

# Measuring the Discount for Lack of Marketability for a Controlling, Nonmarketable Ownership Interest

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*A valuation analyst often has to value a controlling ownership interest in a closely held company for various taxation-related reasons. In such analyses, the analyst may initially conclude the value of a controlling, marketable ownership interest in the subject business entity. If this is the case, the analyst may have to apply a valuation adjustment to this initial value indication in order to conclude the value of the subject controlling, nonmarketable ownership interest. This discussion considers the factors that the analyst typically considers to measure the discount for lack of marketability (DLOM) related to the valuation of a controlling, nonmarketable level of value in the closely held business ownership interest.*

## INTRODUCTION

A valuation analyst (“analyst”) often has to value closely held business ownership interests for gift tax, estate tax, and generation-skipping tax purposes. Often, the valuation subject is a controlling ownership interest in the closely held corporation or other type of business entity.

Depending on (1) the business valuation approaches and methods applied and (2) the benchmark valuation data used, the analyst may initially conclude the value of a controlling, marketable ownership interest in the subject closely held company. In that case, the analyst may have to apply a discount for lack of marketability (DLOM) valuation adjustment to the initial value indication in order to conclude the fair market value of the subject ownership interest.

The difference in the price that an investor is willing to pay for a liquid investment compared to an otherwise comparable illiquid investment may be material. This price difference is commonly referred to as the DLOM.

That is, the DLOM measures the difference in the expected price between:

1. a liquid asset (that is, the benchmark price measure) and
2. an otherwise comparable illiquid asset (typically, the valuation subject).

This discussion summarizes the following topics:

1. The considerations of investment liquidity and illiquidity
2. The various empirical and theoretical models that may be used to estimate the DLOM
3. The application of the DLOM to the valuation of a closely held business ownership interest
4. The factors that analysts consider in the selection of the DLOM

## Consideration of Investment Liquidity

The terms *marketability* and *liquidity* are sometimes used interchangeably. However, there are differences between the two terms.

*Barron's Dictionary of Business Terms* defines marketability and liquidity as follows:

**Marketability.** Speed and ease with which a particular security may be bought and sold. A stock that has a large amount of shares outstanding and is actively traded is highly marketable and also liquid. In common use, *marketability* is interchangeable with *liquidity*, but *liquidity* implies the preservation of value when a security is bought or sold.<sup>1</sup>

The investment attribute of marketability is not an either/or proposition. That is, there are varying degrees of marketability. There is a spectrum of marketability, ranging from fully marketable to fully nonmarketable.

An ownership interest of a publicly traded security can typically be converted into cash quickly, at low cost, and with certainty of price. This is the typical investment benchmark for a fully marketable investment.

At the other end of the marketability spectrum is an ownership interest in a closely held company that pays no dividends or other distributions, requires capital contributions, and limits ownership of the company to certain individuals.

Of course, there are a number of valuation-subject-specific positions in between these two extremes in the marketability spectrum.

## Typical Reasons to Apply a Valuation Adjustment

In the U.S. public capital markets, a security holder can quickly sell most publicly traded securities at or near the last public trade price. The transactions typically occurs at a very small commission cost.

By contrast, the population of potential buyers for most closely held ownership interests is a small percentage of the population of potential buyers for publicly traded securities.

In fact, it may be illegal for an individual or an issuer to sell closely held securities to the general public without first registering the security offering with either:

1. the Securities Exchange Commission (SEC) or
2. the state corporation commission.

Such a security offering registration is an expensive and time-consuming process.

Besides the problems associated with selling a closely held business ownership interest, it is also difficult to hypothecate closely held securities. That is, the value of the closely held ownership interest is further affected by the unwillingness of banks and other lending institutions to accept such securities as loan collateral.

Because of these differences in the ability to sell or hypothecate a closely held ownership interest (compared to publicly traded shares), empirical evidence suggests that the DLOM valuation adjustment may be significant.

## Baseline from Which to Apply the DLOM

In the valuation of a closely held business ownership interest, the analyst typically applies one or more of the three generally accepted business valuation approaches:

1. Market approach
2. Income approach
3. Asset-based approach

Depending on the individual valuation variables used, these three business valuation approaches may conclude value indications on either:

1. a controlling ownership interest level of value or
2. a noncontrolling ownership interest level of value.

In the typical application of the three business valuation approaches, the resulting value indications are typically concluded on a marketable ownership interest basis.

The amount of the DLOM depends on the facts and circumstances related to the subject closely held business ownership interest. This discussion summarizes the factors that an analyst typically considers in the measurement and selection of the DLOM.

Certain engagement-specific factors may also affect the appropriate magnitude of the DLOM. One engagement-specific factor that analysts consider is the particular level of value sought in the valuation engagement.

