIONER*, T.C. Memo 1999-254). In GROSS, counsel for the taxpayer subjected the expert for the IRS to a "*DAUBERT* challenge." The challenge related to an alleged violation of business valuation standards when that expert did not tax-effect the discount rate applicable to an S-corporation's earnings. The Court, rightly, in my opinion, rejected the challenge in that case. The taxpayer should have made the argument based on financial and economic logic rather than a so-called "standards violation."

Whether or not so-called "*DAUBERT* challenges" are successful in having experts excluded, the information conveyed in the course of the challenges will either help or hurt the weight applied by a trier of fact to particular expert opinions.

Benchmark Analysis

We have given a name to a particular method of developing marketability discounts - the Quantitative Marketability Discount Model, or QMDM. Let's give a name to the method of developing marketability discounts by reference to the restricted stock and pre-IPO studies discussed above - Benchmark Marketability Discount Analysis, or Benchmark Analysis. The term has been used before, so there is no claim of originality.

Judge Laro advanced a form of benchmark analysis in *MANDELBAUM* (*MANDELBAUM, ET AL. V. COMMISSIONER*, T.C. Memo 1995-255). Chapter 4 of *QUANTIFYING MARKETABILITY DISCOUNTS* includes an in-depth review of MANDELBAUM that can be summarized as follows:

> Judge Laro's MANDELBAUM analysis goes further than most appraisers in forcing a specific consideration of several factors that are clearly important in marketability discount determinations

However, the analysis does not allow for the ability to quantify the magnitude of impact of these factors (often referred to as the "*MANDELBAUM* Factors") on the marketability discount. As a result, the *MANDELBAUM* benchmark analysis, like that used in *WEINBERG* and *BRANSON* (see discussion of *WEINBERG* and *BRANSON* below), leaves the appraiser in the position of making judgments that are unsupportable without the use of other methods like the QMDM.

What does this discussion mean in the context of Rule 702, *DAUBERT*, and *KUHMO TIRE CO.*? We have taken the liberty of comparing the Benchmark Analysis with the only quantitative model we are aware of - the QMDM. Read on.

DAUBERT Factors	BENCHMARK ANALYSIS	QMDM
Has the method been (or can it be) tested?	Cannot be used to test or to predict Has been accepted by Courts, but is being questioned	Can be used to predict transaction results or to test transaction results Accepted in *THOMPSON LUMBER** Implicitly accepted in *MARMADUKE*** Implicitly accepted in *WEINBERG****
Subjected to peer review and publication?	Studies have been published Method has not been published or subjected to peer review	*QUANTIFYING MARKETABILITY DISCOUNTS* published in 1997 Subjected to peer review pre- and post-publication (see exposure summary below)

Known or potential error rate?	Given the limitations of the comparative data, can expect to achieve reliable results only when facts of case match implicit facts of referenced studies Method cannot differentiate between differing fact patterns with reliability	Each factor of the QMDM analysis is subject to peer review and analysis in relationship to facts and circumstances of specific cases
Existence or maintenance of controlling standards? (Business Valuation Standards of the ASA and USPAP require that all valuation adjustments be developed and supported)	Unsupported judgments can easily be challenged (See *WEINBERG* and *BRANSON*****. A discussion of both *WEINBERG* and *BRANSON* can be found below.)	Individual decisions are understandable and supportable and conform with guidance of BV standards
Is method generally accepted in the technical community	Evidently, in spite of the above	Let the exposure listed at the end of this issue speak for itself

* *THOMPSON V. COMMISSIONER*, No. 18922-93, 1996 (as noted in *SHANNON PRATT'S BUSINESS VALUATION UPDATE*, 12/96, p. 13)

** *ESTATE OF MARMADUKE V. COMMISSIONER*, TCM 1999-432, filed October 14, 1999

*** *ESTATE OF ETTA H. WEINBERG, ET AL, V. COMMISSIONER*, T.C. Memo. 2000-51

**** *ESTATE OF FRANK A. BRANSON v. COMMISSIONER*, T.C. Memo 1999-231

It seems clear to me that the use of a quantitative model such as the QMDM is the only way for an appraiser to be able to withstand a DAUBERT challenge regarding the development of the marketability discount. Of course, other quantitative methods could be developed that capture the same economic factors. And, the QMDM should be used with appropriate reference to the market evidence of the restricted stock studies. That market evidence relates to the implied discount rates, or required holding period returns that can be derived from the studies.

WEINBERG & BRANSON

In March, we wrote about the *WEINBERG* case and attempted to deal with, what was to me, the most disturbing quote in the case: "Because the assumptions are not based on hard data and a range of data may be reasonable, we did not find the QMDM helpful IN THIS CASE." (emphasis added).

THE COURT'S CONCLUSION RE THE QMDM IN *WEINBERG*

The expert working for the taxpayer (Mr. Siwicki) in *WEINBERG* concluded that the marketability discount in the case should be 35% based on references to restricted stock studies. The expert working for the IRS (Dr. Kursh) concluded that the marketability discount should be 15% based on an analysis using the QMDM. The Court concluded that the marketability discount was 20%. Absent the unfortunate sentence quoted above, the normal "scoring" for WEINBERG would have been to conclude that the QMDM "won." In other words, the Court's conclusion was much closer to 15% than to 35%. Even more importantly, the Court's logic paralleled that of the QMDM.

The conclusion of my review of *WEINBERG* is repeated here to provide a framework for further discussion:

> "I do believe that Dr. Kursh's analysis using the QMDM was helpful to the Court. It kept a clear focus on the impact of distribution yield on value. It allowed the Court for the first time (at least in a published decision) to focus on all the critical QMDM factors. It also gave the Court a basis to reach a conclusion of fair market value that was far more reasonable than that advanced by the taxpayer's expert. As should be clear from the analysis above, it appears that Dr. Kursh "won" the battle over the appropriate marketability discount. He "lost" the battle over the appropriate minority interest discount. It is unfortunate that the Court's comments seem critical of the QMDM, because the Court's conclusion is entirely consistent with its application by Dr. Kursh."

WEINBERG ON RESTRICTED STOCK STUDIES

My initial review of *WEINBERG* was so focused on the QMDM that I did not fully appreciate what Judge Whalen said about the development of the marketability discount in the case.

The Court prefaced its remarks about the marketability discount of both experts with an interesting observation: "FINALLY, WE DO NOT AGREE WITH THE MARKETABILITY DISCOUNT COMPUTED BY EITHER EXPERT." [emphasis added]

For background, we need to see what the Court said about the taxpayer's expert report:

> Mr. Siwicki then applied a 35-percent discount to the above value to account for the lack of marketability of the subject limited partnership interest. He reviewed various market studies on illiquid securities to arrive at the amount of this discount. In particular, he relied on a study by the Securities and Exchange Commission (SEC) that compared sales between 1966 and 1969 of the restricted stock of companies that also had freely tradable, publicly traded counterparts.
>
> After analyzing the various market studies on illiquid securities, Mr. Siwicki concluded that the lack of marketability discount for the subject limited partnership interest was most comparable to the portion of the SEC study that reported a 30-percent discount for restricted securities of nonreporting over-the-counter issuers.

> However, Mr. Siwicki believed the subject limited partnership interest warranted a greater discount due to two differences. First, he found that there was no prospect of a public market ever developing for this interest. Second, he found that the restrictions on the sale of this interest were perpetual, as opposed to the restrictions in the studies which lasted only 1 to 3 years. Thus Mr. Siwicki concluded a 35-percent discount represented the lack of marketability of the interest.

The Court did not cite the studies that Mr. Siwicki relied on. We obtained a copy of his report in order to verify that the studies were the same ones discussed in Chapter 2 of *QUANTIFYING MARKETABILITY DISCOUNTS*, or a subset thereof. Mr. Siwicki cited the following studies:

- SEC Institutional Investor Study
- Gelman Study
- Trout Study
- Moroney Study
- Maher Study
- Willamette Management Associates Study
- Silber Study
- Standard Research Consultants Study
- FMV Opinion Study

In addition, Mr. Siwicki's report cited the Emory studies of pre-IPO transactions. In terms of the QMDM, Mr. Siwicki expressed concerns about the potential for a long holding period of indeterminate length by noting "there was little likelihood of an imminent liquidation and distribution of partnership assets." This factor, together with his concern that the partnership's portfolio consisted of an undiversified single asset "argue for a high discount to NAV." Mr. Siwicki did not discuss the merits of the single asset, which included a history of full occupancy, the condition of the property or the Partnership's ability, through leveraging, to diversify or to make substantial distributions.

He did note the partnership's low financial leverage as a positive factor. Actually, there was none, since there was more than sufficient cash on hand to pay off the small mortgage. And he mentioned "demonstrated ability to generate cash for distribution" as another positive (i.e., discount-mitigating) factor. But these factors, when considered in the context of the 35% or so average of the cited studies, did not mitigate his marketability discount much at all.

The yield was 17.7% per year based on his concluded value and a three-year average dividend. That distribution yield is well more than 20% based on anticipatable distributions when the mortgage is paid off in four months! Any bidders out there? For perspective, the prime rate in December 1992 was 6% and 30 year Treasuries traded to yield 7.4%. Regarding the yield, he referred to an article in *TRUST & ESTATES* ("The Market Pricing of Syndicated LPs and the Valuation of FLPs," February 1996). However, his consideration of the value-enhancing impact of distributions was not "adequate", as we will see below.

We have reported at length on the Court's comments regarding the QMDM. We should now focus on what Judge Whalen said about the restricted stock studies:

> Similarly, we disagree with Mr. Siwicki's computation of a marketability discount. Mr. Siwicki arrived at an initial marketability discount, 30 percent, based upon his review of an SEC study of unregistered shares of nonreporting over-the-counter companies. [and the other studies discussed above.] He increased the discount by 5 percent to reflect the perpetual restrictions on this interest and the slim prospect of the interest ever being publicly traded. We believe that Mr. Siwicki failed adequately to take into account certain characteristics of the subject limited partnership interest that suggest a decrease in the marketability discount. These factors include consistent dividends, the nature underlying assets, and a low degree of financial leverage.

In other words, the Court rejected Mr. Siwicki's analysis based on reference to the restricted stock studies. Why did the Court do so? The only logical inference is that there was no nexus between the information in the studies and the facts of the case. Clearly, the partnership's long history of paying dividends and its prospects for future dividends were important to the Court. This factor was an integral part of the QMDM analysis used by Dr. Kursh.

The Court mentions the nature of the underlying assets and low financial leverage, as well. The partnership held a very attractive, fully occupied, well-maintained apartment building, substantial cash assets, and only a small amount of debt that was to be paid off in four months (and cash equal to about 2x the debt), significantly increasing cash flow available for distribution. There was testimony in the case that the general partner could decide to refinance the property and distribute substantial funds to the limited partners. This factor was considered by Dr. Kursh in his QMDM analysis. In particular, this was a mitigating factor in his selection of the required rate of return for a long expected holding period.

BRANSON ON RESTRICTED STOCK AND PRE-IPO STUDIES

Am I guilty of selectively interpreting *WEINBERG*? Let's see. In *BRANSON*, the Court was equally unpersuaded by the use of the various restricted stock studies. In *BRANSON*, the Court specifically referenced the studies mentioned by the various experts. So there is no doubt exactly which studies are being rejected for purposes of establishing marketability discounts. They are essentially the same studies referenced by Mr. Siwicki in *WEINBERG*.

In *BRANSON*, Judge Parr could not have been any clearer. Professor Bogdanski noticed the problem in a recent speech:

> And the Tax Court is becoming more demanding about the reliability and pertinence of such data. For example, proponents of DLOMs [discounts for lack of marketability] need to reckon with *ESTATE OF BRANSON V. COMMISSIONER*, in which the court found the estate tax inclusion values of the stocks of two banks.... In the course of its discussion, the court called into question the taxpayer's use of restricted stock studies to derive a DLOM [and the expert for the IRS]. The court's discussion of the stock of one of the banks, known as Savings, illustrates the court's attitude toward the studies. [John Bogdanski, "Valuation Discounts for Family Businesses (and Other Family Entities," Thirty-Fifth Annual Southern Tax Institute, September 18-22, 2000, page Z-20]

Bogdanski then quotes from BRANSON at the following point:

> We find Gasiorowski's reliance on the restricted stock studies for the size of the discount factor [marketability discount] to be misplaced, since the studies analyzed only restricted stock that had a holding period of only 2 years. The savings shares were not restricted either by law or by agreement. The fact that Savings maintained a waiting list of willing buyers is evidence that the stock's history of low trading volume is due to the shareholder's preference to hold Savings for investment.

Regarding reference to the Emory pre-IPO studies, the Court in *BRANSON* stated:

> Furthermore, we do not find Gasiorowski's conclusions with respect to the IPO study persuasive. The IPO study compared the sales prices of relatively small amounts of a corporation's shares before they were offered to the public to the sales prices of the same shares sold later in an IPO. The study concluded that the sales prices in the nonpublic markets were 40 to 45 percent less than sales prices in the IPO's. Thus, Gasiorowski concluded that the estimated marketable minority value, which he implicitly assumes is equal to an IPO value, should be reduced by 45 percent to reflect that nonpublic market value of the shares. We reject this conclusion for the following reasons.
>
> Petitioner offered no evidence that the value of the shares was affected by any change in the market conditions, the constraints of the economy, or the financial condition of Savings between the date of decedent's arm's-length sale of 1,111 shares for $307 per share in the nonpublic market and the valuation date 1 month later. Consequently, if we apply the conclusions of the IPO study to the case at hand, we find that it is more likely that $307 is 40 to 45 percent less, rather than more, than the price at which the same shares would sell in an IPO.

Regarding the expert for the Internal Revenue Service, the Court in *BRANSON* observed:

> We reject Spiro's reliance on the restricted sales and IPO studies for the same reasons we have already expressed in addressing the opinion of petitioner's expert....

> In deciding the size of the discount [marketability discount], Spiro reviewed the conclusions of restricted stock and IPO studies, and considered the facts and circumstances of the Willits stock. We find no persuasive evidence in the record to support reliance on the restricted stock studies in determining an appropriate marketability discount.

And finally, with respect to the taxpayer's second expert:

> The Willits shares are not restricted from trading by either law or agreement. Petitioner offered no evidence of any shareholders who were unable to sell their shares once offered for sale. Therefore, there is no evidence that the low trading volume is due to any reason other than the shareholder's preference to hold the shares for long-term investment, rather than sale. Accordingly, we find no persuasive evidence in the record to justify reliance on the restricted stock studies in determining an appropriate marketability discount.

Readers of E-Law who rely solely on references to the usual restricted stock studies or on references to pre-IPO to develop marketability discounts have reason to be concerned by *BRANSON* as well as *WEINBERG*. Professor Bogdanski agrees:

> The objections in BRANSON are troubling. The case, and others like it [cites ESTATE OF FURMAN, T.C. Memo 1998-157], may signal the end for the use of the restricted stock studies, at least where the shares being valued are not subject to regulatory or contractual restrictions on transfer... (ibid)

FURTHER CONCLUSIONS FROM *WEINBERG* AND *BRANSON*

I said above that appraisers who routinely reference the various restricted stock studies and pre-IPO studies should be concerned about WEINBERG. The Court could not discern how the taxpayer's expert had considered critical aspects of the subject investment. Having reviewed all the various studies, perhaps more than most appraisers, I can state that the comparative (benchmark) method used by Mr. Siwicki (i.e., comparing a subject investment with some benchmark of average discounts from one or more of the studies he referenced) cannot be used to develop realistic marketability discounts. The data available in the studies he referenced simply does not allow for such comparisons.

The comparisons that the Court was looking for were also not forthcoming in *BRANSON*. Reliance on "the usual" restricted stock studies and pre-IPO studies was fairly clearly rejected in that case.

Some readers may believe it is self-serving of me to say this. However, no one has yet, to the best of my knowledge, written a paper, an article, or a chapter in a book that explains how an appraiser can make comparisons with information from the restricted stock or pre-IPO studies and develop reasonable and realistic marketability discounts. The best advice most textbooks (other than *QUANTIFYING MARKETABILITY DISCOUNTS*) offer is that appraisers must exercise "significant judgment" in the process. Judge Whalen was obviously not convinced by the required judgments in *WEINBERG*. Neither was Judge Parr in *BRANSON*.

[In the next issue of E-Law, we will review the discussion of the marketability discount in three recent valuation textbooks. These reviews will support my assertions about the lack of guidance in the current literature.]

As I pointed out in the initial E-Law, the Court's concluded marketability discount of 20% in WEINBERG fell squarely within the range of judgments offered by Dr. Kursh in his analysis using the QMDM. This fact was noted by Professor Bogdanski:

> And *ESTATE OF WEINBERG v. COMMISSIONER* saw the court adopting the work of a taxpayer's expert [typo, it was the expert for the IRS] who quantified the DLOM [discount for lack of marketability] based in part on consideration of the subject real estate partnership's "consistent dividends, the nature of the underlying assets, and a low degree of financial leverage." [ibid, page Z-19.]

[I e-mailed Jack Bogdanski to confirm my understanding of his comments. He responded: "It is clear that the Court did take these factors into account. I can't tell whether that was at the government's expert's urging, or rather, just something the Court 'discovered' on its own." Obviously, neither of us were there. But the factors were the basic components of Dr. Kursh's expert report on this issue and, according to Dr. Kursh, of his testimony, as well. The Court's conclusion can hardly be considered an immaculate conception.]

Dr. Kursh focused on the factors considered important by the Court and his 15% conclusion was within 5% of that concluded by the Court. I call that CONFIRMATION since the Court was focused on the same factors analyzed by Dr. Kursh. Mr. Siwicki did not focus on the factors the Court thought essential, and his marketability discount analysis was rejected. It really is just about that simple.

THE ONLY QUANTITATIVE METHOD THAT WE'RE AWARE OF - THE QMDM

QMDM LOGIC IS HARD TO IGNORE

There is nothing magic or mystical about the QMDM. It is offered in the context of mainstream financial theory and focuses on those factors that rational investors consider determinative of value for illiquid equity interests:

- How long will I have to hold this investment before there are realistic opportunities for liquidity? Since no one knows exactly what the future holds, rational investors make their best estimates of the expected holding period and incorporate those estimates in their pricing decisions.

- How much do I expect to receive in dividends or distributions while I wait? And will these cash flows be growing? After all, isn't the cash flow from an investment important in its valuation?

- How much do I expect the basic investment to appreciate in value over the holding period? Is any further comment needed on the importance of expected growth in the value of an equity security?

- What is my required return over the expected holding period considering the risks of this investment in relationship to similar investments that have a ready market?

These questions are asked by users of the QMDM in the context of an appraiser's estimate of the freely traded value of the subject enterprise. Ask yourself: Isn't this precisely the information you would want if you were making an investment in a nonmarketable security? What more would you need to know? What less would satisfy you?

Recently, I spent several hours in New York with a prominent investor in companies (whole companies and minority interests). During that meeting, I had occasion to describe the logic and workings of the QMDM. His comment: "That's exactly the process we go through in evaluating every investment."

Analysts use the QMDM to determine the value of illiquid interests of closely held business entities. Decisions are made in the context of and in relationship to estimates of freely traded values of the subject closely held business entities.

Analysts using the QMDM develop required holding period rates of return, estimate the length of expected holding periods, estimate expected value growth and distributions, and reach conclusions. Analysts using the QMDM make numerous judgments that can be tested in the context of the facts and circumstances of each case.

Analysts using the QMDM can test their required returns using the restricted stock studies.

And finally, analysts using the QMDM can assess the reasonableness of their conclusions by making comparisons with similar investments in the public markets. And so can readers of their appraisal reports.

Analysts who use the restricted stock studies as reviewed by the Court in *WEINBERG* or *BRANSON* can do none of these things. There are better ways to utilize the information from the studies to help in reaching valuation conclusions. The QMDM is one such method.

EXPOSURE OF THE QMDM

The QMDM was introduced at the Advanced Business Valuation Conference in San Diego in 1994. Since then, the QMDM has received the following exposure:

- 11 speeches at conferences of the American Society of Appraisers
- 9 speeches at conference of other appraisal organizations
- 29 speeches to targeted groups
- 15 seminars for hands-on training using the QMDM
- 9 articles in publications such as TRUSTS & ESTATES, VALUATION STRATEGIES
- 11 articles in Mercer Capital's E-Law
- 15 articles in other publications by Mercer Capital

The book, *QUANTIFYING MARKETABILITY DISCOUNTS* was published in late 1997. To date, nearly 3,000 appraisers and others have purchased the book. A companion diskette for the QMDM has been available since 1997. More than 800 appraisers have purchased this tool.

The QMDM has had enormous and repeated exposure to members of the appraisal profession since 1994. Many practitioners around the country and the world are using it. Contrary to what you may have surmised from *WEINBERG*, the QMDM is not dead. In fact, it's alive and well.

A CHALLENGE FOR ALL APPRAISERS

Many "established" appraisers seem to have an almost emotional reaction to discussion of the concept of a quantitative model to develop a marketability discount. To date, to the best of my knowledge, there has not been a single article offering criticisms of the QMDM. But several appraisers of the "establishment" have been quick to point out verbally the Court's unfortunate, one sentence remark in WEINBERG as evidence that there is something wrong with the QMDM.

We invite you to speak to the following questions:

- What is wrong with the QMDM or the idea of a quantitative model to develop a marketability discount?

- Why shouldn't the QMDM or another model be used by appraisers as an objective way to consider the facts and circumstances of specific valuation situations and to incorporate their impact on value in conclusions?

- How does the QMDM fail to provide logical, rational and reasonable results (given logical, rational and reasonable assumptions)?

- And will someone please speak to the questions asked by Judge Whalen in WEINBERG and Judge Parr in BRANSON about how to incorporate the facts about subject investments in meaningful comparisons with simple averages of "the usual" restricted stock studies and pre-IPO studies?

Let's begin the process of discussion by replying to these questions in writing in a valuation publication of considerable circulation. In addition, we could have a panel at a forthcoming conference of the ASA or another professional organization. I'll advocate the QMDM and someone else can advocate benchmark analysis. It will only help the entire profession.

A Review of Current Valuation Textbooks on the Topic of Marketability Discounts

By Z. Christopher Mercer, ASA, CFA

This article originally appeared in Mercer Capital's E-Law Newsletter 2000-11, November 21, 2000

We recently obtained a copy of the fourth edition of *VALUING A BUSINESS*, by Pratt/Reilly/Schweihs (thank you, Shannon!). It was with more than a little curiosity that I reviewed Chapter 17, "Discounts for Illiquidity and Lack of Marketability," a chapter of some 32 pages dealing with the subject that has been at the forefront of my mind for a number of years (and a number of E-Laws).

I was pleased to find that the QUANTITATIVE MARKETABILITY DISCOUNT MODEL (QMDM) had achieved its own section in the chapter: "Other Analysis of Discounts for Lack of Marketability for Minority Interests." While I would have liked to have seen a more lengthy and detailed review, the short discussion at page 411 refers to the QMDM as "sound." It also makes reference to the analyses of the various restricted stock and pre-IPO studies found in *QUANTIFYING MARKETABILITY DISCOUNTS* (QMD) (Peabody Publishing, LP, 1997).

We have used the QMDM at Mercer Capital since 1994 in literally thousands of appraisals. In fact, using the QMDM to help quantify marketability discounts for illiquid minority interests is second nature to me, so I seldom think of what life was like before we developed the Model. Reading Chapter 17 of *VALUING A BUSINESS* caused me to wonder what life must be like for appraisers who rely solely on the restricted stock and pre-IPO studies.

As such, I decided to see what guidance is provided by the leading business valuation texts on the subject of marketability discounts. This issue of E-Law provides a summary of the discussions of developing marketability discounts found in three current textbooks:

- *VALUING A BUSINESS: THE ANALYSIS AND APPRAISAL OF CLOSELY HELD COMPANIES*, Fourth Edition, Pratt, Shannon P., Reilly, Robert F., and Schweihs, Robert P., (New York, McGraw Hill, 2000). ("Pratt/Reilly/Schweihs")

- *GUIDE TO BUSINESS VALUATIONS*, Tenth Edition, Fishman, Jay E., Pratt, Shannon P., et al., (Forth Worth, Practitioners Publishing Company, 2000) ("Fishman/Pratt")

- *CCH BUSINESS VALUATION GUIDE*, Hawkins, George B., and Paschall, Michael A., (Chicago, CCH Incorporated, 1999) ("Hawkins/Paschall")

The focus of my review was to learn HOW TO develop marketability discounts assuming I did not have the QMDM. I carefully read all the guidance in each of the three texts, developed a summary table to indicate what factors were mentioned, analyzed, or otherwise discussed (Exhibit 1 found at the end of this issue). The guidance of the three texts can be summarized as follows with a few comments from me in parentheticals:

- The business appraiser should be familiar with the various restricted stock and pre-IPO studies and keep their averages or other measures of central tendency in mind. (We all know that the average of the pre-1996 restricted stock studies is somewhere around 30%, if one outlier is excluded, and that the average of the pre-IPO studies is somewhere around 45%, so we're not exactly sure which average is to provide the most relevant guidance.)

- Next, the appraiser should CAREFULLY consider any of a host of factors. (The "factors" are summarized in Exhibit 1 to this E-LAW. They are mentioned, in all three texts, even if only briefly.)

- After VERY CAREFULLY considering each of these factors (in relationship to what, we are not sure), the analyst should VERY, VERY CAREFULLY exercise his or her BEST PROFESSIONAL JUDGMENT and select a marketability discount that is either at the average, above the average, or below the average (not sure which average). (The Fishman/Pratt text provides a table (Exhibit 8-14 at page 8-24) indicating that some factors would typically serve to increase marketability discounts, others would decrease them, and still others could move it either way. This is helpful, but there is no guidance there regarding the MAGNITUDE of the impact on the selected marketability discount.)

- Finally, after selecting a marketability discount, the appraiser should compare it to the averages (which?) and deem it, in his or her best professional judgment, to be reasonable.

In other words, all three texts advocate (implicitly or explicitly) some form of BENCHMARK ANALYSIS where comparisons are made relative to benchmark averages (or a range of averages). The Hawkins/Paschall text provides a specific example of benchmark analysis (similar to that recommended by Judge Laro in MANDELBAUM). With Pratt/Reilly/Schweihs and Fishman/Pratt, the reader is provided with no example of how a benchmark analysis might be developed.

"THE KERNAL"

Pratt/Reilly/Schweihs in the newest VALUING A BUSINESS make a critical observation at page 411:

> Ultimately, of course, the value of the nonmarketable, minority interest is the present value of the benefits it will produce for its owner.

