By **Fady F. Bebawy**

The Five Marketability Forces Framework

An approach to business valuations of non-controlling interests in privately held companies

The majority of disputes that arise from the audit of gift tax returns and estate tax returns are related to the selection of marketability discounts, commonly known as the discount for lack of marketability (DLOM). Case precedent, as well as the Internal Revenue Service, continue to challenge DLOM conclusions that are made without some subject company and subject interest customized analysis. These analyses will likely be subject to greater scrutiny and audit.

The valuation community has made a number of advancements to address this particular challenge. Let's discuss some of these advancements and consider a framework that the valuation analyst may find helpful in putting all the other forces together that contribute to the final selection of a DLOM. More importantly, the reader of the valuation analysis may find that this approach fills some gaps between the attempted customized analysis and the final DLOM selection. Accordingly, this framework may also appeal to estate-planning attorneys seeking to minimize the IRS scrutiny arising from a lack of support for the concluding DLOM.[1]

Customizing the DLOM

Historically, the analysis of the DLOM has typically involved a review of restricted stock and pre-initial public offering (IPO) studies. These studies are numerous and have been conducted over the past 30+ years. They generally suggest a range of DLOMs between 15 percent and 50 percent. Valuation analysts have long relied on these studies and simply concluded a single DLOM from this wide range. Courts and the IRS repeatedly criticized this method of single selection from a wide range.

From this single selection method emerged a number of studies that were designed to allow for some customization to be more comparable to the subject interest for which the analyst is performing a valuation analysis.

There are two databases that rely on restricted stock transactions similar to those in the many historical restricted stock studies: the FMV Restricted Stock Study[2] database and the Pluris DLOM Database.[3] A valuation analyst can search these databases by fields that can be customized based on the applicable subject company and subject interest.

The Valuation Advisors, LLC database is another one that relies on pre-IPO transactions similar to those in the historical pre-IPO studies and, like the restricted stock databases, compiles various transaction data that allow for customized searches.[4]

In addition to these transaction databases, a number of quantitative models have emerged based on option pricing models and discounted cash flow models.

While each of these customized databases and quantitative methods results in either a point estimate for the DLOM or a range of DLOMs, it's rare that the results end in the same indicated DLOM. Thus, often, the valuation analyst is left with a range of DLOMs and must select a final one. Unlike the very wide range of 35 percent (between 15 percent and 50 percent) introduced earlier, after this customized approach, the range is usually within a much more tighter set of DLOMs, usually between

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10 percent to 15 percent.[5] At this point, when the valuation analyst selects a final DLOM, he should support this selection in some way.

A New Framework

In the landmark case, *Bernard Mandelbaum, et al. v. Commissioner*,[6] Judge David Laro cited nine specific, though not exhaustive, factors for valuation analysts to consider in estimating the DLOM. Since this case, valuation analysts have, directly or indirectly, included the *Mandelbaum* factors in their DLOM analyses and conclusions. Valuation analysts have also examined additional factors as

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company specific and subject interest specific considerations have arisen on a case-by-case basis. I'll provide a framework for addressing the remaining non-quantifiable factors, like *Mandelbaum's* and others, in a way that's fairly easy to understand and apply.

This new framework adopts a well-established and widely used framework developed by Michael Porter in the 1980s and presented in his book, *Competitive Strategy*,[7] as an approach to estimate the DLOM. In his book, Porter introduces a paradigm to perform industry analysis that can be used to: (1) determine the attractiveness of a particular market, (2) develop a company's business strategy, and (3) analyze a company's competitiveness in the market. Porter's paradigm is based on five forces that he identifies as important influences of an industry and that affect a company's ultimate success or failure in it—Porter's "Five Forces."[8] (For a chart showing what these forces are and how they interact with each other, see *http://wealthmanagement.com/site-files/wealthmanagement.com/files/uploads/2015/09/bebawy-porter-5-forces.png).*

A similar and parallel examination takes place when valuation analysts estimate the DLOM. Examining the remaining non-quantifiable factors (including all the *Mandelbaum* factors and others) through a framework similar to the Five Forces—the Five Marketability Forces—may provide important insights to aid in arriving at an estimate of the DLOM that's more understandable by all users of the analyst's valuation report.