This discussion focuses on measuring the DLOM in the context of a controlling ownership interest level of value.

## ILLIQUIDITY FOR A CONTROLLING OWNERSHIP INTEREST

Controlling ownership interests suffer from illiquidity in somewhat the same way as noncontrolling ownership interests. The marketability of an ownership interest—whether controlling or noncontrolling—is determined by the ability of the owner to quickly, at low cost, and with some degree of certainty, convert the ownership interest to cash.

Numerous judicial decisions have affirmed the application of a DLOM to the valuation of a controlling ownership interest.<sup>2</sup>

This valuation adjustment is a function of both:

1. the valuation methods and the variables used and
2. the level of value that is the objective of the subject valuation.

The value of a controlling ownership interest suffers some value decrement (compared to an otherwise comparable readily marketable security).

This value decrement is due to the following two factors:

1. The absence of a ready private placement market
2. Flotation costs (which would be incurred in achieving liquidity through a public offering)

The owner faces the following transaction risk factors when attempting to liquidate the controlling ownership interest:

1. An uncertain time horizon to complete the offering or sale
2. “Make ready” accounting, legal, and other costs to prepare for and execute the offering or sale
3. Risk as to the eventual sale price
4. Uncertainty as to the form (e.g., stock or cash) of transaction sale proceeds
5. Inability to hypothecate the subject equity interest
6. Investment banker or other brokerage fees

Risk factors one through five are summarized next. A summary of risk factor six—that is, investment banker or brokerage fees—is presented below in the Cost to Obtain Liquidity Studies discussion.

## Investment Time Horizon Uncertainty

It may take months (or even years) to complete the offering or sale of a closely held controlling ownership interest. This uncertain (but considerable) time horizon contrasts with the principle of marketability.

The principle of marketability typically implies a short ownership-interest-for-cash conversion period.

## “Make Ready” Costs

As discussed below (in the Cost to Obtain Liquidity Studies discussion), there may be substantial costs:

1. to prepare the company for sale and
2. to execute the company offering or sale.

A study published in 2000 concluded that underwriter costs alone typically represent 7 percent of the deal size in an initial public offering (IPO).<sup>3</sup> These underwriter costs do not include:

1. related auditing and accounting fees;
2. legal costs to draft documents, clear contingent liabilities, and negotiate warranties; and
3. business owner administrative costs.

In “The Cost of Going Public,” Jay Ritter estimated these “other” transaction costs to be between 2.1 percent and 9.6 percent of the IPO proceeds.<sup>4</sup>

## Expected Sale Price Uncertainty

The selling controlling ownership interest holder may not achieve the expected sale price because of many factors:

1. Overstatement of the business valuation on which the expected price is based
2. Occurrence of company events during the market exposure period that cause the sale price to decrease
3. Occurrence of market events during the market exposure period that cause the sale price to decrease
4. Lack of receptivity by capital markets to companies in the subject industry
5. Lack of receptivity by capital markets to the subject company

## Expected Sale Proceeds Uncertainty

If the security sale proceeds are in a form other than cash, then the cash-equivalent transaction price

may be less than the reported transaction consideration.

Examples of the sale proceeds components that may have a cash equivalency value below face value include the following:

1. Restricted public stock
2. Seller-provided below-market financing
3. Future contingency payments
4. Future earn-out payments

## Inability to Hypothecate the Ownership Interest

Banks are reluctant to lend based on a closely held ownership interest as collateral. Accordingly, it is difficult for the closely held company owner to borrow against the expected transaction sale price.

## Investment Banker or Other Brokerage Costs

One consideration in the DLOM estimation of a controlling ownership interest is the cost to obtain liquidity studies. These DLOM studies only apply to the analysis of a controlling ownership interest. The cost to obtain liquidity studies are based on transactions of closely held controlling ownership interests.

## The Cost to Obtain Liquidity Studies

The evidence that the analyst sometimes considers to support a controlling ownership interest DLOM is summarized below.

### Transaction Costs

The various transaction costs related to the closely held controlling ownership interest sale include the following:

1. Auditing and accounting fees. These fees are incurred in preparing financial statements and related information for potential buyers and/or underwriters.
2. Legal costs. These costs are incurred in preparing documents, investigating contingent liabilities, and negotiating warranties.
3. Administrative costs (i.e., opportunity costs). These costs are related to the time committed by company owners and managers to deal with accountants, lawyers, potential buyers and/or their representatives.

4. Transaction and brokerage costs. These business broker, investment banker, or other transaction intermediary costs are sometimes referred to as “flotation costs.” When these transaction costs are expressed as a percentage of the sale price, the percentage cost is referred to as the “gross spread.”