In graduate school years ago, I studied statistics with a Romanian statistician/economist by the name of Nicholas Georgiescu-Roegen. Professor Georgiescu made several references to the word "kernel" in his first few lectures. A student finally asked him what he meant. He had been expecting the question, and replied: "Aha! The kernel is the root of the essence!"

And Pratt/Reilly/Schweihs have identified "the kernel" of the marketability discount in their comment noted above.

We will return to their "kernel" observation later in this review and see if the benchmark analysis advocated in the three texts addresses the "root of the essence" in developing marketability discounts.

Empirical Studies on Restricted Stock Transactions Through 1996

The review of restricted stock studies found in Chapter 17 of *VALUING A BUSINESS* is essentially the same as that found in the third edition, with the addition of a discussion of the Management Planning Study. The text concludes:

> The 10 empirical studies cover several hundred restricted stock transactions spanning the late 1960s through 1996. Considering the number of independent researchers and the very long time span encompassing a wide variety of market conditions, the results are remarkably consistent, as summarized in Exhibit 17-5.
>
> In many of the cases of restricted stock transactions tabulated in Exhibit 17-5, the purchaser of the stock had the right to register the stock for sale in the existing public market. Sometimes investors get a commitment from the issuer to register the securities at a certain future date. Sometimes investors have "demand" rights, where they can force the issuer to register the securities at a time of their choosing. Sometimes investors get "piggyback" rights where there is no obligation other than to include the securities on any future registration that the issuer undertakes. And, sometimes the purchaser has to rely on SEC Rule 144, where he or she can sell after one year if other parts of the rule are followed. In recent years, more transactions have occurred under SEC Rule 144(a), which relaxes some of the restrictions on such transactions, thus making the restricted securities more marketable. In any case, investors generally expect to be able to resell the stock in the public market in the foreseeable future. [VALUING A BUSINESS, p. 403, footnote omitted]

There is certainly no "how-to" aspect to this summary of the restricted stock studies in *VALUING A BUSINESS*. And no "how-to" advice preceded it. All of the studies referenced thus far were conducted prior to the change reducing the Rule 144 holding period to one year (from the previous two-year holding period), which occurred in April 1997. We see this mentioned in (the omitted) footnote of a restricted stock study conducted after 1997:

> As we go to press, a new restricted stock study (analyzing restricted stock sales in 1997 and 1998) has just been completed that concludes a range of discounts from 0 to 30 percent with a mean of 13 percent and a median of 9 percent. This does not mean that lack of marketability discounts have declined, but rather that restricted stock studies are less relevant for estimating such discounts for interests in closely held companies. For further details, see Kathryn Aschwald, "Restricted Stock Discounts Decline as a Result of 1-Year Holding Period," *SHANNON PRATT'S BUSINESS VALUATION UPDATE*, May 1000, pp. 1-3. (VALUING A BUSINESS, p. 411)

> (Ms. Aschwald is with Columbia Financial Advisors, Inc., so we have referred to her study as the CFAI study.)

I hate to say it, but Pratt/Reilly/Schweihs have missed the boat – and unfortunately, completely. As pointed out in a prior E-Law (2000-09) which discussed the CFAI Study at some length, the results of the restricted stock study following the shortening of the Rule 144 holding period to one year were predictable theoretically and comport with common sense.

Many appraisers, including Pratt, Reilly, and Schweihs, have focused so completely on the absolute averages of the "usual" restricted stock studies that they have missed the important information from those studies. And what they have missed is the required holding period return, or discount rate, that is implicit in the average restricted stock study results. In other words, if value to a minority shareholder is the present value of expected cash flows, doesn't that shareholder need to develop a discount rate? This point has been covered at length in the following sources:

- *QUANTIFYING MARKETABILITY DISCOUNTS*, Chapter 8
- E-Law 2000-08
- E-Law 2000-09

The rates of return implied by the "typical" restricted stock study averages provide valuable information about the implied rates of return imbedded in the restricted stock transactions. These implied rates of return can be used as a basis for comparing the reasonableness of required holding period returns used by appraisers FOR THE RELEVANT EXPECTED HOLDING PERIODS for subject illiquid minority business interests.

Summary of Conclusions from Private Transaction Studies

VALUING A BUSINESS spends several pages discussing pre-IPO studies, concluding as follows:

> The evidence from the Emory and Willamette Management Associate studies, taken together, is compelling. The studies covered hundreds of transactions over more than 20 years. Average differentials between private transaction prices and public market prices varied under different market conditions, ranging from about 40 percent to 63 percent, after eliminating the outliers.
>
> This is very strong support for the hypothesis that the fair market values of non-controlling ownership interests in privately held businesses are greatly discounted from their publicly traded counterparts. (*VALING A BUSINESS*, p. 411)

Once again, there is no suggestion of HOW an appraiser can use the averages of the pre-IPO studies as a basis for developing a marketability discount for a specific closely held business interest. And, unlike in Chapter 3 of QMD, there is no discussion of the extreme variability and lack of statistical significance of the individual transaction discounts that contribute to the average discounts in the studies. Nor is there any discussion of the factors inherent in most IPOs that create a bias toward larger discounts for pre-IPO transactions than for restricted stock transactions involving already public companies

Overall Summary from *Valuing a Business*, 4th Edition

The bottom line of the discussion of "Discounts for Illiquidity and Lack of Marketability" in Chapter 17 of *VALUING A BUSINESS* as it relates to minority interests is that THERE IS ABSOLUTELY NO GUIDANCE regarding how to use the statistical information in the various studies to develop marketability discounts in specific valuation circumstances. This reminds me of the swimming instructor who told the class everything there was to know about treading water, but never had them get in the pool to try it.

VALUING A BUSINESS concludes its discussion of marketability discounts with the following:

> We hope that business owners, their legal and accounting advisers, and valuation analysts, will use the types of data presented in this chapter, along with continuing related research, to reduce the disparity between the (often low) discounts concluded in judicial decisions and the illiquidity and lack of marketability discounts empirically evidenced in actual market transactions. [*VALUING A BUSINESS*, p. 421]

One can only conclude from this chapter that the authors of VALUING A BUSINESS believe that marketability discounts for minority interests in non-public entities should be valued, virtually always, at substantial discounts to their (otherwise hypothetical) freely tradable values. Unfortunately, there is no guidance in the book regarding how "business owners, their legal and accounting advisers, and valuation analysts" can use this evidence to develop appropriate marketability discounts (from appropriately developed freely traded indications of value) in specific cases, with specific fact patterns, for illiquid minority interests in privately held business entities.

I will certainly admit that the guidance in *VALUING FINANCIAL INSTITUTIONS*, my first book, which was published in 1992, was even more unsatisfying regarding the development of marketability discounts. But that was 1992. We introduced the QMDM publicly in late 1994 and published *QUANTIFYING MARKETABILITY DISCOUNTS* in 1997.

GUIDE TO BUSINESS VALUATIONS BY FISHMAN/PRATT

After about a six-page discussion of marketability discounts, the *GUIDE TO BUSINESS VALUATIONS* provides a section called "Selecting a Discount for Lack of Marketability," which is quoted below:

> The studies mentioned in the preceding paragraphs clearly indicate that substantial discounts for lack of marketability are often required when valuing a closely held company. The range of discounts, however, is quite wide, and even the average (or median) discounts are only somewhat consistent from one study to the next. All of this indicates that the selection of a discount for lack of marketability INVOLVES A GREAT DEAL OF JUDGMENT and should be based on all of the factors listed in EXHIBIT 8-14. There is considerable evidence, however, suggesting that the marketability discount for a closely held stock compared with a publicly traded counterpart should average between 35% and 50%, in the absence of special circumstances such as those noted in Exhibit 8-14 that would tend to reduce the discount for lack of marketability. [*GUIDE TO BUSINESS VALUATIONS*, pp. 8-29, emphasis added]

Again, there is no "how-to" advice or guidance in the *GUIDE TO BUSINESS VALUATIONS* to help in selecting a marketability discount in a particular valuation situation. The *GUIDE TO BUSINESS VALUATIONS* does not cite or discuss QMD or the QMDM.

CCH BUSINESS VALUATION GUIDE BY HAWKINS/PASCHALL

The *CCH BUSINESS VALUATIN GUIDE* contains approximately 15 pages of text regarding the marketability discount. It reviews the ten restricted stock studies discussed briefly in the other texts, as well as the Robert W. Baird & Co./Emory pre-IPO studies (see Exhibit 1). After separate, short discussions of option pricing and the QMDM, there is a discussion of "The importance of *MANDELBAUM*."

Unlike *VALUING A BUSINESS* and the *GUIDE TO BUSINESS VALUATIONS*, the *CCH BUSINESS VALUATION GUIDE* provides an example marketability discount analysis for a specific closely held business interest. The text defines an interest and provides relevant facts about it. The example then essentially follows the outline provided by Judge Laro in *MANDELBAUM*. In the final analysis, however, after discussing each of ten factors in qualitative terms, the example concludes that the appropriate marketability discount for the interest described should be 28%. This result was selected from a described range (from the various studies) of 26% to 47%. The example was "benchmarked" at the lower end of the range.

While I appreciate the example and the qualitative discussion in this example, as an experienced reader of valuation reports, I was left rather unconvinced that 28% was the appropriate marketability discount. And while I appreciate the effort to show how the MANDELBAUM factors can be discussed in a specific case, I have several problems with this type of analysis (see Chapter 4 of *QUANTIFYING MARKETABILITY DISCOUNTS*.)

CONCLUSIONS REGARDING THE THREE BOOKS

We have reviewed the extent of guidance available to appraisers about how to develop marketability discounts in the absence of the QMDM in three leading and credible valuation texts. Having done so, I find NO GUIDANCE on how to develop a marketability discount in two of the texts, and an example of the *MANDELBAUM* benchmark analysis in the third.

In short, it is my conclusion that it is not possible to learn how to develop a realistic, reasonable and supportable marketability discount from the current valuation texts. This is why we developed and introduced the QMDM in 1994 and published *QUANTIFYING MARKETABILITY DISCOUNTS* in 1997.

The QMDM is Discussed in Two Books

Here is what *VALUING A BUSINESS* has to say about the QMDM in a very short section entitled "Other Analysis of Discounts for Lack of Marketability", with my comments in parentheticals:

> Ultimately, of course, the value of the nonmarketable, minority ownership interest is the present value of the benefits it will produce for its owner.
>
>> (Pratt/Reilly/Schweihs have identified the "kernel" and are now talking basic economics.)
>
> This fact is recognized in the QUANTITATIVE MARKETABILITY DISCOUNT MODEL (QMDM). (properly footnoted) The model simply estimates a time horizon at which the interest will be liquidated,...
>
>> (Actually a reasonable range of expected holding periods based on the specific facts and circumstances of each appraisal)
>
> ... a liquidating price based on annual percentage growth in value from the valuation date,...
>
>> (Again, a range of expected liquidating prices based on the range of expected holding periods)
>
> ... and the interim cash flows to the holder.
>
>> (Mightn't these distributions be important, especially when few of the companies in the restricted stock studies were paying dividends? And yes, many closely held entities, including family limited partnerships, limited liability companies, operating entities, and S corporations do, indeed, make regular and predictable distributions.)
>
> These estimated values are discounted back to a present value in the QMDM at a discount rate that is higher than the normal discount rate for cash flows for the subject company...
>
>> (The required holding period return applicable to shareholder cash flows is normally higher than the discount rate applicable to enterprise cash flows to reflect, at a minimum, the risks associated with (not) receiving them.)
>
> ...to reflect the illiquidity and extra uncertainty of being "locked up" for an indeterminate time.

> (The time period may be precisely "indeterminate," but we can often reasonably estimate if it is relatively short, likely long, or likely very long, which is what the analyst using the QMDM is asked to do. In this fashion, the analyst is asked to a reasonable range of expected holding periods (say, two-to-four years or five-to-ten years).)

There are several factors to consider, and approximate percentage points for each factor add to the discount rate.

> (Interestingly, nearly all of the "factors" mentioned regarding the QMDM are mentioned in *VALUING A BUSINESS*, the *GUIDE TO BUSINESS VALUATIONS*, and the *CCH BUSINESS VALUATION GUIDE* as being factors to be "considered" in developing marketability discounts.)

The model is sound, but the inputs require substantial subjective estimation.

> (Actually, each assumption is based on the factual information available for each case, which minimizes the so-called "subjectivity." Let's look at the assumptions:
>
> 1) The base value, or value at the marketable minority interest level is not a "subjective" assumption. It is based an analyst's considered evaluation of a business.
>
> 2) The expected growth rate in value is not a "subjective" assumption. It is based on the analyst's review of the enterprise valuation and adjusted appropriately if value is expected to grow more rapidly than earnings.
>
> 3) The expected dividend or distribution yield is also not "subjective," especially when based on historical patterns or management's expression of intent to pay on a going-forward basis.
>
> 4) The expected holding period is also not a "subjective" assumption. It is based on an entity's historical dealings with its minority owners (e.g., stock repurchases), its history of ownership, its outlook for future sale, IPO, or other avenues for future liquidity. Naturally, the appraiser must make reasonable judgments regarding the expected holding period because no one can know precisely what the future will hold until it arrives. But those are the judgments that any investor who invests in closely held business interest must make in the absence of perfect knowledge about the future.

5) Finally, the required holding period rate of return is also not a "subjective" assumption. It is developed using the Adjusted Capital Asset Pricing Model in a fashion similar to that followed by most appraisers who build up discount rates in their enterprise valuations. Granted, the analyst must make judgments in both cases, but in both cases, he or she can refer to external market evidence to confirm or affirm the reasonableness of the discount rates.)

It is useful for identifying situations where the discount should be significantly above or below the averages shown by the restricted stock or pre-IPO studies.

> (At the risk of sounding facetious, I am reminded of the story about the miracle of the "simple" thermos. It keeps hot stuff hot, and it keeps cold stuff cold. I'm not the first to ask, "How does it know?" Readers are referred to the diagram of individual restricted stock transactions in Chapter 2 of QMD. Also, please see the diagram of pre-IPO transactions in Chapter 3 of QMD. These diagrams of the actual dispersion of the transactions that make up the "averages" are quite revealing. And Pratt, Reilly, and Schweihs as well as other appraisers seem to rely blindly on the averages of these widely divergent individual transactions as gospel from on high.)

QMDM also analyzes some of the studies discussed in this chapter in detail.

> (To our knowledge, *QUANTIFYING MARKETABILITY DISCOUNTS* is the only reference source that provides a detailed analysis of ALL of the referenced restricted stock studies and pre-IPO studies published that time. Actually, there is little discussion of the Willamette Associates pre-IPO study since there is no formal published study. But every other study mentioned in *VALUING A BUSINESS*, the exception of the CFAI study, which was published in 2000, is discussed in detail appropriate to the level of detail provided in the individual studies.)

The *CCH GUIDE TO BUSINESS VALUATION* also discusses the QMDM. *QUANTIFYING MARKETABILITY DISCOUNTS* is referred to as an "excellent book," but also notes that the QMDM "is subject to a great deal of variance given the large number of assumptions necessary."

CONCLUSION

Interestingly, *VALUING A BUSINESS* concludes Chapter 17 with a brief discussion of *ESTATE OF BARGE v. COMMISSIONER* (TC Memo 1997-188):

> In *ESTATE OF BARGE v. COMMISSIONER*, the Tax Court also provided a very specific list of the factors that it considered in its estimation of the lack of marketability discount in this case.

Those factors (which are developed by quoting from a 1998 article I wrote in *TRUST & ESTATES* regarding the ESTATE OF BARGE) are the basic factors of the QMDM, [Mercer, Z. Christopher, "Quantifying Marketability Discounts, New or Not?", *TRUST & ESTATES*, February 1998, pp. 44-45, as quoted in *VALUING A BUSINESS*, 4th EDITION.]

- Base value
- Expected Holding Period
- Expected Growth Rate in Value
- Expected Dividends or Distributions
- Required Holding Period Return

VALUING A BUSINESS concludes the marketability discount chapter with the following paragraph, just prior to a final summary, which is a direct quote from my *TRUST & ESTATES* article. Given the context in which the paragraph is presented, it is only reasonable for readers to believe that the authors of *VALUING A BUSINESS* agree with my conclusion:

> If, as we expect, the Tax Court continues to follow the line of reasoning found in *MANDELBAUM* and furthered in *BARGE*, there will be a growing expectation that business appraisers develop improved methodologies to quantify marketability discounts in the appraisal of non-marketable minority interests of private businesses AND in estimating the appropriate discounts when valuing undivided interests in real property. (*VALUING A BUSINESS*, p. 421, as quoted from the referenced *TRUST & ESTATES* article).

Recall the "kernel" sentences from Pratt/Reilly/Schweihs:

> "Ultimately, of course, the value of the nonmarketable, minority interest is the present value of the benefits it will produce for its owner. This fact is recognized in the QUANTITATIVE MARKETABILITY DISCOUNT MODEL."

It should be clear that the benchmark analysis advocated, either implicitly or explicitly, in the three cited texts does not recognize this fact.

Let's make the point crystal-clear. Assume that we need to value a company, not a minority interest. Further assume that the value of the company is, ultimately, the present value of the benefits it will produce for its owner. Assume still further that in valuing this company, there are no projections of future benefits over a normal forecast period (in terms of the QMDM, the expected holding period), except for the generalized notion that there might be some benefits. And finally, assume that there is no basis for estimating the terminal value at the end of the normal forecast period.

Given the above, an appraiser is asked to develop a value of the business based upon "the present value of the benefits it will produce for its owner." Tough job! Is there any degree of judgment that can possibly develop a reasonable, realistic and supportable conclusion of value? I think not. That is, however, exactly the job faced by appraisers who attempt to develop marketability discounts from a marketable minority base value by imprecise and often meaningless comparisons with averages of studies whose underlying data points are widely variable. In addition, the underlying facts relating to expected holding periods, distributions and risks may be entirely different. The alternative, of course, is to use the QMDM or a similar quantitative method and estimate the present value of the expected benefits to hypothetical or real owners.

I'm reminded of what I'll call the "Two Rules of the Hole." First, if you are in a hole, recognize that you are. And second, after you've recognized it, stop digging.

My advice to appraisers who remain wedded to benchmark analysis of the type described in this article for the development of marketability discounts is therefore simple: stop digging and start quantifying!

LAGNIAPPE

After preparing Exhibit 1, an analyst with Mercer Capital "volunteered" to check the page references and to confirm that the various articles, factors and cases were, indeed mentioned or discussed. I asked him to comment briefly on what he had learned from this review of portions of three current textbooks and *QUANTIFYING MARKETABILITY DISCOUNTS*. He wrote (not realizing that his comments might appear here):

> Shannon Pratt and others seem to criticize the fact that one has to make "subjective" assumptions for all of the inputs of the QMDM. I guess they feel that that is hardly an improvement over making "subjective" judgments regarding the marketability discount, itself. However, I believe that we consistently employ reasonable and well-explained QMDM inputs that are REPLICABLE by third parties. Others may make slightly different assumptions, but I believe that the QMDM's quantification of the marketability discount will be fairly consistent as long as the inputs used by the other person are as well supported as ours usually are. Many appraisers may simply not want to spend the time to do the financial analyses and have the conversations with management, real estate appraisers and others necessary to compile all the inputs for the QMDM. After all, it takes quite a bit of work to develop and/or research these inputs and to explain where they came from and why they're reasonable.

But the consideration of those inputs gives us great confidence that our marketability discounts are appropriate for the facts and circumstances of each valuation situation.

EXHIBIT 1
E-LAW 2000-11

TOPICS OF DISCUSSION	CURRENT TEXTBOOK DISCUSSIONS RE MARKETABILITY DISCOUNTS						The QMDM	
RESTRICTED STOCK / PRE-IPO STUDIES	**Pratt, Reilly Schweihs**[1]	Page References	**Fishman, Pratt, et al.**[2]	Page References	**Hawkins & Paschall**[3]	Page References	**Mercer**[4]	Page References
SEC Institutional Investor Study	analyzed	396	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Gelman Study	mentioned	398	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Trout Study	mentioned	398	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Moroney Study	mentioned	399	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Maher Study	mentioned	400	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Pittock/Stryker (Standard Research)	mentioned	400	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Silber Study	mentioned	400	mentioned	803.31	mentioned	21022/3	analyzed	Chapter 2
Willamette Restricted Stock Study	mentioned	400	mentioned	803.31	mentioned	21022/3	mentioned	Chapter 2
Hall/Polacek Study (FMV Opinions)	mentioned	401	mentioned	803.31	mentioned	21022/3	mentioned	Chapter 2
Management Planning Study	discussion	401	mentioned	803.31	mentioned	21022/3	published	as Chapter 12
Robert W. Baird (Emory) Pre-IPO Studies	discussion	407	mentioned	803.32	mentioned	21024	mentioned	Chapter 3
Willamette Pre-IPO Studies	discussion	408	mentioned	803.32			mentioned	Chapter 3
Option pricing analysis					mentioned	21024	mentioned	Chapter 14
FACTORS INFLUENCING MARKETABILTY								
What is the Base Value?								
Financial condition of the company*	mentioned	419*	mentioned	803.38	mentioned	21021	analyzed	138
Nature of the company, history, etc.*	mentioned	419*	mentioned	803.38	mentioned	21021	analyzed	251/141
Company's management*	mentioned	419*	mentioned	803.38	mentioned	21021	analyzed	243
What is the Expected Growth in Value?								
Expected growth rate in value	noted re QMDM	411			noted re QMDM	21025	analyzed	215, 221, 257
What are the Expected Distributions?								
Dividends/distributions	mentioned	417	mentioned	803.38	mentioned	21021 / 21027	analyzed	Ch 9; Ch 8, p. 228ff
What is the Expected Holding Period?								
Expected holding period*	mentioned	419*	mentioned	803.38	mentioned	21026/7	analyzed	218
Redemption policy (history of)*	mentioned	419*	mentioned	803.38	mentioned	21026/7	analyzed	242
Lack of exit strategy					mentioned	21028	analyzed	244
Prospect for sale	mentioned	418	mentioned	803.26	mentioned	21030	analyzed	242
Prospect for public offering	mentioned	418		803.26	mentioned	21028	analyzed	242
What is the Required Holding Period Return?								
Investor's discount rate during holding period	noted re QMDM	411			noted re QMDM	21025	analyzed	218
No. of potential buyers (size of market)	mentioned	417	mentioned	803.27	mentioned	21021	analyzed	243
Put rights	mentioned	417	mentioned	803.26/38			analyzed	251, 243
Size of the interest (amount of control)	mentioned	418	mentioned	803.26	mentioned	21021	analyzed	249
Information access and reliability	mentioned	418	mentioned	803.38				
Restrictive transfer provisions (buy-sells)	mentioned	418	mentioned	803.38	mentioned	21029	analyzed	242, 251
Lack of registration	assumed	assumed	mentioned	803.27	mentioned	21028	assumed	assumed
Cost of a public offering*	mentioned	419*	mentioned	803.38	mentioned	21028	mentioned	146

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QUANTITATIVE, RATE OF RETURN ANALYSIS

developing marke

Z. CHRISTOPHER MERCER

tability discounts

The Tax Court's recent rejections of benchmark analysis using the restricted stock and pre-IPO studies as a basis for marketability discounts marks the beginning of the end for this type of thinking.

There is a definite trend in the Tax Court *not to accept* unsupported references to restricted stock studies and pre-IPO studies, commonly referred to as *benchmark analysis*, as the basis for justifying marketability discounts.[1] This article will document this trend of nonacceptance and discuss a developing trend toward the use of quantitative methods, commonly referred to as *quantitative, rate-of-return analysis*, to develop marketability discounts. The article will refer specifically to the quantitative marketability discount model (QMDM) as one such quantitative method that is achieving growing acceptance in the appraisal community.[2]

Appraisers, collectively, have been going to Tax Court with the same old story. The story is that marketability discounts (from a marketable minority valuation basis) for illiquid minority interests of privately owned entities ought to be about 35%, plus or minus a bit, because 35% happens to be about the average discount found in several restricted stock studies dating back to the late 1960s. The Tax Court is now tired of this story and is letting the appraisal community know it in case after case. See a recent comment from a noted legal commentator:

> The objections in *Estate of Frank A. Branson v. Commissioner* (T.C. Memo 1999-231) are troubling. The case, and others like it [cites *Estate of Furman*, T.C. Memo 1998-157], *may signal the end for the use of the restricted stock studies*, at least where the shares being valued are not subject to regulatory or contractual restrictions on transfer...." (emphasis added)[3]

With the Tax Court rejecting benchmark analysis based on comparisons with the restricted stock studies, should appraisers also disregard the restricted stock studies? If these studies are not reliable, what should appraisers do?

The studies need not be disregarded, but appraisers should use them appropriately in developing marketability discounts. Imbedded in every restricted stock analysis is information relating to the *required returns* of the investors who actually engaged in the underlying transactions. This type of analysis will be referred to as *quantitative, rate-of-return analysis*. The implied required return information, and not the *absolute level* of any average discount for a study, is available to appraisers and is useful for developing marketability discounts appropriate for particular nonmarketable securities.