Five Marketability Forces

Let's examine the Five Marketability Forces framework in the context of examining the forces that influence the marketability, and therefore the value, or lack thereof, to potential investors of a non-controlling interest in a privately held company (the subject interest).

If we consider the estate plan along a continuum, the role of the valuation analyst is at the back end (the right side) of that continuum—when a valuation opinion is attached to a gift tax return and an estate tax return. On the other hand, the role of the estate-planning attorney is at the front end (the left side) of that continuum—designing the estate plan and executing it by, among other things, setting up legal entities and including important contractual rights and privileges in their corporate documents. As we'll see, some of these contractual rights and privileges are very important to the determination of the DLOM.

The Five Marketability Forces framework brings to light important influences that may help the valuation analyst determine where in the range of DLOMs the appropriate discount should be for the subject interest that wouldn't otherwise be apparent. That is, once the valuation analyst has performed a

customized, quantitative analysis resulting in a narrow range of DLOMs, the valuation analyst may use a framework like the Five Marketability Forces to aid in selecting a final DLOM within that range.

The Five Marketability Forces framework examines the forces, or influences, which are resident in a subject interest that directly affect the value that a hypothetical investor would place on it and would be willing to pay for it. These are:

- Supply
- Demand
- Substitutes
- Turnover
- Competition

Within each of these forces, there are factors that the analyst examines to determine how they impact the attractiveness of the subject interest (and generically, any similar hypothetical investment) to a hypothetical investor. The factors discussed below are intended to provide a sample of some of the most common factors within a particular force. The valuation analyst will determine additional factors on a case-by-case basis.

Supply

The supply marketability force refers to the extent to which, or the ease with which, the subject interest would be available for hypothetical investors to acquire. It's a measure of the "supply" of the investment to the marketplace. Supply is inherently a marketability concept, because it involves the subject interest being sold. The more readily available the subject interest is for sale to investors, the more it's marketable.

The less restrictions there are on the subject interest's sale—supply to investors—the lower the DLOM. Conversely, the more restrictions there are on the subject interest's sale, the higher the DLOM.

Note that the notion of supply as a marketability force is somewhat different from the notion of supply in economics. While the supply marketability force refers to the ability to sell (supply) the subject interest, supply in economics refers to the number (or supply) of comparable products that are available to buy. In economics, the greater the supply, the lower the price. In the DLOM, the greater the supply marketability force (that is, the less restrictions on the sale of the subject interest), the lower the DLOM.

The following factors are considered when evaluating the supply marketability force in estimating the DLOM:

- Withdrawal—ranges from the ability of the holder of the subject interest to withdraw at any time and receive the value for his holding to not being able to withdraw at all;
- Transferability—ranges from the ability of the holder of the subject interest to transfer his interest at any time and receive the value for his holding to not being able to transfer at all;
- Put rights—the holder of the subject interest may be able to sell (or put) his interest back to the company according to a prescribed formula or process, which creates a ready market to sell the subject interest;
- Company stock redemption policy—this is similar to put rights, but is typically determined by the company rather than the holder of the subject interest; and
- Time to liquidity—there's a schedule (an implied holding period) in place to sell the company.

Supply marketability is an important force and has a significant impact on the selection of the DLOM. Some valuation analysts consider the factors in this force to be the most important in determining a DLOM. All these factors, except for the time to liquidity factor, are dictated by the company's legal documents, prepared by the estate planner in conjunction with the taxpayer.

Demand

The demand marketability force refers to the extent to which the subject interest is an attractive investment for hypothetical investors to acquire. We look closely at the company itself and evaluate its strengths and weaknesses to assess the strength of this marketability force.

The more attractive the subject interest investment, the greater the demand for it and the lower the DLOM. Conversely, the less attractive the subject

interest investment, the lower the demand for it and the higher the DLOM.

The factors that impact the demand marketability force are greater in number than the supply marketability force factors. Generally, this difference is because there are many more variables that can be considered in evaluating a company and an investment than in any other marketability force.