To place the trends of nonacceptance of benchmark analysis and rising acceptance of quantitative, rate of return analysis into perspective, this article will:

- Review recent cases suggesting that benchmark analysis will continue to be rejected and that quantitative methods based on rate of return analysis will be required by the courts.
- Provide a non-technical overview of the QMDM and deal with the implied criticism found in the *Estate of Weinberg*[4] decision, as well as the support and criticism found in *Janda*.[5]

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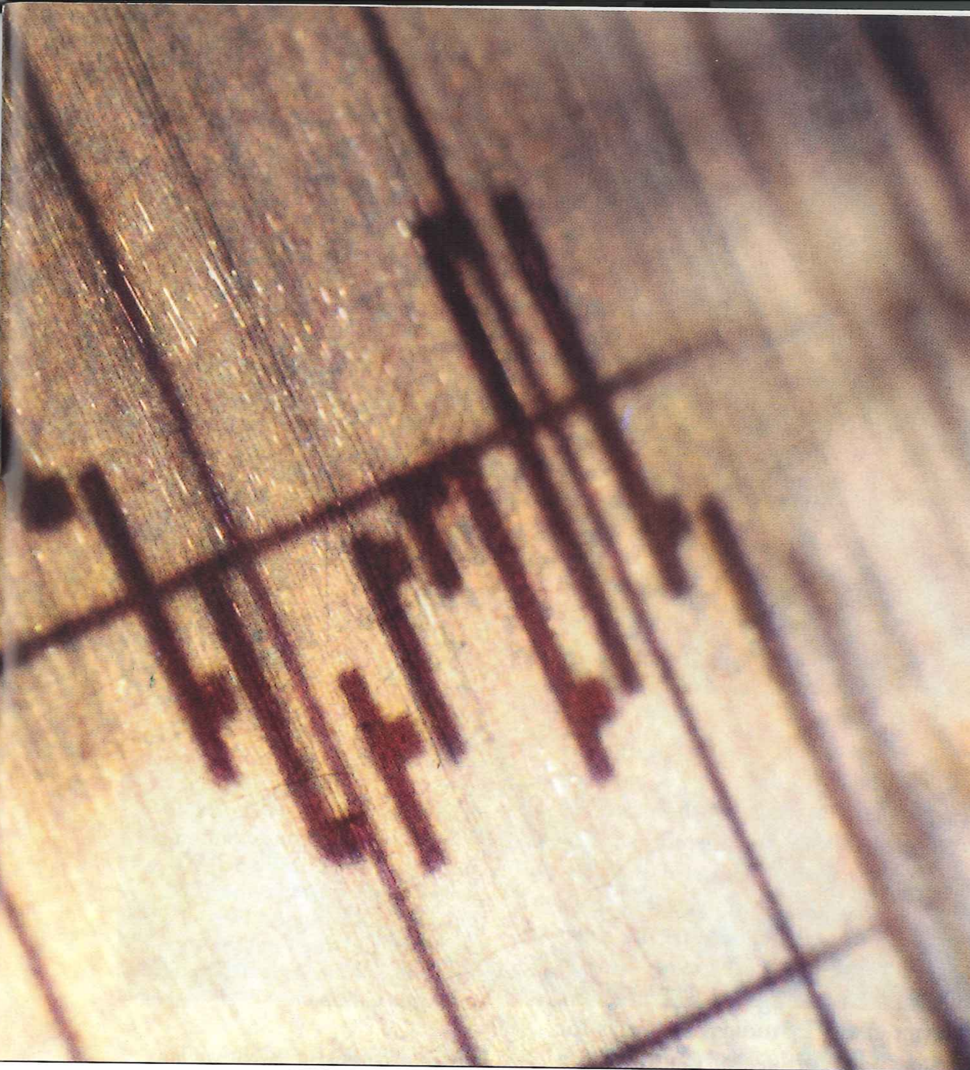


> Furthermore, we do not find Gasiorowski's conclusions with respect to the IPO study persuasive. The IPO study compared the sales prices of relatively small amounts of a corporation's shares before they were offered to the public to the sales prices of the same shares sold later in an IPO. The study concluded that the sales prices in the nonpublic markets were 40 to 45 percent less than sales prices in the IPOs. Thus, Gasiorowski concluded that the estimated marketable minority value, which he implicitly assumes is equal to an IPO value, should be reduced by 45 percent to reflect that nonpublic market value of the shares. We reject this conclusion for the following reasons.
>
> [The taxpayer] offered no evidence that the value of the shares was affected by any change in the market conditions, the constraints of the economy, or the financial condition of Savings between the date of decedent's arm's-length sale of 1,111 shares for $307 per share in the nonpublic market and the valuation date 1 month later. Consequently, if we apply the conclusions of the IPO study to the case at hand, we find that it is more likely that $307 is 40 to 45 percent less, rather than more, than the price at which the same shares would sell in an IPO.

Regarding the expert for the IRS, the court in *Branson* observed:

> We reject Spiro's reliance on the restricted sales and IPO studies for the same reasons we have already expressed in addressing the opinion of petitioner's expert....
>
> In deciding the size of the discount [marketability discount], Spiro reviewed the conclusions of restricted stock and IPO studies, and considered the facts and circumstances of the Willits stock. *We find no persuasive evidence in the record to support reliance on the restricted stock studies in determining an appropriate marketability discount.* (Emphasis added.)

Finally, with respect to the taxpayer's second expert, the court declared:

> The Willits shares are not restricted from trading by either law or agreement. Petitioner offered no evidence of any shareholders that were unable to sell their shares

- Compare the use of benchmark analysis and the QMDM in the context of the *Daubert* questions[6] regarding the admissibility of expert testimony.

Estate of Branson

In *Estate of Branson*[7], the Tax Court rejected the use of the restricted stock studies as a basis for the determination of the marketability discount. In fact, the court specifically referenced the studies mentioned by the various experts so there is no doubt exactly which studies were being rejected.

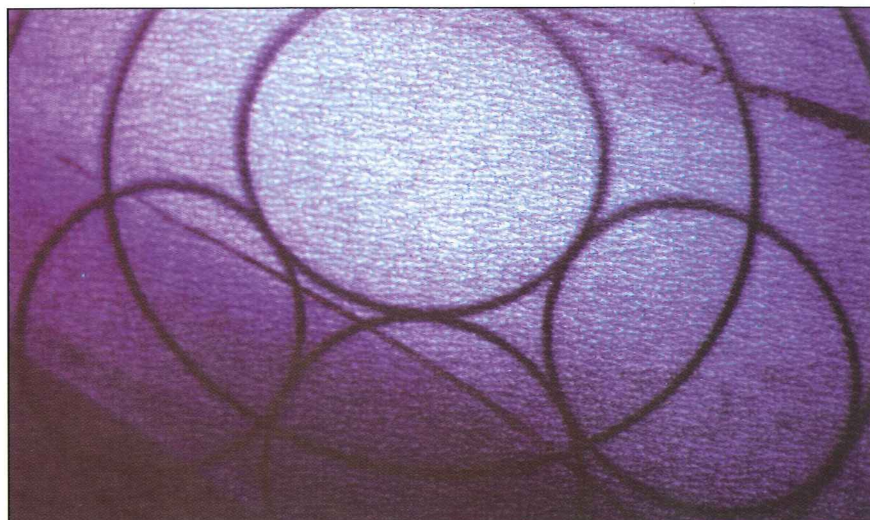
In the handouts for a recent speech before the Southern Federal Tax Institute, Professor John Bogdanski noticed the problem when he reviewed *Branson:*

> And the Tax Court is becoming more demanding about the reliability and pertinence of such data. For example, proponents of DLOMs [discounts for lack of marketability] need to reckon with *Estate of Branson v. Commissioner*, in which the court found the estate tax inclusion values of the stocks of two banks.... In the course of its discussion, the court called into question the taxpayer's use of restricted stock studies to derive a DLOM [and the expert for the IRS]. The court's discussion of the stock of one of the banks, known as Savings, illustrates the court's attitude toward the studies.[8]

Bogdanski then quotes from *Branson* at the following point:

> We find Gasiorowski's [expert for the taxpayer] reliance on the restricted stock studies for the size of the discount factor [marketability discount] to be misplaced, since the studies analyzed only restricted stock that had a holding period of 2 years. The Savings shares were not restricted either by law or by agreement. The fact that Savings maintained a waiting list of willing buyers is evidence that the stock's history of low trading volume is due to the shareholder's preference to hold Savings for investment.

Regarding reference to the Emory pre-IPO studies, the court in *Branson* stated:



once offered for sale. Therefore, there is no evidence that the low trading volume is due to any reason other than the shareholder's preference to hold the shares for long-term investment, rather than sale. *Accordingly, we find no persuasive evidence in the record to justify reliance on the restricted stock studies in determining an appropriate marketability discount.* (Emphasis added.)

Knight

In another recent Tax Court case, *Knight*,[9] an appraiser's reliance on restricted stock studies to support a marketability discount was rejected by the court because the entities engaging in the transactions analyzed by studies were not sufficiently comparable to the subject of the appraisal. To quote from the decision regarding the marketability discount derived by the taxpayer's expert:

> Conklin cited seven studies of sales of restricted stocks from 1969 to 1984 to support this estimate that a 30 percent discount for lack of marketability applies. He used a table summarizing initial public offerings of common stock from 1985 to 1993. However, he did not show that the companies in the studies or the table were comparable to the partnership, or explain how he used this data to estimate the discount for lack of marketability. He also listed seven reasons why a discount for lack of marketability applies but he did not explain how these reasons affect the amount of the discount for lack of marketability.

The IRS expert testified about fair value but not the fair market value of the partnership interests; therefore, his testimony was not considered in deciding the fair market value of the gifts made. While the taxpayers' expert's opinion was rejected because the court considered him an advocate, the fact that the court again rejected the restricted stock studies as a basis for the discount for lack of marketability should be disturbing to those appraisers who rely on them to derive marketability discounts.

Janda

In *Janda*, a case published as this article was being finalized, the Tax Court once again summarily dismissed the benchmark analysis of the expert for the IRS.[10]

To quote from the decision regarding the marketability discount derived by the government's expert:

> As for Mr. Schneider's report, we believe that he merely made a subjective judgment as to the marketability discount without considering appropriate comparisons. Mr. Schneider looked at only generalized studies which did not differentiate marketability discounts for particular industries. Further, although he stated that each case should be evaluated in terms of its own facts and circumstances, Mr. Schneider seems to rely on opinions by this Court that describe different factual scenarios from the instant cases and generalized statistics regarding marketability discounts previously allowed by the Court. Finally, Mr. Schneider has failed to fully explain why he believes that bank stocks are more marketable than other types of stock. We therefore are unable to accept his recommendation.

The court also addressed the QMDM in this case, reviewing the basic structure of the model in verbal terms. While the court took issue with the QMDM assumptions used by the expert for the taxpayer, the decision did not directly criticize the QMDM. To quote from a recent issue of Mercer Capital's e-mail newsletter:[11]

> We believe the Quantitative Marketability Discount Model (QMDM) gained a significant amount of currency in a United States Tax Court decision (*Janda v. Commissioner* (T.C. Memo 2001-24)). As discussed below, although the Court took issue with the assumptions made in the use of the QMDM, it obviously studied the model, and threw out the opposition's use of the same old studies with little comment.
>
> This is a synopsis of what we now know; more will follow once we get a copy of the valuations referenced in the case. The primary themes from the case are:
>
> 1) The Court threw out using benchmark anaysis for determining marketability discounts.
>
> 2) The Court carefully examined the QMDM but disagreed with some of the asumptions used and, as a result, disagreed with the marketability discount implied by the model. Other than that, the principal criticism was that the facts of the case as input into the QMDM resulted in too large a marketability discount.
>
> 3) A modification of the assumptions used by the expert for the taxpayer, input into the QMDM, results in an implied marketability discount that reconciles with the Court's opinion. It also proves that "slight" changes don't result in "dramatic" differences in the marketability discount.
>
> 4) We are increasingly comfortable that the QMDM meets the challenges presented by *Daubert* because of the model's predictive power.

A more detailed discussion of both benchmark analysis and the QMDM in the context of *Janda* can be found in the newsletter. In addition, the case is discussed in greater length below.

Conclusion Regarding Recent Tax Court Cases

Clearly, business appraisers are going to have to use valuation methods other than traditional benchmark analysis to defend their conclusions in Tax Court (and other courts). Those methods must be part of what may be called a quantitative, rate-of-return analysis. The QMDM is one example of quantitative, rate-of-return analysis.

Non-Technical Overview

There is nothing magical or mystical about the QMDM. It is one example of a quantitative, rate-of-return analysis to determine the value of illiquid minority shares in the context of enterprise level, or marketable minority interest level, value indications. The QMDM is offered in the context of mainstream financial theory and focuses on those factors that rational investors consider determinative of value for illiquid equity interests:

- How long will I have to hold this investment before there are realistic opportunities for liquidity? Since no one knows exactly what the future holds, rational investors make their best estimates of the expected holding period and incorporate those estimates in their pricing decisions.
- How much do I expect to receive in dividends or distributions while I wait? Will these cash flows be growing? After all, isn't the cash flow from an investment important in its valuation?
- How much do I expect the basic investment to appreciate in value over the holding period? Is any further comment needed on the importance of expected growth in the value of an equity security?
- What is my required return over the expected holding period considering the risks of this investment in

1 This trend of not accepting traditional references is equally pronounced, but less well-publicized, with the Securities and Exchange Commission. The SEC staff now presumes that the discount for transactions prior to an IPO is zero, rather than an automatic 45% by reference to the pre-IPO studies. It is up to each company, and perhaps its accounting firm or appraiser, to justify the validity of pricing of pre-IPO transactions in relationship to expected IPO prices. The analytical tools and concepts discussed in this article are equally applicable to the pre-IPO discount question as to the more general issue of marketability discount for illiquid interests in private entities.

2 The QMDM is developed more fully in: Mercer, *Quantifying Marketability Discounts* (Peabody Publishing, 1997).

3 Bogdanski, "Valuation Discounts for Family Businesses (and Other Family Entities)," *Thirty-Fifth Annual Southern Federal Tax Institute*, September, 2000.

4 TCM, 2000-51.

5 TCM 2001-24.

6 Daubert v. Merrell Dow Pharmaceuticals, Inc. 509 US 579 (1993).

7 TCM 1999-231.

8 See Note 3, *supra.*

9 115 TC No. 36.

10 See Note 5, *supra.*

11 "Janda v. Commissioner: The QMDM Appears in Tax Court Again," The E-Law Business Valuation Perspective, Issue 01-01. The taxpayers' expert concluded that the appropriate marketability discount was 66% based on his QMDM analysis. The most troubling aspect of the Janda case is a comment suggesting that a marketability discount of 66% is simply too high, apparently regardless of circumstances. Time will tell, whether this was an off-hand comment of one judge or an opinion held more broadly by the Court's members. If the latter is true, all appraisers, whether they use benchmark analysis or quantitative, rate of return analysis, will face a rocky road.

EXHIBIT 1:
Traditional benchmark analysis compared with the QMDM in the context of the *Daubert* factors

Daubert Factors	Benchmark Analysis	QMDM
Has the method been (or can it be) tested?	• Cannot be used to test or to predict • Has been accepted by courts, but is being questioned	• Can be used to predict or test transaction results • Accepted In Thompson* • Implicitly accepted in Marmaduke** • Implicitly accepted in Weinberg
Subjected to peer review and and publication?	• Studies have been published • Method has not been published or subjected to peer review	• Quantifying Marketability Discounts published in 1997 • Subjected to peer review pre publication and available for criticism since then. The only published criticism to date was dealt with above.
Known or potential error rate?	• Given the limitations of the comparative data, can expect to achieve reliable results only when facts of case match implicit facts of referenced studies • Method cannot differentiate between differing fact patterns with reliability	• Each factor of the QMDM analysis is subject to peer review and analysis in relationship to facts and circumstances of specific cases
Existence or maintenance of controlling standards (Business Valuation Standards of the ASA and USPAP require that all valuation adjustments be developed and supported)?	• Unsupported judgments can easily be challenged • Unsupported judgments do not meet prevailing business valuation standards	• Individual decisions are understandable and supportable and conform with guidance of BV standards • Reasonableness of conclusions can be tested by reference to restricted stock study
Is method generally accepted in the technical community?	• Since the method has never been defined or described, it is impossible to determine how broadly it is used	• See the exposure listed in the article

* Thompson, TCM 1999-468
** Estate of Marmaduke, TCM 1999-432

relationship to similar investments that have a ready market?

These questions are asked by users of the QMDM in the context of an appraiser's estimate of the freely traded value of the subject enterprise. This is precisely the information an investor would want when making an investment in a nonmarketable security. What more would an investor need to know? What less would be satisfactory?[12]

Analysts use the QMDM to determine the value of illiquid interests of closely held business entities. Decisions are made in the context of, and in relationship to, estimates of freely traded values of the subject closely held business entities. Analysts using the QMDM (or a similar quantitative models):

- Develop required holding period rates of return, estimate the length of expected holding periods, estimate expected value growth and distributions, and reach conclusions.
- Make numerous judgments that can be tested in the context of the facts and circumstances of each case.
- Can test their required returns using the restricted stock studies.[13]
- Can assess the reasonableness of their conclusions by making comparisons with similar investments (based on relative illiquidity) in the public markets and so can readers of their appraisal reports.

Analysts who use the restricted stock studies for typical benchmark analysis can do none of these things. There are better ways to use the information from the studies to help reach valuation conclusions. The QMDM is one such method. Further, quantitative methods such as the QMDM are the only way to resolve the Tax Court's dissatisfaction with benchmark analysis.

Exposure of the QMDM. The exposure of the QMDM is mentioned to address the questions of whether the QMDM has been subjected to peer review and publication, and whether the method is generally accepted in the technical community.[14]

The QMDM was introduced at the Advanced Business Valuation Conference of the American Society of Appraisers in San Diego in 1994. Since then, the QMDM has received considerable exposure, including: numerous speeches at conferences of the American Society of Appraisers and other appraisal organizations and targeted groups, seminars for hands-on training using the QMDM, and many articles in valuation publications, including *Valuation Strategies*.[15]

Skeptics of the QMDM may now be asking: "What about *Weinberg*? Didn't the court in *Weinberg* find the QMDM to be 'not helpful'? What about *Janda*? Didn't the court note 'grave doubts about the reliability of the QMDM'"? Let's talk about *Weinberg* and *Janda* and what they really tell us.[16]

***Weinberg* and the Restricted Stock Studies.** In the July/August 2000 issue of *Valuation Strategies*, I wrote about the *Weinberg* case and attempted to deal with, what was to me, the most disturbing quote in the case.[17] The court stated: "Because the assumptions are not based on hard data and a range of data may be reasonable, we did not find the QMDM helpful *in this case*." (Emphasis added.)

The expert working for the taxpayer in *Weinberg* (Siwicki) concluded that,

based on references to restricted stock studies, the marketability discount in the case should be 35%. The expert working for the IRS (Kursh) concluded that, based on an analysis using the QMDM, the marketability discount should be 15%. The court concluded that the marketability discount was 20%. Absent the unfortunate sentence quoted above, the normal "scoring" for *Weinberg* would have been to conclude that the QMDM "won." In other words, the court's conclusion was much closer to 15% than to 35%. Even more importantly, the court's logic paralleled that of the QMDM.

The court also made a comment indicating that small changes in assumptions in the QMDM could lead to large changes in concluded discounts. I addressed the court's concern in detail in the article that appeared in the July/August 2000 edition of *Valuation Strategies.* The court noted that extending the expected holding period from the 10-15 year range to the 15-20 year range, and increasing the required holding period return by 3% would increase the concluded marketability discount to 30% from 15%. However, what seemed like "small changes" to the court were, in reality, large changes that altered the character of the investment. The result was a large change in the calculated discount.

The conclusion of my review of *Weinberg* is repeated here to provide a framework for further discussion:

> The IRS expert's analysis using the QMDM was helpful to the court. It kept a clear focus on the impact of distribution yield on value. It allowed the Court for the first time (at least in a published decision) to focus on all the critical QMDM factors. It also gave the Court a reason to reach a conclusion of FMV that was far more reasonable than that advanced by the taxpayer's expert. As should be clear from the analysis above, it appears that the IRS expert "won" the battle over the appropriate marketability discount. He "lost" the battle over the appropriate minority interest discount. It is unfortunate that the court's comments seem critical of the QMDM, because the court's conclusion is entirely consistent with its application by the IRS expert.

My initial review of *Weinberg* was so focused on the QMDM that I did not fully appreciate what Judge Whalen said about the development of the marketability discount in the case. The court prefaced its remarks about the marketability discount of both experts with an interesting observation: "*Finally, we do not agree with the marketability discount computed by either expert.*" (Emphasis added.)

For background, this is what the court said about the taxpayer's expert report:

> Mr. Siwicki then applied a 35-percent discount to the above value to account for the lack of marketability of the subject limited partnership interest. He reviewed various market studies on illiquid securities to arrive at the amount of this discount. In particular, he relied on a study by the Securities and Exchange Commission (SEC) that compared sales between 1966 and 1969 of the restricted stock of companies that also had freely tradable, publicly traded counterparts.
>
> After analyzing the various market studies on illiquid securities, Mr. Siwicki concluded that the lack of marketability discount for the subject limited partnership interest was most comparable to the portion of the SEC study that reported a 30-percent discount for restricted securities of nonreporting over-the-counter issuers.
>
> However, Mr. Siwicki believed the subject limited partnership interest warranted a greater discount due to two differences. First, he found that there was no prospect of a public market ever developing for this interest. Second, he found that the restrictions on the sale of this interest were perpetual, as opposed to the restrictions in the studies that lasted only 1 to 3 years. Thus Mr. Siwicki concluded a 35-percent discount represented the lack of marketability of the interest.

The court did not cite the studies that Siwicki relied on. A copy of his report showed that the studies were the same ones discussed in Chapter 2 of *Quantifying Marketability Discounts.*[18] Siwicki cited nine of the ten studies listed in *Quantifying Marketability Discounts*, excluding only the Management Planning Study.

In addition, Siwicki's report cited the Emory studies of pre-IPO transactions. In terms of the QMDM, Siwicki expressed concerns about the potential for a long holding period of indeterminate length by noting "there was little likelihood of an imminent liquidation and distribution of partnership assets." This factor, together with his concern that the partnership's portfolio consisted of an undiversified single asset "argue for a high discount to NAV." Siwicki did not discuss the merits of the single asset, which included a history of full occupancy, the condition of the property, or the partnership's ability, through leveraging, to diversify or to make substantial distributions.

He did note the partnership's low financial leverage as a positive factor. Actually, there was none, since there was more than sufficient cash on hand

12 Recently, I spent several hours in New York with a prominent investor in companies (whole companies and minority interests). During that meeting, I had occasion to describe the logic and workings of the QMDM. His comment: "That's exactly the process we go through in evaluating every investment."

13 "Restricted Stock Studies' Typical Results Do Not Provide 'Benchmark' For Determining Marketability Discounts - But They Do Help!," The E-Law Business Valuation Perspective, Issue 00-09 [http://www.bizval.com/Elaw/elaw0009.html]. This article provides a more extensive analysis of aspects of implied returns than provided above.

14 For a discussion of how little has actually been written about benchmark analysis and how appraisers can use it to develop marketability discounts, see The E-Law Business Valuation Perspective, Issue 00-11, on the subject [http://www.bizval.com/Elaw/elaw0011.html].

15 The QMDM has had enormous and repeated exposure to members of the appraisal profession since it was introduced in 1994. Many practitioners around the country and the world are using it and have purchased my book, *Quantifying Marketabilty Discounts,* (See Note 2, *supra)* as a reference. A new edition of the book and a QMDM CD are planned.

16 See Notes 4 and 5, *supra.*

17 Mercer, "It's Not About Marketability, It's About Minority Interest," 3 Val. Strat. 28 (July/August 2000).

18 See Note 2, *supra.*

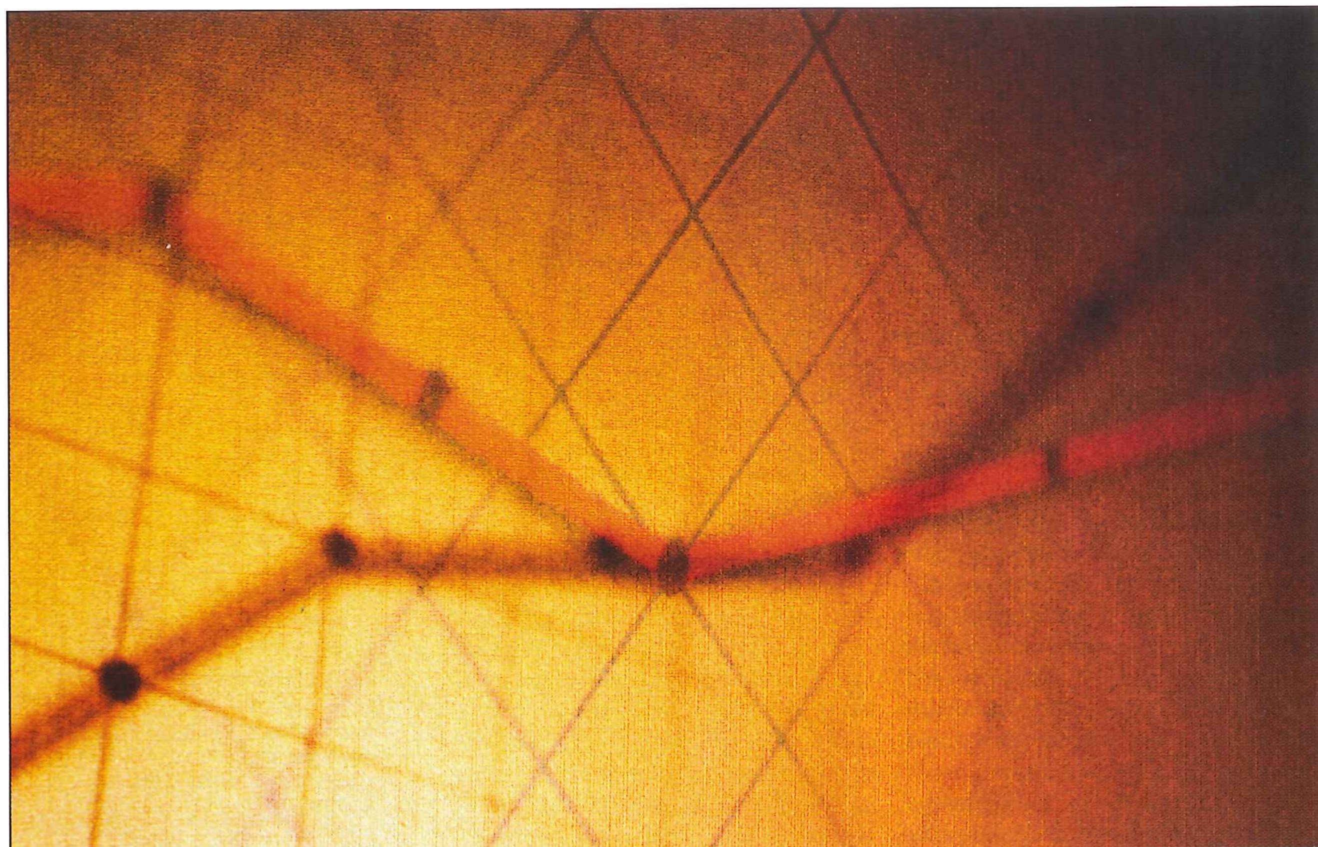
19 "The Market Pricing of Syndicated LPs and the Valuation of FLPs," Trusts & Estates (February 1996).

20 See Note 11, *supra.*

21 See Pratt, Reilly, and Schweihs, *Valuing a Business, The Analysis and Appraisal of Closely Held Companies, 4th ed.* (McGraw-Hill, 2000)

22 See Note 6, *supra.*

23 We have sold nearly 3,000 copies of *Quantifying Marketability Discounts.* The QMDM has been written about in most major valuation publications. We have spoken to hundreds, if not thou-



to pay off the small mortgage. He also mentioned "demonstrated ability to generate cash for distribution" as another positive (i.e., discount-mitigating) factor. These factors, however, when considered in the context of the 35% or so average of the cited studies, did not appear to mitigate his marketability discount.

The yield was 17.7% per year based on his concluded value and a three-year average dividend. That distribution yield is well above the 20%, based on anticipated distributions when the mortgage is paid off in four months! (Any bidders out there?) For perspective, the prime rate in December 1992 was 6% and 30-year Treasuries traded to yield 7.4%. Regarding the yield, he referred to an article in the February 1996 issue of *Trust & Estates*.[19] However, his consideration of the value-enhancing impact of distributions was not "adequate," as shown below.

The court's comments regarding the QMDM have been reported above. Here's what Judge Whalen said about the restricted stock studies:

> Similarly, we disagree with Mr. Siwicki's computation of a marketability discount. Mr. Siwicki arrived at an initial marketability discount, 30 percent, based upon his review of an SEC study of unregistered shares of nonreporting over-the-counter companies [and the other studies discussed above]. He increased the discount by 5 percent to reflect the perpetual restrictions on this interest and the slim prospect of the interest ever being publicly traded. We believe that Mr. Siwicki failed adequately to take into account certain characteristics of the subject limited partnership interest that suggest a decrease in the marketability discount. These factors include consistent dividends, the nature of the underlying assets, and a low degree of financial leverage.

In other words, the court rejected Siwicki's analysis based on reference to the restricted stock studies. The only logical inference of why the court did so is that there was no nexus between the information in the studies and the facts of the case. Clearly, the partnership's long history of paying dividends and its prospects for future dividends were important to the court. This factor was an integral part of the QMDM analysis used by Kursh.

The court also mentions the nature of the underlying assets and low financial leverage. The partnership held a very attractive, fully occupied, well-maintained apartment building, substantial cash assets, and only a small amount of debt that was to be paid off in four months (and cash equal to about twice the debt), significantly increasing cash flow available for distribution. Testimony in the case indicated that the general partner could decide to refinance the property and distribute substantial funds to the limited partners. Kursh considered this in his QMDM analysis. In particular, this was a mitigating factor in his selection of the required rate of return for a long expected holding period.

***Janda* and the Restricted Stock Studies[20].** In *Janda*, Mr. Schneider [IRS' expert] opined to a 20% marketability discount based upon the following factors identified in his report:

1. The asset type held
2. The time horizon until liquidation
3. Distribution of cash flow
4. Earned cash flow (after debt service)
5. Information availability
6. Transfer costs and/or requirements
7. Liquidity factors:

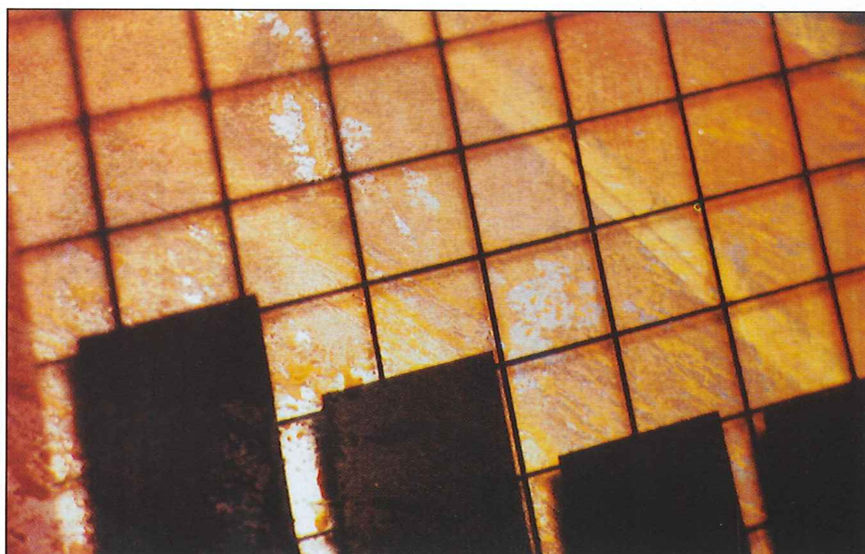
- Is the company large enough to be public?
- Is there a pool of potentially interested buyers?
- Is there a right of first refusal?

Schneider then quoted restricted stock studies and pre-IPO studies,[21] and a few court cases. In other words, Schneider used the usual benchmark studies. He then stated that he believed that "a bank would be a highly marketable business and that the stock would be highly marketable." Based upon this, Schneider concluded that a 20% marketability discount was appropriate.

Echoing *Daubert*,[22] lawyers for the IRS also asserted that "there is no evidence that appraisal professionals generally view the QMDM model as an acceptable method for computing marketability discounts." I do not agree.[23]

The court noted the Service's *Daubert* objection, but neither agreed nor disagreed with it. I have no interpretation regarding the inclusion of the comment in the opinion, but am confident that the QMDM meets the challenges of *Daubert*.[24]

The court in *Janda* thoroughly studied, and it appears, understood the QMDM. While the court did not accept Wahlgren's 65.77% discount, it criticized the assumptions used, not the QMDM. Citing *Estate of Weinberg*,[25] the court noted that "slight variations in the assumptions used in the QMDM model produce dramatic difference in results" and that the "effectiveness of this model therefore depends on the reliability of the data input into the model."



I could not agree more with the second comment. The QMDM is effective when the inputs to the model are reasonable. *Unreasonable inputs produce unreasonable results, just as with a discounted cash flow model, a single period capitalization model, a capitalization model using publicly traded companies, etc.*

However, I disagree that "slight variations in the assumptions" result in "dramatic difference[s]" in the implied marketability discount. The comment in *Weinberg* cannot be substantiated. Having used the QMDM literally thousands of times, I can attest that, as a valuation model, it is less sensitive than single period capitalization models, discounted cash flow models, or most other valuation models. Reasonable combinations of assumptions yield generally stable results. Wahlgren's assumptions can be modified to reconcile with the court's opinion. However, the real issue is: What were the appropriate inputs based on the facts and circumstances? "Slight" changes in assumptions used in the QMDM do not produce "dramatic" differences in the implied marketability discount.

The court questioned whether or not it was proper to use an adjusted historical ROE to imply growth in value. It noted that Wahlgren's build-up of the required holding period return deviated from the method discussed in *Quantifying Marketability Discounts* in that it did not include adjustments for shareholder-specific risks. It did not seem to take issue with the assumed 0% dividend yield or with the ten-year expected holding period.

In summary, the court wrote "we find Wahlgren's application of the QMDM model . . . not helpful in our determination of the marketability discount." Unfortunately, the court went on to say "we have grave doubts about the reliability of the QMDM model to produce reasonable discounts, given the generated discount of over 65%." Wahlgren's analysis was burdened by history; it concluded a value lower than that filed by the taxpayer. The court appeared reluctant to consider any value lower than as filed. Could that fact have influenced the court's analysis? Obviously, it would have been preferable had these comments not been written, but the court's argument is principally with *(Continued on page 46)*

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sands, of professionals in the appraisal community via dozens of speeches and seminars. We have used the model in thousands of appraisals. We have received hundreds of phone calls, emails, and other communications from valuation practitioners outside of Mercer Capital who use the QMDM regularly. We have even been engaged by the IRS to perform valuations on its behalf, using the QMDM (none of which have made it to the point of being a matter of public record).

[24] See "Rule 702, Daubert, Kuhmo Tire Co. and the Development of Marketability Discounts, "The E-Law Business Valuation Perspective, Issue 00-10.

[25] See Note 4, *supra*.

[26] "A Review of Current Business Valuation Textbooks on the Topic of Marketability Discounts," The E-Law Business Valuation Perspective, Issue 00-11.

[27] I e-mailed Professor Bogdanski to confirm my understanding of his comments. He responded: "It is clear that the Court did take these factors into account. I can't tell whether that was at the government's expert's urging, or rather, just something the Court 'discovered' on its own." Obviously, neither of us was there. But the factors were the basic components of Kursh's expert report on this issue and, according to Kursh, of his testimony as well.

[28] FRE Rule 702.

[29] See Note 6, *supra*.

[30] Kuhmo Tire Co., Ltd. v. Carmichael, 526 US 137 (1999).

[31] TCM 1999-254.

[32] TCM 1995-255.

[33] See Note 2, *supra*.

[34] For a more in-depth examination of the comparative issues between benchmark analysis and quantitative, rate of return analysis, see two recent articles: "Rule 702, *Daubert, Kuhmo Tire Co.* and the Development of Marketability Discounts," The E-Law Business Valuation Perspective, Issue 00-10 and "A Review of Current Business Valuation Textbooks on the Topic of Marketability Discounts," The E-Law Business Valuation Perspective, Issue 00-11.

Developing Marketability Discounts

(Continued from page 21) the inputs and the level of discount reached. It would be puzzling, if the court means that 35% to 45% are "reasonable discounts."

In *Janda*, the court characterizes Mr. Schneider's use of benchmark analysis as subjective and irrelevant to the facts of the case.

> ...we believe that he [Mr. Schneider] merely made a subjective judgement as to the marketability discount without considering appropriate comparisons. Mr. Schneider looked at only generalized studies which did not differentiate marketability discounts for particular industries. Further, although he stated that each case should be evaluated in terms of its own facts and circumstances, Mr. Schneider seems to rely on opinions by this court to describe different factual scenarios from the instant cases and generalized statistics regarding marketability discounts previously allowed by the court. Finally, Mr. Schneider has failed to fully explain why he believes that bank stocks are more marketable than other types of stock. We therefore are unable to accept his recommendation.

If a fact-based model like the QMDM generates discounts that are "too large," and benchmark analysis is "irrelevant," is the court looking for a fact-based model that is results-oriented, generating what the court deems "reasonable" discounts? What is reasonable? If benchmark analysis is no good, and a marketability discount should be fact-based, Wahlgren's analysis should win the day hands-down. If his inputs to the model were reasonable, a 65.77% marketability discount would also be reasonable. The court must have disagreed with Wahlgren's interpretation of the facts, and, therefore, also disagreed with the inputs to the QMDM and the resulting marketability discount.

In the end, the court split the baby, and declared a 40% combined minority interest and marketability discount. It did not differentiate as to what portion was attributable to the minority interest discount and what portion was attributable to the marketability discount. However, based on the fact that both appraisers recommended a 10% minority interest discount, it can be inferred that the court's marketability discount was 33.33%. [1 - (1 - 10%) x (1 - 33.33%) = 40%].

Parting Thoughts on *Weinberg* and *Janda*. Appraisers who routinely reference the various restricted stock studies and pre-IPO studies should be concerned about *Weinberg* and *Janda* (as well as *Branson* and *Knight*). The court could not discern how the taxpayer's expert had considered critical aspects of the subject investment. Having reviewed all the various studies, I can state, perhaps with more conviction than most appraisers, that the comparative (benchmark analysis) method used by Siwicki cannot be used to develop realistic marketability discounts. The data available in the studies he referenced simply does not allow for such comparisons.

In *Janda*, the court stated that the expert for the IRS looked at only generalized studies. It made an effort to understand the QMDM but appeared to disagree with the inputs—not the model itself (except for the disturbing comment regarding the magnitude of factors and discounts).

No one has yet, to the best of my knowledge, written a paper, an article, or a chapter in a book that explains how an appraiser can make comparisons with information from the restricted stock or pre-IPO studies and develop reasonable and realistic marketability discounts. The best advice most textbooks (other than *Quantifying Marketability Discounts*) offer is that appraisers must exercise "significant judgment" in the process.[26] Judge Whalen was obviously not convinced by the required judgments in *Weinberg*. Neither was Judge Parr in *Branson*.

Remember, the court's concluded marketability discount of 20% in *Weinberg* fell squarely within the range of judgments offered by Kursh in his analysis using the QMDM. This fact was noted by Professor Bogdanski:"

> And *Estate of Weinberg* v. *Commissioner* saw the court adopting the work of a taxpayer's expert [typo, it was the expert for the IRS] who quantified the DLOM [discount for lack of marketability] based in part on consideration of the subject real estate partnership's "consistent dividends, the nature of the underlying assets, and a low degree of financial leverage."[27]

Kursh focused on the factors considered important by the court and his 15% conclusion was within 5% of that concluded by the court. I call that *confirmation* since the court was focused on the same factors analyzed by Kursh. Siwicki did not focus on the factors the court thought essential and his marketability discount analysis was rejected. It really is just about that simple.

Admissibility of Evidence

If this article appears to be chiding some business appraisers, it has not been misinterpreted. As seen above and below, the Tax Court is increasingly doing the same thing. It is hard to understand many business appraisers' lingering desire to ignore basic financial theory in the interpretation of restricted stock studies and in the application of their market evidence to develop marketability discounts for private business interests. An examination of Rule 702 of the Federal Rules of Evidence as well as a few court cases addressing the admissibility of evidence will show why the trend towards a quantitative, rate-of-return analysis will continue.

Rule 702. Rule 702 of the Federal Rules of Evidence states the following.

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise if, (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.[28]

Merely comparing any evidence regarding a closely held business interest to the averages of studies for which the appraiser has no knowledge of the underlying transactions should fail all three tests.

***Daubert* and *Kuhmo Tire*.** In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, the Supreme Court noted several factors that might be considered by trial judges when faced with a proffer of expert (scientific) testimony[29]. Several factors were mentioned that can assist triers of fact in determining the admissibility of evidence under Rule 702, including:

- Whether the theory or technique in question can be (and has been) tested.
- Whether it has been subjected to peer review and publication.
- The known or potential error rate of the method or technique.
- The existence and maintenance of standards controlling its operation.
- The underlying question: Is the method generally accepted in the technical community?

In *Kuhmo Tire Co., Ltd. v. Carmichael*, the Supreme Court held that the *Daubert* factors may apply to the testimony of "engineers and other experts who are not scientists."[30] Presumably, this categorization could include business appraisal experts.

***Gross*.** Business appraisers who perform tax-related appraisals should read *Gross*.[31] In *Gross*, counsel for the taxpayer subjected the expert for the IRS to a "*Daubert* challenge." The challenge related to an alleged violation of business valuation standards when that expert did not tax-effect the discount rate applicable to an S corporation's earnings. The court correctly rejected the challenge in that case. If the taxpayer made any argument, it should have been based on financial and economic logic, rather than on a so-called "standards violation."

Whether or not so-called "*Daubert* challenges" are successful in having experts' opinions excluded, the information conveyed in the course of the challenges will either help or hurt the weight applied by triers of facts to particular expert opinions.

Daubert Factors: Benchmark Analysis vs. QMDM

It is now appropriate to examine the benchmark analysis and quantitative, rate-of-return analysis in light of the *Daubert* factors enumerated above. Judge Laro advanced a form of benchmark analysis in *Mandelbaum*.[32] Chapter 4 of *Quantifying Marketability Discounts* includes an in-depth review of *Mandelbaum* that can be summarized as follows: "Judge Laro's *Mandelbaum* analysis goes further than most appraisers in forcing a specific consideration of several factors that are clearly important in marketability discount determinations." [33]

The analysis, however, does not take into account the ability to quantify the magnitude of the impact of these factors (often referred to as the "*Mandelbaum* factors") on the marketability discount. As a result, the *Mandelbaum* benchmark analysis, like that used in *Weinberg*, *Branson*, and the other cases cited above, leaves the appraiser in the position of making judgments that are unsupportable without the use of quantitative, rate of return analysis.

What does this discussion mean in the context of Rule 702, *Daubert*, and *Kuhmo Tire?* Exhibit 1 compares traditional benchmark analysis with the QMDM in the context of the *Daubert* factors.[34]

It should now be clear that the use of a quantitative, rate-of-return model such as the QMDM is the only way an appraiser can withstand a *Daubert* challenge regarding the development of the marketability discount. Time will tell whether the courts will embrace this type of methodology.

Conclusion

The Tax Court's recent rejections of benchmark analysis using the restricted stock and pre-IPO studies as a basis for marketability discounts mark the beginning of the end for this type of thinking. Appraisers, instead, should embrace basic financial theory that leads them to seek a quantitative analysis comparable in nature to the quantitative analysis used in developing appraisals at the marketable minority interest or controlling interest levels. In other words, it is time for quantitative, rate-of-return analysis to replace benchmark analysis as the predominant method for developing marketability discounts. ●

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Marketability Discount Analysis at a Fork in the Road

by Z. Christopher Mercer, ASA, CFA and Travis W. Harms, CPA, CFA

"...I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I-
I took the one less traveled by,
And that has made all the difference."
—Robert Frost, *The Road Not Taken*

Introduction: An Industry at a Fork in the Road

The marketability discount, referred to by some appraisers as the discount for lack of marketability, is the largest single adjustment made in most minority interest appraisals. It is defined in the *Business Valuation Standards* of the American Society of Appraisers as "an amount or percentage deducted from the value of an ownership interest to reflect the relative inability to quickly convert property to cash."[1] Appropriately, the standards do not provide advice regarding *how* to determine what the appropriate *amount or percentage* of the discount should be in any particular case.

There currently are two broad methods for developing marketability discounts:

- Benchmark analysis, which uses information, normally average discounts, from the various restricted stock studies to "benchmark" what the marketability discount for a particular illiquid minority interest of a private company should be.
- Quantitative, rate of return methods, which apply discounted cash flow analysis to the expected benefits of particular illiquid interests of privately owned enterprises to determine the marketability discounts most appropriate for those interests.

We suggest that the business appraisal profession is at a critical juncture, or fork in the road, with respect to developing marketability discounts, and with respect to these two broad methods.

This article begins by providing the logical basis for the marketability discount, which is applied to marketable minority interest value indications to determine the value of nonmarketable, minority interests of private enterprises. Logically, we learn that an illiquid interest normally receives less than all of the enterprise cash flows and bears risks that are incremental to the risks of the enterprise. As a result, the illiquid interest is virtually always worth less than the liquid security.

Next, the article briefly examines the evolution of practice in developing marketability discounts and concludes that benchmark analysis is falling short as a method while quantitative methods are emerging.

The article then examines the restricted stock studies in light of current valuation theory to conclude that the studies provide valid evidence of the existence of incremental holding period risks (relative to freely traded shares) as well as the magnitude of those risks. The article also focuses on hypothetical willing sellers of restricted securities, perhaps for the first time.

After reviewing the evidence of restricted stock studies and valuation, the article examines emerging quantitative methods for estimating marketability discounts. It shows that such methods can capture, in addition to the incremental risk evidence of the restricted stock studies, the impact of differences in cash flow (to the interest as opposed to the enterprise), as well as that of the holding period, or time.

Finally, the article addresses the three basic criticisms that have emerged regarding quantitative marketability discount analysis. It then concludes that business appraisers must embrace quantitative analysis in order to develop marketability discounts with credibility.

The Logical Basis for the Marketability Discount

There is almost unanimous agreement in the valuation profession that the value of a business, at the marketable minority level, where most valuations originate, is the present value of the expected future benefits to be generated by the business, discounted to the present at an appropriate, risk-adjusted discount rate. In other words, the value of a business depends on the expected cash flows of the business (including their expected future growth), and the risk of generating those cash flows (manifested in the discount rate).

Likewise, a nonmarketable minority interest in a business is a financial asset whose value must derive from the same factors determining the value of the business: expected cash flows (including their expected future growth), and the risk of generating those cash flows (as manifested in the discount rate).

- The expected cash flows to the holder of a nonmarketable minority business interest have as their source the cash flows generated by the business. The cash flows received by the nonmarketable minority investor may be less than, or equal to, but may be no greater than the cash flows generated by the business.

- Since the expected cash flows generated by the business are the source of the nonmarketable minority investor's cash flows, the risks faced by the nonmarketable minority investor encompass the risk of the business generating those cash flows, as well as incremental risks arising from the illiquidity of the investment. Therefore, the embodiment of risk for valuation purposes, the relevant discount rate, must for nonmarketable minority investors be greater than or equal to, but cannot be less than, the discount rate applicable to the valuation of the business.
- From the standpoint of the nonmarketable minority investor, this confluence of circumstances (he may not receive all the cash flows of the business, and he faces additional risks not borne by the business) leads to the inevitable conclusion that his nonmarketable interest is worth less than (or possibly the same as) his pro rata share of the business. The difference in value is the "amount or percentage" from the definition of the marketability discount quoted above.
- The preceding discussion should make clear the logical and theoretical basis for the existence of a disparity between the value of illiquid business interests and the value of the corresponding business. Without any reference to empirical observation, the fact of marketability discounts is undeniable. Given any two investments, if it is known that one has both less cash flow (and corresponding growth) expectations *and* greater risk, its value will be lower than its counterpart.

Benchmark Analysis Falls Short as Quantitative Methods Emerge

Based on our experience, benchmark analysis using restricted stock studies to develop marketability discounts has undergone at least four separate, but sometimes overlapping stages. And a fifth stage, in which analysts develop marketability discounts using the results of restricted stock studies in the context of quantitative, rate of return analysis, is well underway.

1. *The 35% Stage.* In the 1970s and 1980s, many business appraisers seemed to believe that all marketability discounts should be about 35%, or whatever the average of the studies they were examining indicated. There were obvious problems with this position. Based on informal polls of appraisers at various conferences, it is clear that during this period, few appraisers had actually read the restricted stock studies they were citing. Most appraisers tended to rely on summary discussions of the studies found in the first two issues of Pratt's *Valuing a Business*.[2]
2. *The 35% to 45%, Plus or Minus, Stage.* By the late 1980s, many appraisers began to try to "benchmark" their marketability discounts by making comparisons, plus or minus, based on factors that seemed to influence restricted stock discounts like company size and dividends. This led to a period when marketability discounts tended to be 35% to 45%, plus or minus a bit, and usually, just a little bit. The 35% came from the restricted stock studies summarized in Exhibit 1. The 45% came from the pre-IPO studies prepared by John Emory and Willamette Management Associates.[3] The 45% figure from the pre-IPO study averages was often used to justify higher marketability discounts than one could infer from the restricted stock averages. This stage marked an advance from "all marketability discounts are 35%," but, had problems of its own.
3. *Mandelbaum Benchmark Analysis Stage.* Benchmark analysis came into its own in 1995 when, in *Mandelbaum*, Judge Laro correlated much of what appraisers had been doing into a more formal analysis.[4] The *Mandelbaum*-type analysis had nine factors. The opinion concluded, based on the facts and circumstances of the case, that each factor yielded a component factor that was average, above-average, or below-average relative to a benchmark range of 35% to 45%.[5] Many appraisers adopted this type of analysis, some adding other factors for consideration. The problem remains one of being able to differentiate the facts and circumstances of a private investment relative to the information contained in the averages.
4. *The "More Data" Stage.* By the early 1990s, a few appraisers acknowledged the issues with standard benchmark analysis, and began to conduct additional restricted stock studies where more detailed comparative information was available. Until 1997, none of these studies had been published. Management Planning, Inc. permitted the publication of that firm's restricted stock study in *Quantifying Marketability Discounts*.[6] Other firms elected to withhold the details of their studies from publication, and only recently have there been new restricted stock studies published in the appraisal literature. The "more data" believers think that by comparing a subject company with limited data from 49 transactions, as with the Management Planning Study, or 230 transactions, as with the FMV Opinions study recently discussed in an article in *Valuation Strategies*, will provide sufficient enlightenment to develop credible marketability discounts.[7] The problem with "more data" is that

even with more, there is still so little. While few appraisers have thought about benchmark analysis in these terms, benchmark analysis is a form of guideline company analysis.[8]

Many appraisers find that despite the breadth and scope of the public equity securities markets, they are unable to find even a single, adequately comparable guideline company against which to "benchmark" pricing of many of the privately owned enterprises they are valuing. In other words, with a universe of more than 12,000 public companies about which almost unlimited information is available, and available today, appraisers still cannot find reasonable guideline evidence for many, if not most enterprises that are valued. How can we expect to find "truth" for the thousands of illiquid, minority interests of those enterprises that we are valuing from 49 or even 230 transactions which occurred over a period of many years, and for which only very limited information is available?[9] Good question, and the Tax Court asked it recently in Knight:[10]

> Conklin cited seven studies of sales of restricted stocks from 1969 to 1984 to support his estimate that a 30 percent discount for lack of marketability applied. He used a table summarizing initial public offerings of common stock from 1985 to 1993. *However, he did not show that the companies in the studies or the table were comparable to the partnership*, or explain how he used this data to estimate the discount for lack of marketability....[emphasis added]

In at least three other recent cases of the Tax Court, *Branson, Weinberg,* and *Janda*, the use of benchmark analysis has been severely criticized.[11] The use of benchmark analysis is in serious trouble. And the credibility of appraisers using this method of analysis is also being questioned. Clearly, something has to change. This was recognized by a noted legal commentator (from Louisiana) in recent comments regarding *Janda*; which also references the QMDM:[12]

> ....we found the discussion of the lack of marketability discount conflicting, unfortunate, and unhelpful. On the one hand, it has become clear that the courts want a more scientific approach to *all* facets of valuation, particularly the determination of the lack of marketability discounts.
>
> It is equally clear (at least to this author) that the use of and reliance upon Benchmark Analysis for determining the lack of marketability discount is as medieval, dangerous, and outdated as leeching or examining the entrails of a chicken. Finally a logical and scientific method is available that takes into consideration all of the key valuation facets *as applied to the subject company*, and the appraisal wizards of the Tax Court immediately begin to shoot at it instead of nurturing it along [i.e., the QMDM] . . .

Mr. Hood's comments provide an appropriate segue to Stage 5 of the evolution of marketability discounts.

5. *Quantitative (Rate of Return) Analysis Stage is Emerging.* The use of quantitative analysis to develop marketability discounts has been growing since the publication of *Quantifying Marketability Discounts* in 1997. The Quantitative Marketability Discount Model (QMDM) was formally introduced in that book. Prior to that, there were isolated instances of the use of quantitative analysis. Quantitative analyses like the QMDM consider the *rate of return* information provided by restricted stock transactions (and studies) over relevant holding periods (two years under Rule 144 prior to April 1997, and one year since then). Quantitative analysis therefore estimates the value of illiquid interests based on the expectation of benefits (distributions or dividends and proceeds of ultimate sales) over relevant expected holding periods using appropriate discount rates to equate with present values. The process of doing this analysis, in the context of valuing a business at the marketable minority interest level, determines the applicable marketability discount.