The following factors are considered when evaluating the demand marketability force in estimating the DLOM:

- Voting rights—(as reflected in the company's legal documents) associated with the subject interest lower the DLOM;
- Veto rights—such as the right to approve certain material business transactions that require a super majority of votes (as reflected in the company's legal documents) that are associated with the subject interest will lower the DLOM;
- Authority to make business decisions—if the subject interest holder has this authority (as reflected in the company's legal documents), the DLOM will be lower;
- Access to information—having access to company information, including financial information, is important for investors, and conversely, the uncertainty of not knowing how the company is doing is prohibitive to investors;
- Distribution policy—may range from low to high income distribution rates. High distributions result in a lower DLOM;
- Financial profitability/business risk—high historical and projected profitability lowers business risk and results in a lower DLOM;
- Historical transactions in the stock—more historical transactions in the same equity type as the subject interest result in a lower DLOM;
- Volatility of financial profitability and historical transactions in the stock—more volatility results in a higher DLOM;
- Company management/business risk—a strong and experienced company management team results in a lower DLOM;
- Number of potential buyers of the subject interest—the greater the number of potentially interested buyers, the lower the DLOM; and
- IPO probability—the greater the probability of an IPO, the lower the DLOM.

The notion of the competition marketability force is similar to the notion of elasticity in economics.

Substitutes

The substitutes marketability force refers to the extent to which there are similar, substitute investments to the subject interest in the marketplace that would be attractive to hypothetical investors to buy in lieu of the subject interest.

Substitute investments in the Five Marketability Forces framework would be similar to: (1) a combination of the supplier power and substitutes (product and technology development) in the Five Forces framework, and (2) the supply curve in economics.

In the Five Forces framework, the more suppliers and substitutes of a particular product a subject company has access to as an input into its own product, the lower the supplier power and substitutes with the subject company, which would drive prices down. Conversely, the fewer suppliers and substitutes there are, the greater the supplier power and substitutes with the subject company, which would drive prices up.

In economics, the greater the supply of a certain product there is, the more the price would need to decrease to entice a buyer to acquire the product. Conversely, the fewer the suppliers of a certain product there are, the more the price would increase, as buyers have more limited options in acquiring the product they need.

The following factors are considered when evaluating the substitutes marketability force in estimating the DLOM:

- Substitute investments—the presence of a greater

number of comparable investments available to the hypothetical investor reduces the number of hypothetical investors interested in the subject interest and renders its value lower by way of a higher DLOM;

- Size—generally, a larger subject interest size results in a lower DLOM; however, if the size is considered a block size, the DLOM will be higher, because there are fewer investors in the marketplace who can acquire such an investment; and
- Percentage ownership—generally, if the subject interest represents a larger percentage in the company, its DLOM will be lower.

Turnover

The turnover marketability force reflects the possibility of events occurring in the market and industry that would affect the subject company and impact the value of the subject interest. These market and industry events impact the inherent market risk to which the subject company, and any other market participant, is exposed. This force refers to market and industry changes or shocks, which may result in: (1) bringing new entrants into the marketplace, and (2) taking out existing companies from the marketplace. Thus, these market shocks may result in a turnover, or churn, of market participants.[9]

The following factors are considered when evaluating the turnover marketability force in estimating the DLOM:

- Macro economy/market risk—companies that are subject to industry changes or market shocks are inherently more risky than other companies, thereby lowering their value by way of a higher DLOM. For example:
    - Oil and gas companies were unable to get

the debt they required to finance exploration and drilling costs in the credit crunch of 2008 and, therefore, many had to exit the marketplace.
  - As oil prices decline to a certain level, many small oil and gas companies are unable to cover their high costs and are forced to exit the marketplace; as these conditions are reversed, new companies will enter or returning companies will re-enter the marketplace.

- Regulatory environment/market risk—regulatory agencies have a significant influence on the market. Regulations can create or eliminate barriers to entry into certain markets that directly impact the viability of a company. When hypothetical investors evaluate the subject interest vis-à-vis other investment opportunities, the regulatory environment may impact the size of the DLOM they require to acquire the subject interest.

The valuation analyst must not only consider the impact of a force or factor on the DLOM, but also assess the relative impact a force or factor has, compared to others, on the DLOM.

Competition

The competition marketability force refers to the extent to which the subject interest is competing for investments from hypothetical investors. This force, as in the Five Forces framework, is central and highly impacted by the other four marketability forces.