As will be clear from the remainder of this article, we believe that Stage 5 will prevail as the predominant methodology for developing marketability discounts. We are not alone in this assessment. Referring to an article written by Mercer in the March/April 2001 issue of *Valuation Strategies*,[13] Professor John A. Bogdanski, the editor of the publication, noted in his column:

> Next our business valuation columnist, Chris Mercer, makes an impassioned plea – a convincing one, in our view – for a rate of return analysis in setting discounts for lack of marketability (DLOM). As he points out, traditional discounting methods based on older studies are falling short in courtroom battles over the size of the DLOM. He suggests that the resulting void be filled by an approach

that focuses on the time value of money that an illiquid investment sacrifices. Although his technique has not been explicitly blessed by the judiciary, Mercer makes a case that stands a good chance of winning out in the end.

The remainder of the article will explain why we believe Professor Bogdanski is correct in his observation.

Restricted Stock Studies: Capturing Risk as an Element of Marketability Discounts

The various restricted stock studies have been cited as evidence of marketability discounts for years. Such references are the foundation of benchmark analysis. However, no one has yet shown how to develop a credible marketability discount using benchmark analysis.[14] Everyone is finally agreeing that the average of a restricted stock study tells us little about the appropriate marketability discounts for the varying fact patterns presented by minority interests of private companies. So what can the restricted stocks tell us about marketability discounts, and how can that information be used by appraisers? We will see that the basis for restricted stock discounts is the *additional risk* borne by the purchaser of restricted stocks relative to purchasers of shares alike in every other respect save illiquidity under Rule 144.

Restricted stocks of public companies are issued subject to the applicable provisions of Rule 144 of the Securities and Exchange Commission. Prior to April 1997, the effective period of restriction under Rule 144 for most investors was two years. Subsequent to that date, the Rule 144 holding period restriction was reduced to one year. We need these facts to proceed.

Basic Present Value Background

And we need a refresher on the basic present value concepts of valuation. This section examines the (simplified) valuation mathematics of publicly traded securities assuming both two year and one year holding periods. The following table provides assumptions for the publicly traded security that will be our proxy for how the public markets work. Once we can "value" a public company, we can examine the restricted stock evidence to ascertain what happens to value to cause restricted shares to sell, on average, at prices less than their freely traded counterpart shares.

Assumptions for Public Company (Marketable Minority)	Enterprise Level	
Assumed Discount Rate of Public Co.	*16.0%*	R_{mm}
Expected Growth in CF (Earnings) of Public Co.	*10.0%*	G_e
Reinvestment Rate for Interim Cash Flows	*16.0%*	**Equals R_{mm}**
Expected Interim Dividends	*$0.00*	
Next Year's Expected CF (Earnings) Per Share	*$1.00*	
Expected Holding Period (under Rule 144)	1 or 2 Years	

Given the assumptions above, we will "value" the public company in three ways. Each valuation should be interpreted as reflecting the marketable minority interest level of value.

1. *The Gordon Model.* In Method 1, we use the familiar Gordon Model, which capitalizes next period's cash flow at the applicable equity discount rate less expected growth *of earnings (cash flow)*.
2. *DCF.* In Method 2, we use the discounted cash flow model to value expected interim cash flows and the Gordon Model to provide the terminal value indication.
3. *Discounting Expected Future Values.* In Method 3, we estimate the expected future value at the end of one and two year holding periods, and then discount those values back to the present.

In all three cases, we will assume that no dividends are paid to shareholders. The analysis of this article can be expanded to incorporate consideration of dividends, but for simplicity, clarity and focus, we will only consider non-dividend paying enterprises.

The "valuations" should provide the same result. However, looking at all three methods helps focus attention on how the public markets work.

Method 1: the Gordon Model

The first value indication for the public company is $16.67 per share based on the application of the Gor-

Method 1

I. Gordon Model Value Today	***Rule 144 = 2 Years***				***Rule 144 = 1 Year***		
Time Period in Years	0	1	2	3	0	1	2
Expected Cash Flows Per Share	$0.909	$1.000	$1.100	$1.210	$0.909	$1.000	$1.100
Value Per Share Today *V = Next Year CF / (R - g)*	$16.667				$16.667		

don Model and the assumptions above. We should note three very important assumptions of the Gordon Model itself.

- The expected growth rate of earnings is assumed to be a constant growth rate into perpetuity.
- All enterprise cash flows are assumed to be reinvested in the enterprise (or otherwise available for reinvestment) at the discount rate.
- Cash flows are received at the end of each period.

Method 2: Discounted Cash Flow

The relevance of these assumptions is seen as we examine the second method, the discounted cash flow method. We will use discrete forecast periods of one and two years, respectively, rather than the more familiar five years or so to keep our discussion framed in the context of Rule 144 securities, which will be introduced later.

In the DCF "valuations," the expected cash flows are discounted to the present at the assumed equity discount rate. The derived values under the two-year and one-year holding periods are identical at $16.67 per share, precisely the same as with the income capitalization using the Gordon Model, which is to be expected. The model shows a purchaser today who holds this security for two years. During this period he (constructively) receives the projected interim cash flows (and reinvests them at the discount rate), then sells the security at the end of two years (or one) at the expected market price (i.e., the terminal value). This investor would achieve a 16.0% rate of return over the period, which is precisely identical to the public security's equity discount rate, or R_{mm}. This is confirmed by the internal rate of return calculation summarized at the bottom of the DCF table.

Method 2

II. Present Value of CF's (DCF)	*Rule 144 = 2 Years*				*Rule 144 = 1 Year*		
Time Period in Years	0	1	2	3	0	1	2
Expected Cash Flows Per Share	$0.909	$1.000	$1.100	$1.210	$0.909	$1.000	$1.100
Expected Terminal Value (TV)			$20.167			$18.333	
Present Value of Interim CF		$0.862	$0.817			$0.862	
Present Value of TV			$14.987			$15.805	
Implied Value of Stock Today *(Sum of PV's of Interim CF and TV*	$16.667				$16.667		
Internal Rate of Return If Hold for Two Years	16.0% equals R_{mm}				16.0% equals R_{mm}		
Based on Expected CF and TV	*($16.667)* Outflow	*$1.000* CF_1	*$21.267* CF_2+TV		*($16.667)* Outflow	*$19.333* CF_1 + TV	

Method 3: Present Value of Future Values

Finally, we want to examine the present value of the future benefits expected to be achieved at the end of the holding period. The third "valuation" looks at future values to be derived from the reinvested interim cash flows and the terminal value.

Not surprisingly, we see that the value today of the cash flows reinvested in the enterprise for the relevant holding periods, plus the terminal value, is equal to $16.67 per share, the same as in the other two "valuations." This third method illustrates that the *expected growth rate in value* of the investment (from today's price of $16.67 per share to an expected future value of $22.43 per share two years out (or $19.33 per share one year out) is precisely 16.0%, or the assumed equity discount rate. Note that the base level *expected growth rate of earnings* is only 10.0% in the example. In order for *value* to grow more rapidly, the cash flows have to be reinvested in the enterprise. In order for value growth to be equal to the equity discount rate, the reinvestment rate for interim cash flows must be equal to the discount rate.

If we do not have the concepts illustrated by Methods 1, 2 and 3 clearly in mind, we cannot understand the nature of restricted stock discounts and their implications in the valuation of illiquid minority interests.

It should be clear that if the reinvestment rate on interim cash flows is less than the equity discount rate, then the present value of interim cash flows will be lower than if reinvestment occurs at the discount rate. While not reflected in this example, lower than optimal reinvestment rates, which are often found in private companies, can have a material impact on the present value of expected future benefits, even though the marketable minority interest value is not affected by this future assumption. This is true because the marketable minority value *assumes* that cash flows are either distributed or reinvested at the discount rate! We will examine the impact on value of relaxing this assumption below.

Method 3

III. Expected Future Values	Rule 144 = 2 Years				Rule 144 = 1 Year		
Time Period in Years	0	1	2	3	0	1	2
Expected Cash Flows Per Share	$0.909	$1.000	$1.100	$1.210	$0.909	$1.000	$1.100
Interim Cash Flows		$1.000	$1.100			$1.000	
Prior Years' Reinvestment			$1.160				
Sum of Reinvested Interim Cash Flows			$2.260				
Terminal Value			$20.167			$18.333	
Ending Reinvestment Value			$2.260			$1.000	
Ending Expected Future Value			$22.427			$19.333	
Present Value at Discount Rate	$16.667				$16.667		
Expected Growth Rate in Value			16.0% equals R_{mm}			16.0% equals R_{mm}	

Observed Restricted Stock Discounts

In the context of publicly traded securities, the expected growth in value is equal to the equity discount rate. If it were not so, the public market would reprice the securities until this equivalency is reestablished (assuming some form of efficient markets). We make this observation as a prelude to a discussion of restricted securities.

If a public company issues restricted securities at a discount from the observed market price (in the present case, at less than $16.67 per share), a *restricted stock discount* will be observed as in Equation 1:

Equation 1
Restricted Stock Discount = 1 –
(Transaction Price / Market Price)

For illustration purposes, assume that a restricted stock transaction occurred with our subject company at $11.67 per share. The restricted stock discount would be 30%:

Restricted Stock Discount = 1 – ($11.67 per share / $16.67 per share) = 30%

This is familiar territory for most appraisers. What are not so familiar are the *sources* of restricted stock discounts. We know that public companies have issued restricted stock at prices, on average, lower than their then-current market prices.[15]

In the context of the Gordon Model and basic present value concepts, the value of the restricted stock of a public company, V_{rs} (for restricted stock, nonmarketable for a specified period), can be characterized symbolically as Equation 2:

Equation 2: Restricted Stock Formula

$$V_{rs} = V_{mm} \left(\frac{(1 + R_{mm})^{HP}}{(1 + (R_{mm} + HPP))^{HP}} \right)$$

The value of a restricted stock is a function of:

- The marketable minority (or freely traded) value of the enterprise, V_{mm}
- *G_v for the public company is equal to R_{mm}* (for the reasons discussed above). The equivalency relationship between the expected returns of the freely traded stock, represented by the numerator in the equation above, and the expected growth in value is true, but only in the case of a public company (or a private company with optimal reinvestment characteristics).
- *The required return of investors in the particular restricted stock, represented by the denominator.* But the denominator is identical to the numerator except for HPP, the postulated holding period premium. So in the final analysis, the restricted stock discount (determined by the difference between V_{mm} and V_{rs}) is a function of the investors' holding period premium, or HPP, or their assessment of the incremental risks associated with the period of illiquidity relative to the freely traded alternative investment.

It is clear from Equation 2 that there is no restricted stock discount for a given holding period unless a required holding period premium (HPP) is demanded by investors. In other words, if HPP is equal to zero, the value of the restricted stock determined by Equation 2 would be equal to the marketable minority value. This is true because the numerator and denominator of the factor adjusting value from V_{mm} to V_{rs} are equal, and the factor becomes 1.0. *If there is no perceived incremental risk, there is no reason for discounts in restricted stock transactions.* The evidence of restricted stock discounts, then, affirms the existence of HPP.

It should also be clear from the definition of restricted stock discounts above and the symbolic representation of V_{rs} that the restricted stock discount is a function of the very same factors for any given expected holding

period. For any given restricted stock transaction, we know V_{mm} because it is observable in the market. Applying the CAPM, or a similar model, we can estimate R_{mm}, or the enterprise discount rate, and we know the expected holding period based on the requirements of Rule 144. What we do not know is HPP. But as the equations indicate, if we know V_{mm} and V_{rs}, and can estimate R_{mm}, we can solve Equation 2 for the implied HPP. Said another way: *The restricted stock discount is a function of the holding period premium!*

We can use Equation 2, which estimates the expected future value at the end of the holding period HP, to calculate HPP for any given restricted stock discount. We can also use the equation to estimate the implied restricted stock discount for any assumed holding period premium. These calculations are made in Table 1 for a range of assumed holding period premiums for the hypothetical public company we have been discussing throughout this article (i.e., valued at $16.67 per share today with an expected two year holding period under old Rule 144).

Table 1

Two Year Rule 144 Holding Period

Future Value (at end of holding period)	**$22.43**
Assumed period of illiquidity under Rule	**2.0**
Assumed investment horizon (years)	**4.0**

A	B	C	D	E	F
				If assume longer investment horizon	
(HPP) Assumed Holding Period Premiums	**(R_{RS}) Investor's Holding Period 2-Year Return**	**(V_{rs}) Value at Investor's HPR**	**Implied Restricted Stock Discounts**	**Investor's Implied Horizon Return**	**Investor's Implied Horizon HPP**
0.0%	16.0%	$16.667	0.0%	16.0%	
2.0%	18.0%	$16.106	3.4%	17.0%	1.0%
4.0%	20.0%	$15.574	6.6%	18.0%	2.0%
6.0%	22.0%	$15.068	9.6%	19.0%	3.0%
8.0%	24.0%	$14.586	12.5%	19.9%	3.9%
10.0%	26.0%	$14.126	15.2%	20.9%	4.9%
12.0%	28.0%	$13.688	17.9%	21.9%	5.9%
14.0%	30.0%	$13.270	**20.4%**	22.8%	6.8%
16.0%	32.0%	$12.871	**22.8%**	23.7%	7.7%
18.0%	34.0%	$12.490	**25.1%**	24.7%	8.7%
20.0%	36.0%	$12.125	**27.2%**	25.6%	9.6%
22.0%	38.0%	$11.776	29.3%	26.5%	10.5%
24.0%	40.0%	$11.442	**31.3%**	27.4%	11.4%
26.0%	42.0%	$11.122	**33.3%**	28.3%	12.3%
28.0%	44.0%	$10.815	**35.1%**	29.2%	13.2%
30.0%	46.0%	$10.521	36.9%	30.1%	14.1%

Given a base discount rate of 16.0%, Column A provides a range of assumed holding period premiums (HPP). Adding the assumed HPP to the base equity discount rate of 16.0% yields the investors' required holding period return (R_{RS}) in Column B. Using Equation 2 above, we calculate V_{rs} in Column C. Given V_{rs}, we calculate the implied restricted stock discounts (using Equation 1) in Column D. Column E calculates the investors' implied horizon return assuming that the investment horizon was really four years, rather than the two year period of Rule 144 restriction. Finally, Column F calculates the investors' implied holding period premiums under the longer assumed holding periods. We can make several enlightening observations from the results of Table 1:

- Focus first on the highlighted range of restricted stock discounts in the range of 31% to 35% at the bottom of the table in Column D. For a two-year expected

holding period, restricted stock discounts in this range suggest holding period premiums to R_{mm} in the range of 24% to 28% (in Column A). They also suggest implied returns, if expected growth in value (R_{mm} of 16%) is achieved, in the range of 40% to 44% (Column B). The average restricted stock discounts for the various studies prior to 1990 were in the range of 35% (see Exhibit 1). So the implied average HPPs (and holding period returns) for these transactions were substantial – greater than almost anyone would imagine. But the math speaks for itself.

- Look now at the higher shaded area of restricted stock discounts of 20% to 27% in Column D. This is the approximate average restricted stock discount for studies focusing on transactions in the early 1990's (see Exhibit 1) when numerous observers noted that discounts were falling (primarily based on institutional encouragement and regulation modifications by the Securities and Exchange Commission, as well as greater market liquidity in general). The implied holding period premiums in this group of calculations are considerably lower than in the prior set, on the order of 14% to 20% (Column A), with implied returns of 30% to 36% for the two year holding period (in Column B, assuming liquidity at exactly two years at the expected future value).
- If we assume that the typical investor in restricted stocks made decisions based on the fact that the actual holding period could be longer than two years, say three to five years, we find that the implied HPPs and returns are somewhat lower. Columns E and F in Table 1 make the analogous calculations for a four-year holding period.[16] The point of this analysis is that extended holding periods dampen the implied required returns for a given restricted stock discount.

The concepts covered in Table 1 are addressed in Chapter 8 of *Quantifying Marketability Discounts, Revised Reprint* and the original text. This analysis elaborates on those discussions and clarifies the source of the investors' returns.

At this point, it should be clear that restricted stock discounts of public companies are caused by risk factors related to the period of restriction, or the holding period premium (HPP). As a prelude to the further analysis, it should also now be clear that for a given restricted stock transaction (or study average), we can estimate the implied HPP (or average HPP) using Equation 2.

Restricted Stock Discounts: The Viewpoint of Hypothetical Willing Sellers (Issuers)

An important question should be asked at this point. Were the issuers of the restricted stocks in the transactions leading to the well-known averages fiduciarily irresponsible to negotiate such deep discounts to the market price? In other words, why would they sell stock at such deep discounts to their market prices (on average)?

Table 2 provides an analysis from the perspective of issuing firms by calculating the implied cost of equity capital based on each hypothetical transaction in the table.[17] We know that for our subject public company, the equity discount rate is 16.0% – so if there is no observed restricted stock (marketability) discount in an issuance, the cost of equity, or R_{mm}, is equal to 16%.

Table 2

G	H	I	J
(from D)	Issuer Perspective		
Transaction Restricted Stock Discount	Proceeds from Issuance	Firm's Cost of Equity for Transaction	Incremental Cost of Equity
0.0%	$16.67	16.00%	= Rmm
3.4%	$16.11	16.21%	0.21%
6.6%	$15.57	16.42%	0.42%
9.6%	$15.07	16.64%	0.64%
12.5%	$14.59	16.86%	0.86%
15.2%	$14.13	17.08%	1.08%
17.9%	$13.69	17.31%	1.31%
20.4%	$13.27	17.54%	1.54%
22.8%	$12.87	17.77%	1.77%
25.1%	$12.49	18.01%	2.01%
27.2%	$12.13	18.25%	2.25%
29.3%	$11.78	18.49%	2.49%
31.3%	$11.44	18.74%	2.74%
33.3%	$11.12	18.99%	2.99%
35.1%	$10.82	19.25%	3.25%
36.9%	$10.52	19.50%	3.50%

Column I in Table 2 calculates the cost of equity capital based on each hypothetical transaction. For restricted stock discounts in the range of 30% to 35% (Column G), the cost of equity is raised from 16% (R_{mm}) to the range of 19% (Column I), or some 300 basis points (Column J). For restricted stock discounts in the range of 20% to 25% (Column G), the cost of

equity is raised to the 17.5% to 18.3% range (Column I), or on the order of 150-225 basis points (Column J). Investors in the restricted stocks as well as in the public markets undoubtedly viewed this cost in the context of the specific investment opportunities facing the public companies.[18] The managements and boards of the issuing companies were likely not irresponsible to sell stock at such prices, if they had attractive investment opportunities for the new capital.

Rule 144 Holding Period Reduced to One Year

Our analysis thus far has focused on the two-year Rule 144 holding period existing before April 1997. Exhibit 2 provides the same calculations found in Tables 1 and 2 for a one-year period of restriction.

Not surprisingly, the implied restricted stock discounts for a given level of HPP are lower than for the two-year calculations. There is less time (than with a two year holding period) for the price-dampening impact of the increment to the discount rate to have an effect.

Looking at the shaded areas of Exhibit 2, we can observe the following:

- In the range of one-year restricted stock discounts of 9% to 13% found in the CFAI study, the implied holding period premiums range from 12% to 18%, or modestly lower than found in the upper shaded area of Table 1. Shortening the holding period may be having a dampening effect on HPP.
- In this same range of restricted stock discounts, the HPPs for an extended holding period of four years are in the range of 3% to 4%, or considerably lower than the 7% to 10% range found in Table 1 with a two year period of restriction.
- The cost of equity capital for issuers is substantially lower with a one-year holding period. This is precisely the result desired by the SEC with the reduction of the Rule 144 holding period to one year effective April 1997.[19]

It is clear that the SEC realized the underlying mathematics of restricted stock pricing. A reduction in the cost of equity was the expected result of a lowering of risk – i.e., a reduction of the expected holding period. The end result may have been a small reduction in the holding period premium, on average, as well.

Quantitative Analysis: Capturing Risk, Cash Flow and Time Differentials as Elements of the Marketability Discount

We have observed the evidence provided by the restricted stock studies regarding the incremental risks associated with lack of marketability. However, it is important to note that investors in the nonmarketable business interests of many private companies are also subject to the risk of receiving the benefit of less than all cash flows generated by the business.[20] As will be shown below, this second component of marketability discounts can be critical in many valuation situations. *Since the restricted stock studies deal only with public companies, the evidence provided by the studies does not reflect the cash flow component of marketability discounts. As a result, an analyst relying solely on benchmark analysis has no basis for determining the adverse value impact on minority shares of not benefiting from all the cash flows of a business.*

Capturing Risk and Cash Flow Differences

Value indications of private businesses at the freely traded level are *hypothetical* indications. They are developed assuming that there is an active and public market for the securities ("as if freely traded"). But there is not such a market, by definition. When valuing illiquid interests in private companies, it is necessary to look further into the expectations for the reinvestment of cash flows. Consider two examples:

- If a company has a history of reinvesting in excess assets (like cash and marketable securities) or non-operating assets (like land or hunting lodges or beach houses) that have expected returns less than its discount rate (R_{mm}), the present value of the expected cash flows of the enterprise will be less than the freely traded value just derived in the valuation process using the Gordon Model (or variants thereof).
- If the controlling shareholders of a business provide discretionary bonuses to themselves that are unavailable to the minority shareholders, in effect, making selective (non pro rata) distributions, those cash flows will not be reinvested in the business. In this example, the present value of expected (retained) cash flows will be less than if the company were public (where it can reasonably be assumed that such selective payments will not be tolerated), and therefore, the effective reinvestment rate will be less than R_{mm}.

Neither example is unusual in the world of private companies. In both, it should be clear that the reinvest-

ment rate of enterprise cash flows will be less than R_{mm}. Referring to Equation 2, which measures V_{rs} (and the restricted stock discount using Equation 1), we can observe that it *does not allow for* consideration of a possible reduction of future cash flows in the determination of a restricted stock discount.

So we cannot simply use Equation 2 to determine the appropriate marketability discount for a private company. There is more to the story.

We need to modify Equation 2 to consider the potential for less than optimal reinvestment and for cash flow leakages. Fortunately, this is not difficult. We know that the numerator of Equation 2 determines the expected growth rate in value of the public security. And it is clear from the earlier analysis that the expected return provided by the numerator $(1 + R_{mm})^{HP}$ over the relevant expected holding period (HP) is equal to the equity discount rate, or R_{mm}, for non-dividend paying publicly traded securities.

Therefore, in Equation 3, we modify Equation 2 to allow for consideration of suboptimal reinvestment of expected cash flows and cash flow leakages. We do so by recognizing that in the case of a private company, the expected growth rate of value (of the enterprise *or* for minority interests) may be less than the equity discount rate in a hypothetical, marketable minority appraisal.[21] In Equation 3, we therefore substitute the explicit term G_v for R_{mm} in the numerator to determine V_{nm}, the nonmarketable minority interest value. This substitution extends the valuation model to account for all of the causes of marketability discounts: incremental risk factors (HPP), derivative cash flows less than those assumed in the as-if-freely traded context (G_v less than R_{mm}), and time (when alternative holding periods are considered).

Equation 3: Generalized Illiquid Stock Formula

$$V_{nm} = V_{mm} \left(\frac{(1 + G_v)^{HP}}{(1 + (R_{mm} + HPP))^{HP}} \right)$$

With Equation 3, we now have a more general model that is applicable both to restricted stocks and illiquid minority interests in private enterprises. If the enterprise is a public company, the analyst can substitute the estimated equity discount rate (R_{mm}) for G_v (effectively using Equation 2 and deriving V_{rs}). If the enterprise is a private company, the analyst can substitute the expected growth rate in value *of the interest* and determine V_{nm}, or value at the nonmarketable minority level.

- For a minority interest, the expected growth rate in value attributable to the interest will be a function of the actual, expected enterprise reinvestment policies and/or the expectation of leakages of enterprise cash flows that will not compound to the benefit of the subject interest.
- For the enterprise itself, the business appraiser can compare the value of the business with the value of the expected business plan by making calculations based on expected enterprise reinvestment rates.

For readers who may have thought we would write an article and only barely mention the Quantitative Marketability Discount Model (QMDM), here is the big surprise: *Equation 3 is a symbolic specification of the QMDM!* Equation 3 will work to estimate the value of a restricted stock or of an illiquid interest in a private enterprise. As a result, it will work, in conjunction with Equation 1, to estimate either restricted stock discounts or marketability discounts.

Equation 3 is more general than Equation 2. The denominator is the same, because investors in both public and private securities face incremental risks (relative to the freely tradable alternative investment) during periods of illiquidity. However, investors in private companies have to deal with the fact that optimal reinvestment of all cash flows cannot be assumed. A failure on the part of an appraiser to consider the implications of such divergences from the freely traded model of Equation 2 can lead to substantial mistakes in valuation.

Capturing Risk, Cash Flow and Time Differences

It is important to observe that, according to Equation 3, the relevant holding period will have an impact on the value of the nonmarketable minority interest. As was the case with restricted stock studies discussed previously, shorter holding periods, all else equal, imply less time for the exponential impact of the disparity between the growth (including interim cash flows) of an investment and the required return on that investment, to increase.

Intuitively, it might seem that marketability discounts might increase dramatically as the holding period is extended to three years, four years or more, and all other things remain the same. However, as we noted above, the extension of time may have a counter-vailing impact on risk, or the investors' HPP. It is true that a longer

Table 3

QMDM Assumptions	Determining Factors for Estimated Discounts	
Without Dividends	**Restricted Stock Discounts for Public Companies**	**Marketability Discounts for Private Enterprises**
1. Expected Growth in Value (G_v)	$R_{mm} = G_V$	G_V. May be less than R_{mm} based on expected reinvestment policies or non prorata cash flow leakages. This is a significant difference in the valuation of private and publicly traded securities. Estimating G_v requires additional analysis not generally required in the valuation of restricted publicly traded securities.
2. Expected Holding Period (HP)	Currently 1 year under Rule 144; Prior to April 1997, two years	Subject to estimation based on facts and circumstances of specific investments. Generally unknowable with precision, but often of considerable duration.
3. Required Holding Period Return (R_{mm})	R_{mm} + HPP. For a given restricted stock transaction, HPP can be estimated when the value of the restricted stock is known Restricted stock investors must determine pricing based on their assessment of holding period risks.	R_{mm} + HPP. A primary source of market evidence of HPP comes from estimates of HPP found in various restricted stock transactions. Other sources include transactions in publicly traded partnership interests, and additional references to public and private market required returns
With Dividends		
4. Expected Dividends or Distributions 5. Expected Growth Rate of Dividends	The mathematical treatment of dividends for public and private companies is similar. In both cases, the analyst must estimate the expected distribution levels and the growth in those distributions. Dividend growth over relatively short holding periods will generally have a very modest impact on value.	

period of illiquidity locks up an investment and exposes it to more risks (which would tend to increase HPP). But a longer period of illiquidity provides time for favorable events to occur, as well (which could lower HPP).