The following factors are considered when evaluating the competition marketability force in estimating the DLOM:

- Investment concentration—the more investment opportunities are available to the hypothetical investor that are more attractive, as determined by the factors in the Five Marketability Forces, the higher the DLOM will be for the subject interest. Conversely, if there's no concentration in comparable investments, the DLOM will be lower for the subject interest; and
- Factors of the other four marketability forces—all of the factors impact competition in all of the four other marketability forces.

Elasticity of the DLOM

The notion of the competition marketability force is similar to the notion of elasticity in economics. For example, in the price elasticity of demand, any changes in price will have an inverse impact on demand. If prices are increased, the demand for a product will decrease. Conversely, as prices decrease, the demand will increase. Price is the independent variable that changes and impacts demand, the dependent variable. Similarly, the price elasticity of supply also has an inverse relationship. As the price of a good increases, the supply of the good decreases.[10] Here, price is also the independent variable that changes and impacts supply, the dependent variable.

With the DLOM, the variables are reversed. Each of the Five Marketability Forces is the independent variable, and the DLOM is the dependent variable. As a marketability force varies, the DLOM will change in response.

For example, consider the demand elasticity of the DLOM. A change in any of the factors identified in the demand marketability force will result in a change to the selected DLOM. If the distribution policy is favorable to distributing a very high percentage of excess cash and if the company has complied with this favorable distribution policy historically, the selected DLOM would be lower than it would be for a subject interest with a very low distribution policy, holding all other variables constant.

The DLOM is elastic and changes as a result of the changes in each of the Five Marketability Forces.

Impact of Forces

Some forces and factors impact the DLOM more than others. The valuation analyst must not only consider the impact of a force or factor on the DLOM, but also assess the relative impact a force or factor has, compared to others, on the DLOM.

"Five Marketability Forces," p. V30, presents a composite look at the Five Marketability Forces framework and the factors I've presented.

"Five Marketability Forces," makes clear that the supply marketability force provides the greatest opportunity for estate-planning attorneys, in conjunction with their clients, the business owners, to impact the DLOM. Because the supply marketability force represents the ability of the subject interest holder to sell his investment, many may consider it to be the most important marketability force. Some gift and estate tax valuation analysts further believe that withdrawal is the single most important factor related to the selection of the DLOM and captures much of the elements of the other factors, such as transferability, put rights and the stock redemption policy. Thus, the role estate-planning attorneys play in the wealth transfer process is great and commences at the front end of the estate plan continuum.

When dealing with the Five Marketability Forces and all their factors in estimating the DLOM, we take the perspective of the hypothetical investor who's evaluating what reasonable price to pay for the subject interest. More specifically, we're looking at the hypothetical investor who's evaluating what reasonable discount to apply to the marketable control price to acquire the subject interest.

Applying the Framework

The Five Marketability Forces framework isn't intended to be used by itself to select the DLOM. It's intended to be used after a customized analysis of the subject company and subject interest using the various studies, databases and quantitative models. It's envisioned that the customized analysis would result in a range of DLOMs so the valuation analyst would be required to arrive at a final estimated DLOM within this range. The Five Marketability Forces framework would then be used to assign the point along the range where the final estimated DLOM would lie.

Based on the Five Marketability Forces framework discussed, the valuation analyst would examine each force and all their respective factors. Once this examination is done, the valuation analyst would select whether each force would result in the selected DLOM to be at the high end, the midpoint or the low end of the DLOM range. The valuation analyst would also assign a weight to each force. The weighted average of all of the Five Marketability Forces together would be calculated and used to arrive at the final estimated DLOM.

> The Five Marketability Forces provide a framework that's both easy to use and easy to understand that bridges the gap between the DLOM range and the final estimated DLOM selection.

A simple example will serve to illustrate just one way this may be done.[11] "Final Estimated DLOM," p. V31, presents a scenario in which the valuation analyst has performed a customized analysis and determined the DLOM would fall between 30 percent and 40 percent.

For the supply marketability force, the valuation analyst determined that the factors would result in the selection of the DLOM to be 40 percent, holding all other forces constant. The 40 percent is calculated by starting at the midpoint, 35 percent, and adding the 5 percent supply marketability force selection shown on the table. The valuation analyst also assigns

a "strong" weighting (weighted 3 on a range from 1 to 3) to this force. Once this process is performed for each of the Five Marketability Forces, the weighted average Five Marketability Forces rate is calculated. This rate, 8 percent, is then added to the low end of the DLOM range, 30 percent, to arrive at the concluded DLOM of 38 percent.

The Five Marketability Forces provide a framework that's both easy to use and understand that bridges the gap between the DLOM range and the final estimated DLOM selection.

Endnotes

1. Of course, having more support than otherwise may not stave off Internal Revenue Service challenges entirely, but it's hoped that, at a minimum, the discussion, or dispute, would be about the assumptions and the analysis rather than how the valuation analyst made the leap from a discount for lack of marketability (DLOM) range, wide or narrow, to a single point estimate.
2. The methodology is discussed in the article by Kyle B. Vataha and Lance S. Hall, "A Better Approach to Determining Marketability Discounts," *Business Valuation Alert* (April 2010).
3. The methodology is discussed in the article by Espen Robak, "An Updated Approach to Determine Lack-of-Marketability Discounts," *Valuation Strategies* (May/June 2010).
4. The database is available on a subscription basis from *www.bvmarketdata.com*.
5. The range could be 15 percent to 25 percent (a 10 percent range),

Five Marketability Forces

A look at the framework and the factors

Competition
Investment Concentration

Supply	Demand	Substitutes	Turnover
Withdrawal	*Voting and Veto Rights*	Substitute Investments	Macro Economy/ Market Risk
Transferability	Make Business Decisions	Size	Regulatory Environment/ Market Risk
Put Rights	Access to Information	*Percentage Ownership*	
Stock Redemption Policy	*Distribution Policy*		
Time to Liquidity	Financial Profitability/ Business Risk		
	Management Quality/ Business Risk		
	Historical Transactions		
	Initial Public Offering Probability		
	Volatility		
	Number of Potential Buyers		

Note: Factors that estate attorneys can influence and set in the estate plan are in orange italics.

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25 percent to 40 percent (a 15 percent range), and so on.

6. *Mandelbaum, et al. v. Commissioner*, T.C. Memo. 1995-255.
7. Michael E. Porter, *Competitive Strategy—Techniques for Analyzing Industries and Competitors* (1980).
8. Though the Five Forces framework was introduced 35 years ago, it continues to be taught at undergraduate and graduate level business programs. Thus, the Five Forces remains a widely known and understood framework.
9. This turnover marketability force replaces the threat of new entrants in the Five Forces framework. This is because the threat of new entrants force in the Five Forces framework represents only new entrants into the marketplace or barriers to their entry, while the turnover marketability force in the Five Marketability Forces framework represents both new entrants into the marketplace and existing company exits out of the marketplace.
10. This shouldn't be confused with the upward sloping supply curve in microeconomics, in which price and quantity move together along the supply curve, and the number of suppliers are held constant. This restriction of fixed suppliers is relaxed in the price elasticity of supply.
11. This is just one example of how the Five Marketability Forces framework can be used to assign a point estimate for the DLOM within the DLOM range. The valuation analyst may modify the approach illustrated in "Final Estimated DLOM," this page.

Final Estimated DLOM

Apply the Five Marketability Forces to determine the specific point within the range

Application of the Five Marketability Forces Framework

Inputs			
DLOM Range [a]	30%	to	40%
FMF Range [b]	0%	to	10%
Starting DLOM (Midpoint) [c]		5%	

The Five Marketability Forces

	Supply	Demand	Substitutes	Turnover	Competition
Assignment of Force [c]					
(−5%, 0%, +5%)	5%	5%	0%	-5%	0%
Weight	Strong	Strong	Medium	Low	Medium
(1=Low, 3=Strong)	3	3	2	1	2
Weighted Average FMF Rate			8%		
Low End of DLOM Range			30%		
Concluded DLOM			**38%**		

Key: DLOM: discount for lack of marketability **FMF:** Five Marketability Forces

[a] The DLOM range is the result of the customized DLOM analysis.
[b] The FMF range considers the low end of the DLOM range as 0% and the high end of the range as the difference between the low and high of the DLOM range.
[c] The starting DLOM (midpoint) is the starting point of the FMF range. Each force is assigned a score of either −5%, 0%, +5%. For example, a −5% score for just one force (ignoring all other forces) would result in 0% along the FMF range and 30% along the DLOM Range.

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