The relationship between the duration of the expected holding period (HP) and investors' required incremental risk premia (HPP) requires further study. In the meantime, we have the evidence of implied HPP from the various restricted stock studies which was examined above for guidance.

The QMDM as a Tool for Performing Quantitative Analysis

At this point in the article, it should be clear that our discussion of benchmark analysis and restricted stock discounts provides support for the Quantitative Marketability Discount Model. The QMDM is the general model that explains the limited case of restricted stock discounts. Table 3 provides a summary of the five key assumptions of the QMDM as they relate both to restricted stocks of public companies and illiquid minority interests of private enterprises.

It should be clear from the summary table that benchmark analysis, based on comparisons of a subject investment to restricted stock study averages, is incapable of realistically capturing the impact on valuation of changes in the key assumptions of the QMDM. These assumptions drive the value of any investment in illiquid securities, whether restricted shares of public companies or minority interests of private enterprises. It should therefore be clear that quantitative analysis as espoused in this article is superior to benchmark analysis as a method for developing marketability discounts.

Criticisms of the QMDM

We set as an objective of this article to strengthen the ability of appraisers to use quantitative, rate of return analysis in developing marketability discounts. Since its introduction, the QMDM has been subjected to considerable peer review, and has generated comments and criticisms from other business valuation professionals. The constructive criticism generally falls into three categories. We will briefly address these criticisms, and provide greater clarity regarding why they are not valid.

Criticism #1: The QMDM Also Measures the Minority Discount

The first criticism relates to the conceptual levels of value. Appraisers making this criticism assume that when valuing minority interests of privately owned businesses, normalizing adjustments for excess controlling owner compensation and other discretionary expenses should not be made. This argument was recently made by Mr. Eric Engstrom.[22] Engstrom and others make this argument "because the minority shareholder lacks the control or power to effect changes to the cash flows." We have addressed this issue on numerous occasions.[23] Appraisers who make this argument should consider the following points:

- If normalizing adjustments are not made when appropriate, the appraiser is capitalizing neither the cash flows of the enterprise (on an as-of-freely-traded basis) nor the cash flows attributable to the minority shareholder.
- The resulting valuation indication is neither a marketable minority interest nor a nonmarketable minority interest value indication. And readers of their valuation reports will never know the value of the underlying enterprise, which is an important consideration for hypothetical and willing buyers. No one would purchase a minority interest in a limited partnership or limited liability company without reasonable indications of the underlying net asset values. This flawed methodology would require an investor in a privately owned operating company to do just that – make a purchase decision without knowledge of the underlying entity value.
- By capitalizing non-adjusted cash flows (into perpetuity), no consideration of the expected holding period of the minority investment is allowed.
- The application of marketability discounts based on references to restricted stock studies, which relate to freely traded valuation bases, lacks any theoretical basis.

In other words, the argument regarding *not* normalizing enterprise earnings when valuing minority interests of those enterprises does not comport with financial theory or economic common sense. (Footnote 21 can be reread in light of these factors to further emphasize this point.)

Criticism #2: QMDM Relies on Arbitrary Growth Assumptions

The second general criticism of the QMDM is that the model requires the user to determine the expected growth rate in value of the investment, and that any differential between Gv and Rmm "forces" a discount. The criticism normally suggests that the process is "arbitrary" and is typically supported by the argument that by definition, the growth in value of an investment must equal the required return on the investment less the dividend yield. While we do not dispute this assertion, we point out that it is based on the key assumptions we discussed earlier in the section on present value concepts and it relates to value at the marketable minority level. *These basic assumptions may not reflect the economic reality faced by investors in illiquid interests of many private companies.* The QMDM incorporates these realities to reflect the investment concerns of hypothetical buyers of such interests.

Given an estimate of the expected reinvestment rate, which is based on the subject company's historical reinvestment behavior and discussions with management, corresponding estimates of growth in value can be developed. For example, our hypothetical public company example had an assumed discount rate of 16% (R_{mm}), expected growth in earnings of 10%, and expected growth in value of 16%. *Take this company private, changing nothing else, and its freely traded value remains the same, or $16.67 per share.*[24] In Table 4 below, we provide the results of calculations using Equation 3 to indicate the impact on value of varying levels of reinvestment *and assuming that HPP equals*

zero. In other words, the calculations are illustrative of the impact of suboptimal reinvestment only, and do not include a consideration of incremental holding period risk.

Table 4

R_{mm} = 16% G_e = 10%	Calculated Marketability Discounts	
Growth of Value (G_v)	Holding Periods	
	Two Years	Five Years
16%	0.0%	0.0%
Given R_{mm}, the expected G_v is a function of the Reinvestment Rate and Time		
10%	10.1%	23.3%

An examination of Table 4 should worry appraisers who rely on benchmark analysis alone. As previously noted, the restricted stock studies, which examine transactions in restricted stocks of public securities, *do not even consider issues related to suboptimal reinvestment rates or non pro rata distributions.* It is not arbitrary to assume an expected growth rate of value (as it pertains to an illiquid interest) which is less than an entity's discount rate if that assumption is warranted by the facts and circumstances. Note that a reduction in the expected growth rate in value from the freely traded assumption of 16% to 10% creates a marketability discount of 10% to 23% in the two to five year range of expected holding periods. *In other words, the cash flow implications of private company reinvestments alone (without consideration of holding period risks, or HPP) can contribute materially to the appropriate marketability discount for its illiquid minority interests.*

Criticism #3: The QMDM Requires Other Assumptions

The expected growth of value assumption (Criticism #2) was treated separately because it is a theoretical issue. The QMDM also requires other assumptions of the appraiser: 1) the required holding period return, or shareholders' discount rate, which requires the development of a base equity discount rate and judgments regarding HPP; 2) the level and 3) growth of expected dividends or distributions; and 4) an estimate of the expected holding period (or range).

After reviewing the QMDM in his recent book, Mr. Jay A. Abrams criticized the QMDM for not providing appropriate discounts when applied to the case of restricted stock securities.[25] Mr. Abrams allowed Mercer to reply to his criticisms in the cited text. This criticism was also addressed in a recent issue of *Business Valuation Review*.[26] As noted in the cited materials, Abrams' criticisms stem from not recognizing the magnitude of implied HPP in the restricted stock study averages. The analysis of this article also addresses this criticism by deriving the magnitude of HPP in the restricted stock study averages.

We noted earlier that the Tax Court has criticized benchmark analysis in several recent cases. The assumptions made by appraisers using the QMDM were also cited in *Janda and Weinberg*.[27] Appraisers developing valuation indications at the enterprise level must make and support their assumptions. This fact is also true when developing value indications at the shareholder level, whether the appraiser is relying on benchmark analysis or quantitative, rate of return analysis. It may be that the Tax Court is not yet comfortable with the necessity of making the assumptions of the QMDM. However, it is far preferable to make the assumptions explicit using the QMDM, rather than making implicit and undisclosed assumptions when using benchmark analysis.

The level of expected distributions can be assessed based on the history and capacity of a subject enterprise, unique factors that will require or encourage (or discourage) distributions, and/or management's stated plan. Other things being equal, a distributing investment is more valuable (requires a lower marketability discount) than a non-distributing investment. It seems unreasonable to criticize any appraiser for making reasonable assumptions regarding expected distributions and estimating their impact on value.

Finally, appraisers using the QMDM must make assumptions about the expected holding period for the subject illiquid investments. It should be clear from the discussion above that there is an implicit assumption of the relevant Rule 144 holding period imbedded in the various restricted stock studies. We realize that some appraisers are uncomfortable making this assumption; however, it can be made based on available facts and circumstances. In fact, hypothetical investors must make such assumptions, and real investors do make them. Can they be made with precision or certainty? No, but then, very few of the important valuation judgments appraisers make can meet the tests of precision or certainty.

In short, it is not sufficient to criticize the QMDM because the appraiser must make assumptions about the outlook for subject illiquid investments in private enterprises. The assumptions form the basis for the deliberations of hypothetical willing investors as well as real investors. The appraisal community and the Tax

Court will realize this with ongoing exposure to quantitative, rate of return methods such as the QMDM.

Conclusion: Which Road to Take?

This article began with a discussion of the fundamental factors that cause marketability discounts to exist. We then turned attention to examining benchmark analysis as a method for determining marketability discounts for private companies. We outlined the troubles that users of benchmark analysis are having in convincing the Tax Court and others about the reasonableness and relevance of their concluded marketability discounts.

We then reviewed basic present value concepts in the context of "valuing" a publicly traded entity's restricted shares. This was followed by a more detailed discussion of the development of restricted stock discounts (Equations 1 and 2), and a brief discussion that related observed restricted stock discounts to the cost of equity capital of issuing public companies. Then we showed that the equation which can be used to value restricted securities of public companies is a subset of the more generalized Quantitative Marketability Discount Model, or the QMDM. We conclude with the following observations:

- Benchmark analysis is in trouble because it fails to consider the underlying mathematics of the valuation of restricted stocks of public securities. Further, it provides no basis for considering critical differences (possible suboptimal reinvestment rates, cash flow leakages, and lengthy holding periods) in the development of marketability discounts.
- It is important for appraisers to understand the basic present value concepts discussed above. They provide the basis for understanding the valuation differences between public securities and illiquid, private securities.
- The critical determinant of restricted stock discounts for public companies is the investors' holding period premium, or HPP. Restricted stock studies do provide a basis for estimating this incremental risk associated with holding public securities for the period mandated by Rule 144 at the time of the individual transactions.
- The critical determinant of marketability discounts for illiquid interests of private enterprises are: 1) the holding period premium associated with a potentially long and normally indeterminant holding period, or HPP; 2) the impact of suboptimal expected reinvestment of enterprise cash flows; and 3) the impact of lengthy expected holding periods. We showed that determinant 2 is true regardless of the fact that the hypothetical, marketable minority value indication is determined based on the assumption of optimal (i.e., at the discount rate, R_{mm}) reinvestment. *Restricted stock studies cannot take into account these potentially critical differences in cash flow expectations, nor can they consider holding periods different than the prevailing period of Rule 144 restriction.*
- The QMDM is a general model created in the context of broader, quantitative, rate of return analysis, that illustrates how illiquid interests of private companies should be valued in the context of a freely traded valuation indication. It cannot be dismissed with the simplistic observations noted above regarding Equation 2 (i.e., Criticism #2), which defines the valuation of restricted stocks of public companies. Equation 2 is a subset of the QMDM, or Equation 3, which defines the valuation of restricted stocks of public companies and of illiquid interests of private enterprises.
- Finally, it should be clear by now, that quantitative, rate of return analysis sits squarely in the center of generally accepted financial theory, and is leading the way into Stage 5 in the development of marketability discounts. By analogy, Stage 5 is the "other road" for business appraisers if Mr. Frost had been discussing marketability discounts in *The Road Not Taken*.

The business appraisal profession is at a clear fork in the road with respect to the development of marketability discounts. Many have been cruising comfortably down Benchmark Drive for years, and know no other path. Unfortunately, this road is an economic dead end. The diverging road, Quantitative Highway, is nearly complete, and traffic is moving smoothly.

Endnotes

1. "Definitions," *Business Valuation Standards*, American Society of Appraisers, Revised February 2001, p. 22.
2. Pratt, Shannon P. , *Valuing a Business*, First Edition (Dow Jones-Irwin, 1981), and Second Edition (Dow Jones-Irwin, 1989).
3. Emory, John D., "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock," *Business Valuation News*, September, 1985, pp. 21-24; *Business Valuation Review*, December, 1986, pp. 12-15; June, 1989, pp. 55-57; December, 1990, pp. 114-116; December, 1992, pp. 208-212; March, 1994, pp. 3-7; December, 1995, pp. 155-160;

September, 1997, pp. 123-131; September, 2000, pp. 111-121.
See Willamette Studies (Pratt, Shannon P., *Valuing a Business*, Fourth Edition (McGraw-Hill, 2000), p. 408-412. There is also a discussion of pre-IPO studies in *Quantifying Marketability Discounts* (cited fully below) at Chapter 3.

4. *Mandelbaum v. Commissioner*, 69 T.C.M. (CCH) 2852 (1995).
5. For a detailed review of *Mandelbaum* and the Court's benchmark analysis, see Mercer, Z. Christopher, *Quantifying Marketability Discounts, Revised Reprint,* (Memphis, TN: Peabody Publishing, L.P., 2001), pp. 126-154. A current business valuation text offers an example of *Mandelbaum*-type benchmark analysis as a way to develop marketability discounts. See Hawkins and Paschall, *CCH Business Valuation Guide* (Chicago: CCH Incorporated, 1999), pp. 21021-21030.
6. *Ibid*, Chapter 12
7. Robak, Espen and Hall, Lance S., "Bringing Sanity to Marketability Discounts," *Valuation Strategies*, July/August 2001, p. 6-13. Unfortunately, this article is little but an advertisement for the study that FMV Opinions is offering for sale. It provides no transactional detail, and the skimpiest of summary detail. Our review of this article is being published in the September/October 2001 issue of *Valuation Strategies*. See Mercer and Heinz, Nicholas J., "Marketability Discounts: Back to Reality."
8. *ASA Business Valuation Standards*, American Society of Appraisers. Revised February 2001. See SBVS-1, "The Guideline Company Valuation Method."
9. We are *not* saying that more detailed and more complete analyses of restricted stock transactions are useless. They will help appraisers understand the reasons for the wide variation in observed discounts that have been observed in all studies, and can help to better quantify and understand the impact of holding period risks. In addition, such studies that consider both the old Rule 144 period of restriction of two years and the new restriction of one year can shed light on the impact of time on holding period risks.
10. *Knight v. Commissioner of Internal Revenue* (115 T.C. No. 36).
11. *Estate of Frank A. Branson v. Commissioner of Internal Revenue* (T.C. Memo 1999-231), *Estate of Etta H. Weinberg v. Commissioner of Internal Revenue* (T.C. Memo 2000-51), *Janda v. Commissioner of Internal Revenue* (T.C. Memo 2001-24)
12. Hood, L. Paul., Jr., Esq., "Janda: Valuation and Marketability Discounts: "Damned if You Do" Valuation," Originally published in *Steve Leimberg's News of the Week*, February 9, 2001, http://www.leimbergservices.com. This article was reprinted as Issue 2001-02 of *E-Law Business Valuation Perspective*, February 13, 2001, http://www.bizval.com/Elaw/elaw0102.htm.
13. Bogdanski, John A., "From the Editor," *Valuation Strategies,* March/April 2001, p. 3. Bogdanski refers to:
Mercer, Z. Christopher, "Quantitative, Rate of Return Analysis vs. Benchmark Analysis in Developing Marketability Discounts," *Valuation Strategies,* March/April 2001, pp. 12-21.
14. See Mercer, *E-Law Business Valuation Perspective, No. 2000-11*, "A Review of Current Business Valuation Textbooks on the Topic of Marketabilty Discounts. http://www.bizval.com/Elaw/elaw0011.htm
15. See Exhibit 1. See Chapter 2 of *Quantifying Marketability Discounts* or Chapter 2 of *Quantifying Marketability Discounts, Revised Reprint* for a detailed discussion of restricted stock studies. See also *E-Law Business Perspective 00-09*, "Restricted Stock Studies' Typical Results Do Not Provide 'Benchmark' for Determining Marketability Discounts – But They Do Help!", available at www.mercercapital.com and reprinted in *QMD, Revised Reprint* at p. 349.
16. Interestingly, the range of implied HPPs calculated in Table 1 for our hypothetical public company for a four year holding period is in the range of HPPs used in the ten examples of the QMDM in use found in Chapter 10 of *Quantifying Marketability Discounts, Revised Reprint* (or the same chapter in the 1997 book). We find use of restricted stock studies to make reasonable inferences about the valuation of private securities to be helpful and supportive of reasonable marketability discounts for illiquid minority interests of private securities.
17. Begin with the basic Gordon (dividend) formula for a public security:
(1) $P_0 = D_1/(R_{mm} - g)$
(2) $R_{mm} - g = D_1/P_0$
(3) $R_{mm} = D_1/P_0 + g$
Now substitute the price of the restricted security for P_0 and we determine the firm's cost of equity for the restricted stock transaction (RST)
(4) $R_{RST} = D_1/P_{RS} + g$
18. The reason that the cost of equity calculations do not mirror the implied holding period returns for the two year period of restriction in Table 1 is that the entire benefit of the lower price for restricted shares is realizable, at least for purposes of the calculations, on the last day of the second year following purchase. The "cost" of the discount to the issuer is mitigated because the new capital is available for reinvestment at the discount rate into perpetuity.

19. As quoted in *Quantifying Marketability Discounts, Revised Reprint*: "The commission is amending the holding period requirements contained in Rule 144 to permit the resale of limited amounts of restricted securities by any person after a one-year, rather than a two-year, holding period. Also, the amendments permit unlimited resales of restricted securities held by non-affiliates of the issuer after a holding period of two years, rather than three years. *These changes should reduce the cost of capital, particularly for small business issuers.*" (emphasis added). 17 CFR Part 230 [Release No. 33-7390; File No. S7-17-95] RIN 3235-AG53.
20. Purchasers of restricted securities are not subject to this risk, because the discipline of the marketplace, which is inextricably linked to the marketability of the freely traded shares, ensures that all cash flows generated by the business accrue to the benefit of the shareholders (either through distribution or reinvestment in positive net present value projects).
21. It should be clear that this statement is true for the illiquid minority interest. It is less obvious, but equally true for the enterprise. In other words, from the perspective of the enterprise, *the value of the expected business plan, which calls for continuing suboptimal reinvestment and the accumulation of excess, or nonoperating assets, may be less than the value of the business* if it were sold today. The effect of suboptimal reinvestment impacts both controlling and noncontrolling shareholders pro rata. Controlling shareholders, of course, always have the option of distributing cash flows, or changing reinvestment policy, thereby avoiding suboptimal reinvestment. Noncontrolling shareholders in private companies do not share this luxury. This very important nuance of financial theory causes some appraisers to confuse elements of the marketability discount with the minority interest discount. Note that minority shareholders in public companies also lack control over cash flows. They assume that entity cashflows will be distributed, or else reinvested optimally. If not, they sell their shares. In other words, shareholders of public companies have "control" over the ability to sell, i.e., liquidity, that shareholders in illiquid, private companies lack. The "lack of control" that Engstrom mentions (see below) relates to a lack of liquidity in cases where enterprise cashflows are diverted.
22. See Engstrom, Eric, "An Examination of the QMDM," *Shannon Pratt's Business Valuation Update*, March, 2001, pp. 7-8 and Mercer, Z. Christopher, "Mercer Responds to Engstrom Analysis," *Shannon Pratt's Business Valuation Update*, March, 2001, pp. 9-10
23. Mercer, Z. Christopher, Appendix D: Developing Cost of Capital (Capitalization Rates & Discount Rates) Using ValuSource PRO Software, *Cost of Capital*, (John Wiley & sons, Inc.) Shannon Pratt, 1998; "Mercer Responds to Engstrom Analysis," *Shannon Pratt's Business Valuation Update*, March, 2001, pp. 9-10; and presentations at conferences of the American Society of Appraisers, the Institute of Business Appraisers, the American Institute of Certified Public Accountants, NACVA, and others.
24. We ask that readers reread this sentence several times and confirm its truth by reviewing the earlier discussion of present value concepts.
25. Abrams, Jay A., *Quantitative Business Valuation* (McGraw-Hill, 2001), pp. 273-281.
26. Mercer, Z. Christopher, "The QMDM and Estimating Required Rates of Return for Restricted Stocks of Public Companies," *Business Valuation Review*, June 2001, pp. 5-9.
27. See earlier citations. For further elaboration, see Mercer, *E-Law Business Valuation Perspective 2000-03 and 2000-04, "Weinberg, et al. v. Commissioner* - It's not About the Marketability Discount." http://www.bizval.com/Elaw/elaw0003.htm. See also Crow, Matthew R. and Patton, Kenneth W., *E-Law Business Valuation Perspective 2001-01, "Janda v. Commissioner:* The QMDM Appears in Tax Court Again." http://www.bizval.com/Elaw/elaw0101.htm.

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Exhibit 1
Restricted Stock Study Summary

	Summary of Published Restricted Stock Study Results						
Pre-1990 Studies*	**Period Covered**	**No. of Observations**	**Medians**	**Means**	**Standard Deviations**	**Low**	**High**
SEC Institutional Investor Study	1966-1969	398	24%	26%	na	-15%	80%
Gelman	1968-1970	89	33%	33%	na	<15%	>40%
Moroney	1968-1972	146	34%	35%	18%	-30%	90%
Maher	1969-1973	34	33%	35%	18%	3%	76%
Trout	1968-1972	60	na	34%	na	na	na
Stryker/Pittock	1978-1982	28	45%	na	na	7%	91%
Willamette Mgt	1981-1984	33	31%	na	na	na	na
Silber	1981-1988	69	na	34%	24%	-13%	84%
Post 1990 Data							
FMV Opinions*	1969-1992	100+	na	23%	na	na	na
Management Planning*	1980-1995	49	29%	28%	14%	0%	58%
Johnson**	1991-1995	72	na	20%	na	-10%	60%
*FMV Opinions****	*1980- 4/97*	*230*	*20%*	*22%*	*na*	*na*	*na*
	1996 to 4/97	23	14%	21%	na	1%	68%
Post April 1997 Data							
CFAI Study****	5/97 to 1998	15	9%	13%	na	0%	30%

* Full citations in *Quantifying Marketabiltiy Discounts*, pp. 45, 365

** Johnson, Bruce A., "Quantitative Support for Discounts for Lack of Marketability," *Business Valuation Review*, December 1999, p. 152.

*** Robak, Espen, and Hall, Lance S., "Bringing Sanity to Marketabilitly Discounts," *Valuation Strategies,* July/August 2001, p. 7.

**** CFAI Study was published AS "Restricted Stock Discounts Decline as Result of one-year Holding Period," Pratt's Business Valuation Update, May 2000, p. 1. Ms. Katherine Aschwald was the author.

Exhibit 2
Restricted Stock Pricing Analysis
Investor Perspective Versus Issuer Perspective

Future Value (at end of holding period)	**$19.33**
Assumed period of illiquidity under Rule 144 (years)	**1.0**
Assumed investment horizon (years)	**4.0**

				If assume longer investment horizon					
A	B	C	D	E	F	G	H	I	J
						(from D)	Issuer Perspective		
Assumed Holding Period Premiums	Investor's Holding Period Return	Value at Investor's HPR	Implied Restricted Stock Discounts	Investor's Implied Horizon Return	Investor's Implied Horizon HPP	Transaction Restricted Stock Discount	Proceeds from Issuance	Firm's Cost of Equity for Transaction	Incremental Cost of Equity
0.0%	16.0%	$16.667	0.0%	16.0%		0.0%	$16.67	**16.00%**	= Rmm
2.0%	18.0%	$16.384	1.7%	16.5%	0.5%	1.7%	$16.38	16.10%	0.10%
4.0%	20.0%	$16.111	3.3%	17.0%	1.0%	3.3%	$16.11	16.21%	0.21%
6.0%	22.0%	$15.847	4.9%	17.5%	1.5%	4.9%	$15.85	16.31%	0.31%
8.0%	24.0%	$15.591	6.5%	18.0%	2.0%	6.5%	$15.59	16.41%	0.41%
10.0%	26.0%	$15.344	7.9%	18.4%	2.4%	7.9%	$15.34	16.52%	0.52%
12.0%	28.0%	$15.104	**9.4%**	18.9%	2.9%	9.4%	$15.10	**16.62%**	**0.62%**
14.0%	30.0%	$14.872	**10.8%**	19.4%	3.4%	10.8%	$14.87	**16.72%**	**0.72%**
16.0%	32.0%	$14.646	**12.1%**	19.8%	3.8%	12.1%	$14.65	**16.83%**	**0.83%**
18.0%	34.0%	$14.428	**13.4%**	20.3%	4.3%	13.4%	$14.43	**16.93%**	**0.93%**
20.0%	36.0%	$14.216	14.7%	20.7%	4.7%	14.7%	$14.22	17.03%	1.03%
22.0%	38.0%	$14.010	15.9%	21.1%	5.1%	15.9%	$14.01	17.14%	1.14%
24.0%	40.0%	$13.810	17.1%	21.6%	5.6%	17.1%	$13.81	17.24%	1.24%
26.0%	42.0%	$13.615	18.3%	22.0%	6.0%	18.3%	$13.62	17.34%	1.34%
28.0%	44.0%	$13.426	19.4%	22.4%	6.4%	19.4%	$13.43	17.45%	1.45%
30.0%	46.0%	$13.242	20.5%	22.9%	6.9%	20.5%	$13.24	17.55%	1.55%

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Developing and Supporting
Marketability Discounts in the Appraisal
of Closely Held Business Interests

by
Z. Christopher Mercer, ASA, CFA

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- In the final analysis, it appears that the Court may have been influenced to an extent by the quantitative methodologies presented by Stephens and Blaydon, even though there is no direct support of those opinions in the Court's decision.

A brief discussion of relative valuation comparisons regarding EJL is found at the conclusion of the discussion of our next case.

MANDELBAUM

Case Background

Mandelbaum is a 1995 Tax Court Memorandum providing an analysis of the marketability discount issue.[44] The case represents the consolidated cases of three brothers, Bernard, Leon, and Max Mandelbaum. At issue was the appropriate value for minority interest gifts the brothers made to their children on six dates from 1986 to 1990. The parties stipulated the fair market value of the shares at the freely tradable level of value, leaving the Court to determine only the appropriate marketability discount.[45]

The Mandelbaum brothers founded Big M ("the Company" or "Big M") in 1950 and were initially its sole shareholders. A women's retail apparel business, the Company grew from a single store to employ 3,500-4,000 persons in stores in six East Coast states. The brothers and their children were all involved in the management and operations of the Company. Summary information about the Company and the stipulated values on the six relevant dates for the case is provided in Figure 4-7.

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[44] *Mandelbaum v. Commissioner*, 69 T.C.M. (CCH) 2852 (1995).

[45] The *Mandelbaum* opinion was written by Judge David Laro, who has become active in business valuation cases in recent years. Judge Laro spoke about this decision shortly after its issuance at the International Conference of the American Society of Appraisers held in June 1995 in Denver, Colorado. We will spend a disproportionate amount of this chapter on *Mandelbaum* because of its detailed treatment of the marketability discount issue and the fact that the opinion deals, for the first time in a published decision (to the best of my knowledge) with several of the basic components of the Quantitative Marketability Discount Model developed in Chapter 8. Unfortunately, a careful analysis of the decision reveals several misunderstandings that should not be perpetuated, either by the Tax Court or by appraisers reading the decision. I am writing this detailed review to clear up a number of misconceptions raised by the language of the opinion.

Mandelbaum v. Commissioner
Historical Financial Perspective for Big M
($ Thousands)

	Fiscal Periods Ending							
	7/25/85	**7/26/86**	**7/25/87**	**1/30/88**	**7/30/88**	**7/28/89**	**7/27/90**	**7/26/91**
Net Sales	$124,898	$144,832	$199,528	na	$224,479	$235,529	$260,816	$270,903
Pre-Tax Income	$11,468	$10,117	$14,604	na	$12,131	$14,097	$6,570	$1,567
Pre-Tax Margin	*9.2%*	*7.0%*	*7.3%*		*5.4%*	*6.0%*	*2.5%*	*0.6%*
Taxes	($5,628)	($5,480)	($7,314)	na	($848)	($904)	($406)	($116)
Net Income before Extraordinary Items	$5,840	$4,637	$7,290		$11,283	$13,193	$6,164	$1,451
Extraordinary Items	$468	$0	$0	na	$6,640	$0	$0	$0
Net Income	$6,308	$4,637	$7,290	na	$17,923	$13,193	$6,164	$1,451
Stockholders' Equity	$34,332	$38,921	$46,163	$58,721	$64,086	$71,914	$72,020	$64,657
Return on Average Equity	na	12.7%	17.1%		29.2%	19.4%	8.6%	2.1%
Dividends (as if a C corporation)	$36	$48	$48	na	$0	$0	$0	$500
Type of Corporation	**C**	**C**	**C**	**S**	**S**	**S**	**S**	**S**
No. of Shares	9,643	9,643	9,643	9,643	9,643	9,643	9,643	9,643
Book Value Per Share	$3,560	$4,036	$4,787	$6,089	$6,646	$7,458	$7,469	$6,705
Dividends Per Share	$3.78	$5.00	$4.98	na	$0.00	$0.00	$0.00	$51.85

	Valuation Dates for Big M in *Mandelbaum*					
	12/31/86	**12/31/87**	**12/23/88**	**12/15/89**	**2/1/90**	**12/30/90**
Stipulated Value Per Share (Freely Traded)	$7,505	$6,631	$7,736	$8,675	$7,325	$4,397
Implied Dividend Yield	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Price/Earnings Multiple (C corporation Basis)	15.6	8.8	6.6	6.3	5.4	6.9

Figure 4-7

Big M's revenues were growing rapidly until fiscal year 1988. For the three years ending with fiscal year 1988, revenues had grown at a compound rate of 21.6%. For the next three years, revenue growth slowed to 6.5% (compounded). Pre-tax income peaked in fiscal year 1987 at $14.6 million, stayed in the $12 million to $14 million range for the next two years, and then experienced a sharp decline in fiscal year 1990 (falling to $6.6 million). Fiscal year 1991 data was provided in the opinion but would not have been available as of December 1990.

The case dealt with valuation at the six dates indicated in Figure 4-7 above. The stipulated values at the marketable minority interest level peaked at $8,675 per share as of December 15, 1989, and then fell to $7,325 per share and $4,397 per share as of February 1, 1990 and December 30, 1990, respectively. The decline in value per share undoubtedly reflected the deteriorating trends in sales and earnings seen in Figure 4-7.[46]

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[46] While the full fiscal year results for 1991 were not available in December 1990, the declining trend would undoubtedly have been known, since the retailer had completed its 1990 Christmas seasonal rush.

Prior to its conversion to an S corporation (effective with the short period ending January 30, 1988), Big M paid a quite small dividend to shareholders (in the range of $3.78 per share to $5.00 per share), as seen by the negligible implied yield calculations in Figure 4-7. Following its election as an S corporation, the Company made distributions to shareholders sufficient only to pay their personal tax liabilities on corporate earnings. In December 1990, a dividend of $500 thousand, or $51.85 per share, was paid "in connection with the establishment of three grantor trusts."

Big M's stock was subject to two shareholder agreements. The first agreement (dated November 4, 1982) was executed because shareholders "believed it is in their best interest to provide for continuity in the management and policies of Big M." It required that any board vacancies be filled by current members and that new directors be either current shareholders or their spouses. The agreement restricted a decedent's estate to the sale of shares to Big M in accordance with state law. Big M had sole discretion to pay for those shares over any length of time. In addition, a shareholder could freely transfer stock within his immediate family. Except as otherwise provided, a shareholder who wanted to transfer shares had to first offer them to the Company, which then had 90 days to decide to purchase, again with the sole discretion to pay for the stock *over any length of time*.

The second agreement (dated June 13, 1988) was executed pursuant to the "desire to maintain ownership and control of...Big M among themselves and to provide for continuity in the management and ownership of...Big M." This agreement also indicated a desire to maintain the same proportionate ownership interests among the three family branches. The second agreement contained similar provisions as the first with one addition – if a shareholder wanted to transfer stock outside the family group, the shares must be offered to members in the family group. The family group members had 90 days to exercise their right of first refusal. If this right was not exercised, Big M had 30 days to exercise its right of first refusal.

The Appraisals

Following the filing of notices of deficiencies with respect to gifts, the parties stipulated the fair market value of the shares before the discount for lack of marketability. Therefore, the sole issue in this case was the appropriate marketability discount to be applied to the stipulated value.

For the IRS: Paul R. Mallarkey

Paul R. Mallarkey served as expert witness for the Internal Revenue Service. Mallarkey is described as Northeast Regional Director for Valuation and Appraisal services for BDO Seidman, a major accounting firm. Mallarkey is also a senior member (ASA designation) in business valuation with the American Society of Appraisers, and a

Chartered Financial Analyst (CFA designation) with the Institute of Chartered Financial Analysts (now the Association for Investment Management Research).

Mallarkey concluded that the appropriate marketability discount was 30% for each of the appraisal dates. He considered three studies of restricted stock which indicated discounts ranging from 30% to 35%.[47] His 30% marketability discount reflected the fact that "the risk associated with holding the Big M stock is neutralized by its size and stable gross profits, which have allowed Big M to remain profitable." In addition, he concluded that the shareholder agreements did not seriously affect the marketability of Big M shares.

The Court did not find Mallarkey's reasoning persuasive because he did not adequately consider the fact that an outside investor would not acquire meaningful power upon investment. In addition, the Court felt he did not consider the "chilling effect" of the shareholder agreements on prospective investors. Significantly, the Court found his reliance on only the three restricted stock studies inadequate because the holding period of these stocks was only two years, and there was no support for such a short holding period for Big M.

For the Taxpayer: Roger J. Grabowski

The taxpayer's expert was Roger J. Grabowski, a principal and the National Director of the Valuation Services Group for Price Waterhouse, LLP, a Big Six accounting firm. While not mentioned in the case, Grabowski, like Mallarkey, also holds the ASA designation of the American Society of Appraisers and is the same Grabowski mentioned in the discussion above regarding *Jung*.

Grabowski engaged in a more detailed analysis than Mallarkey.[48] The portion of his report dealing with marketability discounts consisted of some 30 pages of text and analysis. Grabowski considered the three studies listed above, four other restricted stock studies and three studies of initial public offerings ("IPOs").[49] The four restricted stock studies had average discounts of about 35%. The three pre-IPO studies yielded an average discount of about 45%.

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[47] The studies were the SEC study, the Moroney study, and the Maher study, all of which were discussed in Chapter 2.

[48] As with the Stephens and Blalock reports in *Lauder*, we obtained a copy of Grabowski's report from Tax Court records. These are the only three reports we have identified to date utilizing specific quantitative methodologies that have been presented to the Tax Court.

[49] The additional four restricted stock studies considered by Grabowski included the Gelman study, the Trout study, the Pittock & Stryker (Standard Research Consultants) study, and the Willamette Management Associates study (see Chapter 2). The pre-IPO studies referenced by Grabowski were conducted by John Emory and Willamette Management Associates (see Chapter 3).

Grabowski's report also included a detailed quantitative analysis that supported his conclusions regarding marketability discounts. This analysis included consideration of dividends and expected future growth in earnings, as well as expected holding periods of varying lengths. In developing his discount rate (the required holding period return to be introduced in Chapter 8), Grabowski interviewed nine investment firms to determine the rate of return they would require from an investment in a company like Big M. From these interviews, he developed annual discount rates in the range of 25% to 40%. Unfortunately, there is no direct mention of Grabowski's quantitative analysis in the Court's opinion.[50]

He listed several factors in determining marketability discounts of 70% for the first four valuation dates shown in Figure 4-7, and 75% for the last two dates. The factors included:

- The stock was rendered "virtually illiquid" by the shareholder agreements and an expected holding period of at least ten years;
- Mandelbaum family members had always owned the company;
- There were no plans to take the company public or seek outside investors;
- Senior management was fairly young and at least 20 years from retirement age;
- None of the gifts changed the balance of voting power; and,
- The Company had an erratic dividend history, meaning that hypothetical investors would be uncertain as to whether regular dividends would be received.[51]

---

[50] Grabowski's concluded ranges of discounts were the result of detailed calculations regarding expected future cash flows and distributions to shareholders to be received over varying holding periods, and discounted to the present at his range of appropriate discount rates. His model is similar in concept to the Quantitative Marketability Discount Model presented in Chapter 8; however, it is, frankly, not as understandable. It also differs structurally in the relationship between expected growth of the underlying business and the required holding period return (discount rate). Grabowski cites an early article we prepared on the subject of quantifying marketability discounts. That paper was first presented in a private meeting of a group of appraisers in mid-1994, and to the Third Joint Business Valuation Conference of the Canadian Institute of Chartered Business Valuators and the American Society of Appraisers in San Diego in November, 1994. See Mercer, Z. Christopher, "Quantitative Marketability Discount Methodology," *The Journal of Business Valuation (1995),* pp. 201-208. Grabowski's report was dated in January 1995. Unfortunately, the logic and common sense of the model set out in the Mercer papers was not included in Grabowski's report. In fairness to Grabowski, the model he used is workable and logical. In fairness to the Court, it is highly likely that the Court could not fully understand how and why Grabowski's model worked based on a reading of the report. As a result, the Court appears to have discounted his conclusions.

[51] Regarding this point, the Court noted:

> Grabowski further based his conclusions on his *allegations* that Big M had an erratic dividend history, and that any investor in Big M would be uncertain as to whether he or she would receive regular dividends. (p. 2865) [emphasis added]

Based upon my review of the historical record provided in the case (and summarized in Figure 4-7), it is not an *allegation* that dividends were both low and erratic. They were. The Court's implied criticism of Grabowski on this point is misplaced.

Despite his more detailed analysis, the Court did not accept Grabowski's conclusion, suggesting that "no hypothetical seller would sell Big M stock at such a large discount." It is important to focus on the Court's reasoning:

> We are no more persuaded by Grabowski's analysis or conclusions. First, Grabowski's determination of fair market value focuses only on a hypothetical willing buyer and does not reflect the view of a hypothetical willing seller. Although the record indicates that petitioners adamantly desire to keep the ownership of Big M within their family, the test of fair market value rests on the concept of a hypothetical willing buyer and a hypothetical willing seller. *Ignoring the views of a willing seller is contrary to this well-established test. In this regard, Grabowski failed to consider any person who could be considered a hypothetical willing seller of Big M stock.* He also did not consider whether such a seller would sell his or her Big M stock for at least 70 percent less than its freely traded value. *We find incredible the proposition that any shareholder of Big M would be willing to sell his or her stock at such a large discount.*
>
> Second, we give the Shareholders' Agreements less weight than Grabowski. According to Grabowski, the right of first refusal contained in the Shareholders' Agreements "severely restricts" marketability of Big M stock...*In most cases, especially where an operating company is concerned, a right of first refusal without a fixed price has little, if any, effect on fair market value (which inherently includes a marketability discount), and such an absence of a fixed price clearly has a less dramatic effect than fixed priced restrictions*.[52] [emphasis added, citations omitted]

The Court seems to contradict itself at this point. In the first paragraph quoted above, Grabowski is criticized for failing to consider a hypothetical willing seller. Later in the same paragraph, the decision mentions the motivations of *specific sellers*, i.e., "any shareholder of Big M." As will be noted below, we believe that an active consideration of the hypothetical willing buyer implicitly considers the hypothetical willing seller as well. The basis for this belief is provided in an in-depth analysis in Chapter 6.

In addition, the Court stated that the shareholder agreements did not "severely restrict" marketability because they did not set a price. At this point, the decision stated that the agreements only created an order of purchasers by granting the rights of first refusal. Interestingly, the Court's criticism of Mallarkey on this point seems contradictory:

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52 *Mandelbaum*, p. 2866.

> We believe that the Shareholders' Agreements create a chilling effect on prospective investors, and, accordingly, that some consideration must be given to the agreements' effect on the issue of marketability.[53]

We will consider the issue of the Shareholders' Agreements in more depth in the discussion of the Court's opinion below.

The Court indicated that Grabowski's interviews with representatives of investment firms were not representative of potential investors. Based on the interviews, Grabowski considered a range of discount rates (required annual returns) of 25% to 40%, and concluded that the higher end of the range was most appropriate for deriving marketability discounts for Big M shares, using annual rates of 35% to 40% in the calculations leading to his concluded ranges. His analysis concluded with marketability discounts of 70% and 75% as noted above.

The Court criticized Grabowski as follows:

> Third, we are troubled by the fact that Grabowski failed to consider hypothetical willing buyers who are genuine representatives of prospective investors in Big M. Although Grabowski conducted interviews with nine investors, Grabowski's interviewees included only leveraged buyout groups, merchant bankers, and venture capitalists. Such a group of investors may (and did) require a higher rate of return than other investors. *Grabowski should have included in his test a more representative sample of willing buyers of Big M stock, e.g., competitors of Big M or independent investors*. Grabowski did not do so. We find that Grabowski's failure to do so weakens his testimony.[54] [emphasis added]

There is a problem with the Court's criticism on this point. I fail to understand how a consideration of what a competitor of Big M would pay for a minority interest would lead to an appropriate conclusion of fair market value. It is unrealistic to consider competitors of Big M, who might be under some compulsion (at the very least, curiosity) to purchase shares, as hypothetical willing buyers.[55] Why would any privately owned company desire to have a competitor as a shareholder? Indeed, that is one of the very reasons that many companies that otherwise are attractive candidates for going public, do not do so. And why would any private company risk

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[53] *Ibid.*

[54] *Ibid.*

[55] Competitors would generally desire to acquire small amounts of stock for information or nuisance value. Alternatively, competitors might seek to build a position for eventual acquisition. None of these reasons is particularly attractive to a subject private company.

having its books and records made available to a competitor/shareholder who attempted to exercise minority shareholder rights under appropriate circumstances?

As to the suggestion that Grabowski should go to "other independent investors," I frankly do not know who they are, or how to quantify their rate of return objectives in any other way than the methodology developed in Chapter 8. The investors interviewed by Grabowski were fairly clearly independent investors of capacity who routinely invest in minority interests of private companies. As will be shown in Chapter 8, the rate of return requirements of Grabowski's investors are substantiated by the rate of return expectations for the investors in the restricted stocks that the Court relies upon in its development of a "benchmark range" of marketability discount (see below for the Court's range and the discussion surrounding Figures 8-22 and 8-23 in Chapter 8).

Finally, the Court did not agree with Grabowski's assumption of a 10 to 20 year expected holding period for an investment in Big M, criticizing as follows:

> Grabowski also relied on his assumption that a buyer would have to hold Big M stock for 10 to 20 years in order to make his or her investment worthwhile. We find this reliance equally misplaced. Although Grabowski mentioned retirement for the current generation in the same breath as his 10 to 20 year assumption, Grabowski fails to explain how the current generation's retirement will add to the marketability of Big M stock. Grabowski also mentioned petitioners' intent to keep the stock family owned. The record, however, does not support Grabowski's assumption that petitioners will surrender family control in 10 to 20 years.[56]

The Court indicates a misunderstanding of the importance of an assumption regarding the expected holding period for an investment in a nonmarketable minority interest. Mallarkey is criticized for not justifying "such a short holding period for Big M stock" as his implicit two year assumption. It is unclear if the Court is criticizing Grabowski because his holding period range is too short or too long. The comments in the quote immediately above raise this question.

It is unrealistic for the Court to hold out a standard that suggests that business appraisers can ever know exactly what an expected holding period will be. After all, real life investors are faced with this same uncertainty. It is not possible to know the unknowable. That is not the point. Grabowski's analysis suggested that a hypothetical willing buyer would reasonably expect *a very long holding period* for an investment in Big M shares. Why?

- The Company has been owned by the Mandelbaum family since its formation in the 1950s.

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[56] *Mandelbaum*, p. 2867.

- Six second generation shareholders (from all three of the founding families) are active in the business, including Larry Mandelbaum, the chief executive officer, who is 44 years old and is the son of Max Mandelbaum). Larry Mandelbaum is some 20 years away from normal retirement age.
- There are no plans to take the Company public, sell the Company, or seek non-family equity investors.
- The Shareholders' Agreement, first executed in 1982 and updated in 1988, states "the desire [of the shareholders] to maintain ownership and control of the Corporation among themselves and to provide for continuity in the management and ownership of the Corporation."

The operative question is: *Would a hypothetical willing buyer facing these facts make an investment decision based upon the assumption of a short expected holding period?* In our experience, the answer is, likely not.

The Court's criticism of the expected holding period assumption also fails to consider that one of the reasons for high discount rates among investors (as indicated by Grabowski's survey) is the very uncertainty about the length of the holding period. The Court's language above, referring to the 10 to 20 year holding period facing an investor "to make his or her investment worthwhile" misses the point. *Given the facts as presented in this case, it would be irrational for any potential investor to consider that the expected holding period would be anything but quite a long period.*[57]

The Court's Conclusion - 1

After rejecting the experts' analyses, the Court determined that a 30% marketability discount was appropriate. Before proceeding with the remainder of our discussion of the Court's analysis, it will be helpful to summarize the valuation results in the case in Figure 4-8.

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[57] The rationale for this assertion is developed in Chapter 8 in the section *Simulating the Thinking of Hypothetical Investors*.

	Valuation Dates for Big M in *Mandelbaum*					
	12/31/86	12/31/87	12/23/88	12/15/89	2/1/90	12/30/90
Stipulated Value Per Share (Freely Traded)	$7,505	$6,631	$7,736	$8,675	$7,325	$4,397
Implied Dividend Yield	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Price/Earnings Multiple (C corporation Basis)	15.6	8.8	6.6	6.3	5.4	6.9
Implied Price/Book Value	186%	139%	116%	116%	98%	59%
Marketability Discounts						
Mallarkey (IRS)	30%	30%	30%	30%	30%	30%
Grabowski (Taxpayers)	75%	75%	75%	75%	70%	70%
Court	**30%**	**30%**	**30%**	**30%**	**30%**	**30%**
Value Per Share After Court's Discount	$5,254	$4,642	$5,415	$6,073	$5,128	$3,078
Implied Dividend Yield	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Price/Earnings Multiple (C corporation Basis) Before Extraordinary Items	10.93	6.14	2.91	4.44	3.75	4.82
Implied Price/Book Value	130%	97%	81%	81%	69%	41%
Relative Value Multiples Implied by Grabowski						
Value Per Share	$1,876	$1,658	$1,934	$2,169	$2,198	$1,319
Dividend Yield	2.6%	2.9%	0.0%	0.0%	0.0%	0.0%
Price/Earnings Multiple (C corporation Basis) Before Extraordinary Items	3.90	2.19	1.65	1.59	1.61	2.06
Price/Book Value	46%	35%	29%	29%	29%	18%

Figure 4-8

The case brought before the Court was one where the parties had stipulated the freely traded values of Big M. These values are reproduced in Figure 4-8 above with certain relative valuation multiples for perspective. Also shown in the Figure are the range of marketability discounts presented to the Court, together with the Court's conclusions followed by per share and relative valuation calculations based on the Court's conclusions (which were the same as Mallarkey's) and then similar calculations based on Grabowski's recommendations to the Court.

What happened in *Mandelbaum*? It is quite possible that the Court made relative valuation calculations as shown above and simply decided that the valuation multiples implied by Grabowski's conclusions were too low. The highlighted area of Figure 4-8 shows the implications of Grabowski's concluded marketability discounts. The nonmarketable minority interest values implied by his conclusions represent:

- Price/earnings multiples on net income of 3.5x (fiscal 1986) and 2.2x (fiscal 1987) based upon the most recent fiscal year's earnings before extraordinary items. After fiscal year 1987, Grabowski's discounts applied to the stipulated freely traded values yielded price/earnings multiples in the range of 1.6x to 2.1x (after adjusting earnings to a C corporation equivalent before extraordinary items after the S-election was made).
- Price/book value multiples ranging from a high of 46% (the 1986 valuation date) to 18% of book value (for the December 1990 valuation date).

If the Court made these calculations, it might have concluded: Too low. Seems unreasonable. The Court may also have made similar calculations for the freely traded (and stipulated) values and drawn a similar conclusion, particularly for the last two valuation dates.[58] We cannot know, of course, if this actually happened. However, I have said for many years that appraisers have an obligation to the readers and users of appraisal reports to show why their conclusions are reasonable, based upon relative value comparisons as indicated above, or in whatever other way is appropriate in particular cases.[59] Unfortunately, Grabowski's report did not include any tests of reasonableness.

If the Court had simply agreed with the evidence on restricted stock studies and pre-IPO studies presented by Mallarkey and Grabowski, and concluded that Mallarkey's 30% marketability discount was the more reasonable of the two, much of the detailed analysis that precedes and follows this section would have been unnecessary. However, the Court elected to write an "appraisal."

A Personal Sidebar

I engage in this exercise regarding *Mandelbaum* with some trepidation. However, I do so with the same skills as a financial analyst and business appraiser with which I have reviewed hundreds of appraisal reports prepared by appraisers outside of Mercer Capital. In essence, the Court has conducted an "appraisal" of its own after dismissing or severely criticizing the appraisals presented to it for consideration. The Court's "appraisal" is subject to review just like any other appraisal. I make this analysis with all due respect to the Tax Court and every other court, and hope that it, in conjunction with the other content of this book, will lead to a deepening

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[58] As we indicated in Chapter 1, no valuation premium or discount has any meaning unless the base to which it is applied is specified. The marketability discount is applicable to the marketable minority interest or freely traded level of value. If the Court perceived for any reason that the stipulated freely traded values were too low, it could have a natural resistance to doubling up with what it perceived as an aggressive marketability discount.

[59] See Mercer, *Valuing Financial Institutions,* p. 288 for the following:

> In my judgment, appraisal conclusions should include a "proof" of the reasonableness of the appraiser's opinions. The proof can consist of simple comparisons with comparative reference points, including:
>
> 1. The price/earnings multiple or range of the selected comparable (guideline) group.
> 2. The price/book value multiples or range of the comparable group.
> 3. Other market multiples developed from the comparable group, including price/sales ratios, price/assets, dividend yields, price/pre-tax income multiples, price/cash flow multiples, etc.
> 4. Comparisons with actual transactions in the company's stock.
> 5. Comparisons with transactions multiples involving similar companies
> 6. Other comparisons that can help the reader understand the reasonableness of the conclusion(s).
>
> Comparisons such as these help the reader and the appraiser place the conclusion of the report into a context that both should be familiar with after reading the report. If the valuation conclusions stands out by way of relative comparison as particularly high or low, the appraiser and the reader should be comfortable that this relative comparison is reasonable in light of the total analysis of the report.

understanding of important issues facing the courts, business appraisers and business owners.

The Court's Conclusion - 2

In ascertaining the marketability discounts, the Court delineated nine factors to consider:[60]

1. Financial statement analysis
2. Company's dividend policy
3. Nature of the company, its history, its position in the industry and its economic outlook
4. Company's management
5. Amount of control in transferred shares
6. Restrictions on transferability of stock
7. Holding period for the stock
8. Company's redemption policy
9. Costs associated with making a public offering

The Court's Benchmark Range

The Court relied upon Grabowski's analysis of restricted stock studies and pre-IPO studies in establishing a benchmark range of 35% to 45% to compare the other nine factors:

> We find that the 10 studies analyzed by Grabowski are more encompassing than the three studies analyzed by Mallarkey. Because Grabowski's studies found that the average marketability discount was 35 percent, and that the average discount for the IPOs is 45 percent, we use these figures as benchmarks of the marketability discount for the shares at hand.[61]

The "benchmark range" became an indication of some type of average discount for purposes of the opinion. And, based upon the noted studies, the *averages* are within the stated ranges. However, as we saw in Chapters 2 and 3, in real transactions, there

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[60] The decision lists ten factors; however, the first factor, "Private versus public sales of the stock," is the development of the "benchmark range" of marketability discounts to which each of the remaining nine factors is compared.

[61] *Mandelbaum*, p. 2867.

is a wide variation in the actual observations studied (see Figure 2-10 and Figure 3-10 for visual confirmation).

The Court should be applauded for developing an analysis that attempts to gauge how far a particular marketability discount should be from the range of averages for the studies.[62] However, there are problems with the Court's analysis that lead, in my opinion, to an understatement of the appropriate marketability discounts.[63]

For each of the factors discussed below, the Court's conclusion is noted and its rationale is critiqued. At the conclusion of each section, my own conclusion, based upon detailed review of the case, is also provided. At the conclusion of this discussion of the Court's nine factors, we will provide, without further discussion, an approximate quantification of the Court's conclusion (Exhibit 4-1) and an alternative analysis that considers the implications of the problems raised in this discussion (Exhibit 4-2).

Factor 1: Financial Statement Analysis

The Court concluded that the financial position and outlook for Big M would lead to a *below-average* marketability discount. Several points should be noted about this analysis.

First, the parties stipulated to a freely traded value. The Court's discussion reviewed Big M's historical performance, financial position, and outlook, factors that should have been considered in the valuations at the freely traded level of value.

Second, the Court's written opinion overlooked the significantly deteriorating financial performance seen in Figure 4-7 and briefly discussed above. For example, the Court noted that Big M's net income exceeded $6.1 million for each fiscal year from 1987 to 1990.[64] The Court did not note that the Company became an S corporation effective after fiscal year 1987, rendering net income not comparable going forward, nor that net income in fiscal year 1988 was bolstered by $6.6 million in extraordinary (non-recurring items), nor that the $6.1 million net income was for fiscal year 1990,

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[62] Recall from Chapter 3 that pre-IPO discounts are measuring the net impact of several other factors, in addition to marketability. And recall further that both the restricted stock studies and the pre-IPO studies deal with transactions in shares of companies that either are public (and the restrictions will lapse) or will be public within five months (and the shares will be marketable or subject to the same restrictions placed on restricted shares).

[63] This statement assumes, of course, a reasonable stipulation of freely tradable value, and is based upon the facts as presented in the case.

[64] The Court's analysis looks only at Big M. Generally, companies are compared to themselves over time, to appropriate private or public peer groups, or to other market-based benchmarks.

the last year of the period.[65] The Court then noted that Big M's net income exceeded $1.4 million for fiscal year 1991. In other words, income before extraordinary items was falling precipitously between fiscal years 1989 and 1991.

Based on a cursory reading of the Court's financial analysis, it would appear that the Company was quite attractive on a financial basis. Clearly, however, Big M was less attractive at the end of the period of analysis than at the beginning. Figure 4-9 displays reported pre-tax income and the pre-tax margin on sales (before extraordinary items) for the fiscal years ending (July) 1985 through 1991.

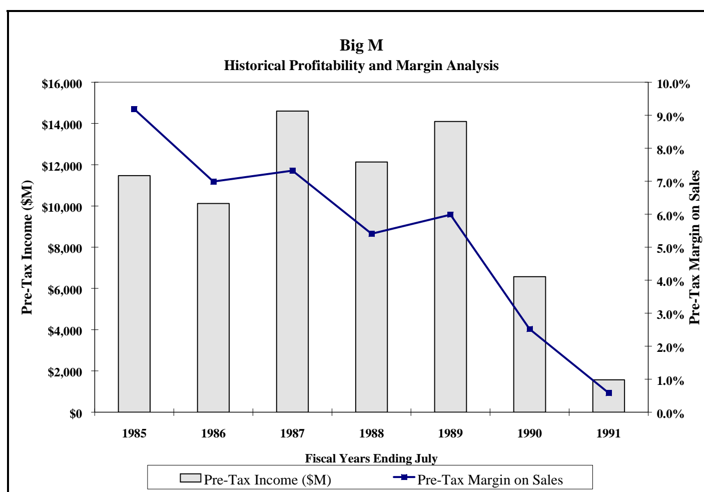

Figure 4-9

The Court concluded its financial analysis with the following:

> Given the additional fact that Big M's stores are widely recognized in the industry, we conclude that these factors favor a below-average marketability discount for stock in Big M on each of the six valuation dates.[66]

Clearly, however, Big M was becoming increasingly less attractive, based on reported earnings and margins over the period.

At best, the Court could be using a "general attractiveness" argument as an element influencing the marketability discount. Since the financial results and outlook are key components of underlying valuations at the freely traded level, appraisers need to be careful when carrying these elements over to the determination of

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[65] The net income of a C corporation and of an otherwise identical S Corporation differ by the amount of federal taxes paid by the C corporation.

[66] *Mandelbaum,* p. 2868.

marketability discounts. The most logical place to consider "general attractiveness" in developing marketability discounts is in the required holding period return, or discount rate to be applied to shareholder/investor cash flows (dividends or distributions and return of principle), as is discussed in Chapter 8.

The fundamental elements of the financial analysis have already been considered in arriving at the stipulated freely traded value. Consideration of this analysis as favoring a significantly below-average marketability discount could tend to understate the appropriate marketability discount. While the sheer size of Big M, with revenues in excess of $200 million, could tend to call for a lower discount (based on the restricted stock studies), this factor must be considered in the context of financial performance, which, for Big M, had been deteriorating for several years.

My interpretation of the Court's financial analysis factor in the context of the Court's analysis would likely call for a modestly below-average comparison (to the benchmark range of discounts) in the early years reflected in Figure 4-9 above, deteriorating to a modestly above-average factor in the later years. However, this factor is, as noted above, included in the fundamental analysis leading to a marketable minority interest (freely tradable) value conclusion and is not directly applicable in determining the marketability discount (except as a consideration of the required holding period return).

Factor 2: Company's Dividend Policy

The Court concluded that the company's dividend policy favored a *below-average* marketability discount.

There is a confusion between dividends actually received by investors and dividend-paying capacity in the Court's consideration of dividend policy. There is also confusion over when non-dividend paying stocks are attractive relative to dividend-paying stocks. Simply put, investors do not achieve investment returns from a company's *capacity* to pay dividends. Returns are achieved from actual dividends or distributions. Rational investors are willing to trade all or a portion of their required returns for expected future growth in value, which can ultimately be liquefied. Absent significant growth prospects, low or no dividends result in a valuation penalty relative to dividend paying stocks.

Based upon the financial trends in place with Big M, it is unlikely that investors would consider the prospects for capital appreciation to be attractive for the Company, particularly toward the end of the period of analysis. Note in Figure 4-7 that the stipulated freely traded value fell from $8,675 per share as of December 15, 1989 to $4,397 per share at December 30, 1990, a reduction of nearly 50%. This does not reflect a favorable outlook for future growth prospects or shareholder distributions. Nevertheless, the fact of some historical dividends would, in the Court's framework, call for a modestly below-average marketability discount.

Factor 3: Nature of the Company

The Court concluded that the nature of the company and its outlook should lead to a *below-average* marketability discount. In so doing, factors redundant to its financial analysis were considered:

> Investors generally regard the nature of a company, its history, its position in the industry, and its economic outlook as relevant factors for determining the worth of the company's stock.[67]

These factors are clearly fundamental business elements that are considered in the valuation at the freely traded level.

> In the instant case, Big M was not the leader in its industry, its operations, however, were diversified and very profitable as of all six valuation dates. The future of Big M looked bright on each of these dates.[68]

The Court is adding to its "general attractiveness" argument from above, but the facts do not support the conclusion. In the Court's framework, my comparison to the benchmark range would imply an average discount; however, this comparison is not applicable.

Factor 4: Company Management

The Court's consideration of management called for a *below-average* marketability discount. Management was described as proven, experienced, and well-known in the industry. The Court went on to say:

> Based on its track record, an investor would have reason for confidence in Big M's management team. Big M's policy decisions have furthered the business of the company as a whole, rather than promoting the interests of only the shareholders belonging to a particular branch of the family.[69]

The quality and effectiveness of management is a fundamental valuation factor, and is considered in the valuation at the freely traded level. Management is responsible for the historical record. Performance shows a long-term trend of decline.

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[67] *Mandelbaum*, p. 2868.

[68] *Ibid.*

[69] *Ibid.*

The issue of management is yet another argument of "general attractiveness" that is properly considered in the valuation at the freely traded level, prior to the application of a marketability discount. The favorable consideration of an unfavorable trend tends to understate the marketability discount in the Court's analysis.

Since it is a reasonable expectation of investors to have competent management working on their behalf, my conclusion on the management issue is that it would lead to an average comparison in the early years of the analysis, leading to an above-average comparison as performance deteriorated. However, as with the other fundamental factors, this factor should be considered not applicable.

Factor 5: Amount of Control in Transferred Shares

The Court concluded that none of the blocks of Big M shares represented control of Big M, and that this factor should favor an average marketability discount.

Since the largest block of stock considered in *Mandelbaum* consisted of one thousand shares, representing a 10.4% interest in Big M, we have no real argument with this point in the context of the Court's framework.

Factor 6: Restrictions on Transferability of Stock

The restricted nature of the shares favored an *above-average to average* marketability discount in the Court's opinion.

When criticizing Mallarkey, the Court indicated that the Shareholders' Agreements would have a "chilling effect on prospective investors." When criticizing Grabowski, the Court disagrees that the agreements would "severely restrict" marketability, as advanced by Grabowski.[70] The Court indicated that "some consideration" of the agreements was necessary. In the Court's lexicon, simple logic requires an appropriate conclusion of above-average to the weight to be accorded to this factor.

There is more than simple logic involved. A further discussion of the Shareholders' Agreements will support this assertion. As noted above, there was a 1982 agreement and a 1988 agreement. The latter agreement contained many provisions found in the former, so we will focus on it. The provisions of the second agreement are paraphrased below:[71]

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[70] In the context of the discussion, it appears that the Court believed that most of Grabowski's analysis hinged on his comment regarding "severely restricting" marketability to reaching his conclusion of 70% and 75% marketability discounts. My reading suggests that it was only one element.

[71] *See Mandelbaum.* The caveat regarding Section 2703 noted above is repeated here.

- The agreement begins with statements to the effect that the family desires to retain control of the Company in the hands of the family in proportion to the current ownership of each family group.
- The agreement mandates who the shareholders will elect to the board of directors of Big M (Leon, Bernard, Laurence, Kenneth, Ken and Allen, all members of the Mandelbaum Family).
- Vacancies on the board must be selected by the remaining board members (not the shareholders), and any added board member must be a child or spouse of a current (i.e., before the hypothetical willing investor) shareholder.
- Shareholders can transfer shares freely to family members.
- To transfer shares outside one's family group, the shares must first be offered to other members of the same group on the same terms and conditions as offered to an outsider. This option remains open for 90 days, during which family group members can exercise right of first refusal.
- If members of the relevant family group do not take the offer, Big M has a 30 day window to exercise a right of first refusal. Big M, however, has sole discretion to pay for the stock over any length of time it desires, with a note payable to the shareholder at the prime rate.
- If Big M does not exercise its right, the shareholder can transfer the shares to an outsider. However, the purchaser must, in turn, agree to be bound by the agreement.
- Further, on the death of a shareholder, the holder's estate *may* sell the decedent's shares to Big M, in which case, Big M *must* buy (in accordance with the laws of New Jersey). However, Big M has the right to pay for the shares *at a price to be determined solely by the holders of the voting shares,* and can pay for the stock *over any length of time that Big M desires*, with interest at the prime rate.

In our experience, an agreement with these provisions has a significant chilling impact on marketability. In the first place, it is a great deal of trouble for a hypothetical willing buyer to become sufficiently informed to make an investment in a closely held company with the knowledge that one's to-be-fellow shareholders or Big M itself can nominally meet the offer, and take a total of 120 days to do it.[72] So the *next hypothetical purchaser* of the shares (when the first hypothetical willing buyer desires liquidity) must work through the same haze that he or she is working through now.

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[72] Recall the 21% discount allowed in *Mueller*, supra, when a sale of 100% of the shares of the company was pending at the date of death and actually closed 67 days later.

Next, if Big M is the purchaser, the seller has no idea when liquidity will be achieved, but can be given an apparently unsecured note for an indeterminate length of time, paying interest at the prime rate. That is not an attractive liquidity option.

Finally, even hypothetical willing buyers die (just like real buyers). As a result, the hypothetical willing buyer of Big M shares that must become subject to the 1988 Shareholder Agreement to acquire shares puts his family (or company or institution) in the position of being at the mercy of Big M to acquire liquidity for the investment should he die. This is not a risk that a rational investor will take without considerable compensation in the form of potential return. In the case of Big M, this potential compensation must come from the discount placed on the shares by the marketability discount taken from the stipulated freely traded value.

Based on this analysis, the restrictions placed on transferability must have a significant *negative* impact on marketability, and therefore should result in a substantially above-average weight for this factor in the Court's framework.

Factor 7: Holding Period for Stock

The Court considered the holding period factor to be "neutral" with respect to its concluded marketability discount. The evidence of both experts was disregarded:

> Grabowski assumed that an investor in Big M stock must hold his or her stock for 10 to 20 years. Mallarkey assumed a shorter period of 2 years. We are not persuaded by either assumption.[73]

Unfortunately, the expected holding period faced by a hypothetical or real investor is not a matter to be considered as either positive, negative, or neutral, except in the context of similar investments with differing holding periods. Most investors making investments in closely held securities do so with some expectations regarding the anticipated length of the holding period. Those expectations result from the facts and circumstances surrounding the investment and the entity that is the subject of the investment.

The facts reviewed in the Court's opinion leave little doubt that a rational investor would expect a lengthy holding period for a minority investment in Big M stock. Based on the facts as presented, I would not consider any holding period shorter than the five to ten year range, and Grabowski's assumption of a 10 to 20 year holding period is certainly supported by the facts.[74] The holding period factor

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[73] *Mandelbaum,* p. 2869.

[74] In fact, his analysis did cover a holding period range of 5 to 20 years. The reader is again referred to the discussion surrounding Figure 8-5, which simulates the thinking of hypothetical investors, for further support of these assertions.

should be accorded a significantly above-average contribution to the marketability discount in the Court's framework.

Factor 8: Company's Redemption Policy

Noting that the record did not indicate whether Big M had set a redemption policy, the Court cited one redemption of 900 shares (representing an estimated 8.5% of the shares then outstanding) "in or about 1974."[75] The Court concluded that the company's redemption policy favored a *below-average* marketability discount.

The sole redemption occurred about 12 years prior to the earliest valuation date in the case, and 16 years prior to the latest valuation date. The Court's discussion on the issue stated:

> Big M did so [the redemption] because Bernard [one of the founding Mandelbaums] needed the money to settle a divorce from his former spouse. We also know that the Shareholders' Agreements give Big M the right to purchase its shares before a buyer outside of the Mandelbaum family may do so and do not set a price for these shares.
>
> Given that Big M has previously redeemed shares for the sole benefit of one of its shareholders, we find nothing that would prevent it from later redeeming the shares of a seller at their freely traded value (or greater) in order for Big M to remain family owned. We believe that a hypothetical willing buyer or seller would consider Big M's prior redemption in a favorable light when viewing the price that he or she would assign to the shares.[76] [parentheticals added]

A single redemption from a family member some 12 to 16 years prior to the valuation dates, and eight years prior to the signing of the first of the shareholders' agreements discussed above, would seem to provide little comfort to a hypothetical willing investor that his or her shares might be redeemed on a favorable basis at any time in the future.

The point is that, in the absence of a history of redemptions or share repurchases at prices favorable to minority shareholders, the implicit policy must be interpreted as *no policy*. There is little in the record to provide the hypothetical willing buyer with any comfort or assurance that any repurchase program will be available should he or she desire or require liquidity at any point in the future.

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[75] No pricing or relative pricing information was provided in the opinion.

[76] *Mandelbaum,* p. 2869.

I have to disagree with the Court's conclusion and must conclude that the absence of historical redemptions provides little comfort that the Company will be a source of liquidity (on a favorable basis or any basis) for a hypothetical willing investor. Nevertheless, only a relatively few private companies have active repurchase programs at reasonable pricing for minority shareholders, so this factor should therefore be considered about average in the Court's framework.

Factor 9: Costs Associated with Making a Public Offering

The Court concluded that costs associated with a public offering of shares favored an *above-average to average* marketability discount.

> Investors consider the costs associated with making a public offering in determining the value of unlisted stock. An above-average to average discount is warranted if the buyer completely bears the cost of registering the purchased stock. The discount is lessened, however, to the extent that the buyer has the ability to minimize his or her registration costs. Registration costs may be minimal to the buyer, for example, if he or she has the right to compel the corporation to register (or otherwise "piggy-back") the unlisted shares at its expense.[77]

The Court's analysis indicates some misunderstanding of the nature of public offerings. For a company the size of Big M (at least in the years prior to fiscal year 1990), the costs of flotation, including brokerage commissions and the expenses of the offering, might run on the order of 10% of the funds raised in an IPO, plus or minus, depending upon circumstances and the size of the offering. This book has not considered cost of flotation as an important element in determining marketability discounts because under the most optimistic interpretation, such costs would account for only a small portion of any marketability discount, particularly if discounts at or near the Court's benchmark range are appropriate. And keep in mind that the costs associated with making a public market are only relevant to companies that can viably make an initial public offering.

The Court also appears to misunderstand that, even if a shareholder has "tag-along" rights to a company's IPO, and the company bears the out-of-pocket costs of the offering, the shareholder will still pay the underwriters' commission on any shares sold. If a shareholder has a right to compel a public offering, this (rare) fact alone will have a substantial mitigating impact on any marketability discount.

In any event, with costs of flotation accounting for only a small portion of "normal" marketability discounts, it hardly seems appropriate to deem that this factor would

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[77] *Ibid.*

suggest an above-average to average marketability discount for Big M, which is large enough to be a public candidate (with affirmative plans not to engage in an IPO). We consider this factor to be not applicable within the context of the Court's framework for analyzing marketability discounts.

Summary of the Analysis of the Court's Conclusion

Exhibit 4-1 at the end of the chapter provides a summary of the Court's factor analysis, making assumptions regarding the implied discount that each factor would indicate based upon the Court's characterization regarding average, above-average, or below-average. These or similar assumptions are necessary to yield a 30% concluded result from the analysis. It is also clear in Exhibit 4-1, that the concluded marketability discount would rise if factors #1, #3 and #4 are excluded from the weightings. This simple adjustment would lead to a 35% or higher marketability discount, rather than the Court's 30% conclusion.

Exhibit 4-2 provides an alternative analysis in the *Mandelbaum* framework. After correcting Exhibit 4-1 for my noted disagreements with the Court's analysis, it is clear that a considerably higher conclusion can be reached with this nonquantitative model. In the alternative analysis, a marketability discount in excess of 50% can easily and reasonably be developed when considering the Court's factors.

Additional Factors for Consideration

In the final analysis, the *Mandelbaum* decision is helpful because it focuses attention on specific factors in assessing marketability discounts. However, as should be clear from the preceding discussion, there are some problems with the case as a precedent for business appraisers or the Tax Court.

Interestingly, the Court did not at any point disagree with Grabowski's *methodology*, which was clearly a quantitative methodology.[78] Instead, the Court disagreed with Grabowski's *assumptions*, and then made certain assumptions of its own. We can summarize the discussion thus far, as follows:

- The Court appeared to disagree with Grabowski's observation that dividends had been low and erratic. However, they were low and erratic, as Figure 4-7 clearly indicates. A hypothetical willing buyer would not likely believe that regular and substantial dividends would be paid based upon the historical record. This is critical in the valuation of non-dividend paying stocks, because all of an investor's return must come from an expected future liquidity event when he or she is ultimately able to sell the shares and realize the accumulated gain (or loss).

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[78] The Court did disagree with Grabowski's process of interviewing potential investors, but we do not consider this to be a methodological disagreement.

- The Court disagreed with Grabowski's assumption of a 10 to 20 year holding period (as well as Mallarkey's implied assumption of two years or so). Unfortunately, the Court did not take a position on the holding period based upon the evidence. This is a significant flaw, since, given the basic mathematics of present value, a longer expected holding period will require a higher marketability discount and a lower value, other things being equal.
- Having disagreed with Grabowski regarding both expected future dividends and the holding period, the Court did not address the projections of future cash flows (dividends to be received during future years and expected terminal values to be received at the end of varying holding periods). Those cash flows, however, are the economic factors that drive the value of a minority interest in a nonmarketable security for the hypothetical willing investor or any rational investor.
- The Court disagreed with Grabowski's assumption regarding his discount rate range of 35% to 40%, but offered no alternative rate. Ordinarily, this is not the job of the Court; however, in this case, the Court is making an appraisal of its own, and a discount rate is required for any meaningful consideration of the impact of the expected holding period on the marketability discount.
- The Court criticized Grabowski for his failure to consider the hypothetical willing seller in his appraisal. As we will see in Chapter 6, we believe that Grabowski's model implicitly considers the hypothetical willing seller, because ultimately, the hypothetical willing seller faces the same set of economic facts seen by the hypothetical willing buyer. But, having criticized one appraisal for not considering the hypothetical willing seller, the Court failed to do the same thing.

Comparisons with *Lauder*

The Tax Court generally considers its historical cases to have value as precedent for future cases. Most business valuation cases quote prior Tax Court cases liberally as the various judges validate their positions on particular matters. In *Mandelbaum*, the Court also quoted extensively from prior cases. Interestingly, the Court did not cite *Lauder*.

The two cases differ factually at several points. *Lauder* was an estate tax matter, while *Mandelbaum* was a gift tax issue. In *Lauder,* the Court had to reach a conclusion based upon the evidence with respect to value at the freely traded level. In *Mandelbaum,* those values (for the respective valuation dates) had already been stipulated. Beyond that, however, there are several interesting similarities, including:

- Both dealt with companies that were well-known. Big M had stores that were recognizable in its region of operation, and the Lauder name, was (and is), a household word nationally and internationally.
- Both were sizable private businesses. The size and profitability of Big M has been discussed above. At the time of the 1983 valuation, The EJL Corporation, the parent of Estee Lauder, Inc. and Subsidiaries, had sales of more than $700

million, net income of some $34 million, and stockholders' equity of more than $180 million.

- Both were large enough to have engaged in an initial public offering, and both companies were adamant about retaining their private ownership status. The major operating entities of The EJL Corporation did, in fact, engage in an IPO during 1995, some 13 years after the valuation date of the case.
- Both companies had second generation family members in senior management positions, with the expectation that a third generation would rise up in the businesses. Several third generation members of the Lauder family were already working for the Lauder companies.
- Both companies had restrictive shareholder agreements designed to help assure their continuity as private companies.

Historical financial information similar to that of Figure 4-7 for Big M is provided in Figure 4-10 for Estee Lauder, Inc., which comprised substantially all the assets of EJL. A graph of historical pre-tax earnings and the pre-tax margin is provided in Figure 4-11.[79]

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[79] The financial and valuation information for Figures 4-10 and 4-11 was developed based upon information in the *Lauder* opinion as well as from historical financial information presented to the Court in the Stephens' report (which was discussed above).

Estate of Lauder

Historical Financial Perspective for Estee Lauder, Inc. and Subsidiaries

($ Thousands)

	Fiscal Periods Ending June 30						
	1976	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**
Net Sales	$226,400	$278,200	$345,300	$441,800	$535,900	$628,600	$670,900
Pre-Tax Income*	$29,000	$39,500	$53,300	$70,800	$74,800	$84,000	$83,600
Pre-Tax Margin	*12.8%*	*14.2%*	*15.4%*	*16.0%*	*14.0%*	*13.4%*	*12.5%*
Net Income	$10,300	$15,600	$20,000	$26,900	$32,300	$35,500	$34,900
Net Margin	4.5%	5.6%	5.8%	6.1%	6.0%	5.6%	5.2%
Stockholders' Equity	$48,100	$66,300	$85,000	$109,600	$128,700	$155,000	$166,800
Return on Average Equity	24.2%	30.2%	32.8%	36.7%	39.0%	37.0%	34.3%
Common Stock Dividends	$400	$200	$524	$1,117	$11,171	$7,599	$7,220
Dividend Payout Ratio	3.9%	1.3%	2.6%	4.2%	34.6%	21.4%	20.7%
Given Number of Shares							32,808

* Before minority interests in earnings of subsidiaries

	Before Discount	After 40% Discount	
Value Per Share as of January 16, 1983 per Court	$12,457	$7,474	Per Share
Impied Market Capitalization ($M)	$408,689	$245,207	
Implied Price/Earnings Multiple	11.7	7.0	
Implied Price/Book Value	245%	147%	
Implied Dividend Yield	1.8%	2.9%	

Figure 4-10

Based on even a cursory comparison of Figure 4-10 with Figure 4-7, Estee Lauder, Inc. was a much larger, more profitable company than Big M. Return on average equity rose from 24% to 39% between fiscal years 1976 and 1979, while sales nearly doubled. While the pre-tax margin declined somewhat (from a peak of 16% in 1979 to just over 11% in 1983) and sales growth moderated in 1981 and 1982, return on equity in excess of 30% was achieved in every year shown.

The same information as shown in Figure 4-9 for Big M is graphed in Figure 4-11 for Estee Lauder, Inc. below.

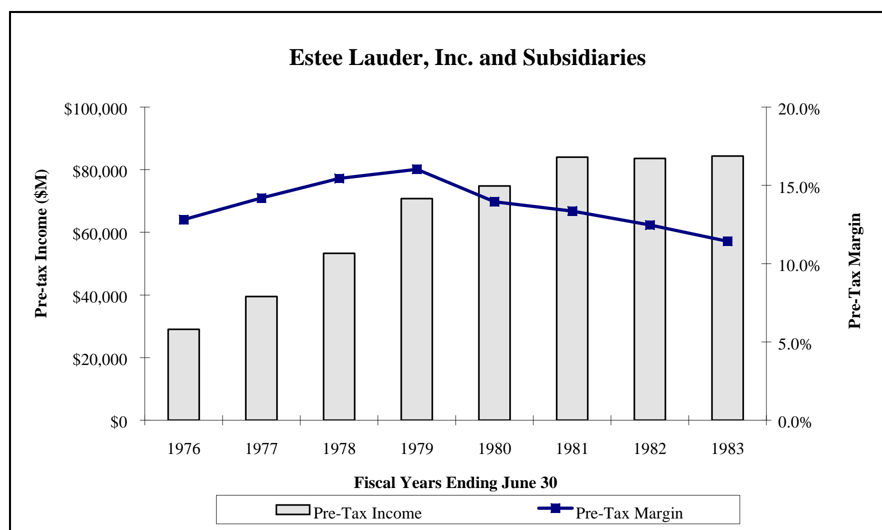

Figure 4-11

Given the facts and circumstances of the two cases, *Lauder* and *Mandelbaum*, it would appear that the marketability discount applicable to The EJL Corporation should be smaller than that applicable for Big M. By this analysis, I am not suggesting that the applicable discount in *Lauder* should be smaller. However, the relative valuation multiples for *Lauder* (Figure 4-10) are, on their face, more reasonable than those after the application of Grabowski's discounts in *Mandelbaum* (on a fact-adjusted basis) as seen in Figure 4-9.[80]

CONCLUSION

The four cases discussed in depth in this chapter illustrate a trend in judicial analysis of marketability discounts. Courts are less likely to accept generalized support for a discount which contains a mere reference to an average discount indicated by some restricted stock study or pre-IPO study. Appraisers should include a detailed analysis of the various factors affecting marketability as they relate to a subject company, and support their conclusion with relevant published evidence, quantitative analysis, and common sense. In general, appraisers should continue to follow the guidance of *Estate of Berg, Mandelbaum*, and other recent cases and develop marketability discounts in light of the specific facts of each case and in light of available market evidence.

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[80] Let me make it clear that I have valued neither Big M nor The EJL Corporation. However, I have looked at or made simple relative comparisons in thousands of appraisals. In neither case do we have adequate guideline company information to make more reasoned inferences about the valuations.

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