In a study published in 1987, Jay R. Ritter analyzed the flotation costs typically incurred by the security issuer in an IPO.<sup>5</sup> These flotation cost data are summarized in Exhibit 1.

The Ritter study indicates that larger companies generally negotiate lower underwriting fees as a percent of the IPO gross proceeds.

More current flotation cost information is presented in a study conducted by Jay Ritter and Hsuan-Chi Chen published in 2000.<sup>6</sup>

In the “Seven Percent Solution,” the authors examined the price spread (i.e., the underwriter price discount) from 3,203 firm commitment IPOs from January 1985 to December 1998. The selected IPO transactions all had domestic gross proceeds of at least \$20 million before the exercise of the over-allotment option.

Exhibit 2 summarizes the results from this Ritter and Chen study.

Ritter and Chen concluded that a significant number of IPOs were completed with a gross price spread of exactly 7 percent. In the 1985 to 1987 period, 23 percent of all IPOs had a 7 percent gross price spread. Of the IPOs analyzed in the 1998 to 1994 period, the amount of transactions with a 7 percent price spread increased to 60 percent.

For 1995 to 1998, 77 percent of all IPOs had a gross price spread of exactly 7 percent. Ritter and Chen observed that the price spread is larger for smaller companies.

This evidence indicates that a reasonable underwriter price discount for an IPO is 7 percent for companies with IPO gross proceeds exceeding \$20 million.

PricewaterhouseCoopers LLP (PwC) published a study on IPO costs in September 2012.<sup>7</sup> PwC authors Martyn Curragh, Henri Leveque, and Neil Dahr examined both the costs a company incurs to make an IPO as well as the ongoing costs a company incurs to remain a publicly traded entity.

The PwC study analyzed over 380 IPO transactions between January 1, 2009, and June 30, 2012. The PwC study examined the following costs associated with the IPO transactions:

**Exhibit 1  
Ritter Study  
IPO Flotation Cost Analysis**

IPO Gross Proceeds [a] (\$Million)	Number of Transactions Considered	Underwriting Price Discount [b] (%)	Other Flotation Expenses [c] (%)	Total IPO- Related Cash Expenses (%)
<u>Firm Commitment IPO Offers</u>				
0.1–1.999999	68	9.84	9.64	19.48
2.0–3.999999	165	9.83	7.60	17.43
4.0–5.999999	133	9.10	5.67	14.77
6.0–9.999999	122	8.03	4.31	12.34
10.0–120.174175	<u>176</u>	<u>7.24</u>	<u>2.10</u>	<u>9.34</u>
All Offers	<u>664</u>	<u>8.67</u>	<u>5.36</u>	<u>14.03</u>
<u>“Best-Efforts” IPO Offers</u>				
0.1–1.999999	175	10.63	9.52	20.15
2.0–3.999999	146	10.00	6.21	16.21
4.0–5.999999	23	9.86	3.71	13.57
6.0–9.999999	15	9.80	3.42	13.22
10.0–120.174175	<u>5</u>	<u>8.03</u>	<u>2.40</u>	<u>10.43</u>
All Offers	<u>364</u>	<u>10.26</u>	<u>7.48</u>	<u>17.74</u>
<p>[a] Gross proceeds categories are nominal; no price level adjustments were made.            [b] The underwriting discount is the commission paid by the issuing firm; this is listed on the front page of the firm’s prospectus.            [c] The other expenses figure comprises accountable and nonaccountable fees of the underwriters; cash expenses of the issuing firm for legal, printing, and auditing fees; and other out-of-pocket costs. These other expenses are described in footnotes on the front page of the issuing firm’s prospectus. None of the expense categories include the value of warrants granted to the underwriter, a practice that is common with best-efforts offers.            Source: Jay R. Ritter, “The Costs of Going Public,” <i>Journal of Financial Economics</i> (January 1987): 272.</p>				

**Exhibit 2  
Ritter and Chen Study  
Analysis of the Number of IPOs, Gross Proceeds, and Gross Price Spread Percent**

IPO Gross Proceeds: IPO Transaction Date	\$20 Million–\$80 Million			\$80 Million and Up			All IPOs in the Study		
	Below 7%	Exactly 7%	Above 7%	Below 7%	Exactly 7%	Above 7%	Below 7%	Exactly 7%	Above 7%
1985–87	46%	26%	28%	76%	12%	12%	52%	23%	25%
1988–94	14%	75%	11%	90%	10%	0%	31%	60%	9%
1995–98	5%	91%	4%	71%	28%	1%	20%	77%	3%

1. Underwriter fees
2. Legal, accounting, and other fees directly attributable to the IPO

Exhibit 3 summarizes the PwC IPO cost study

The PwC study concluded that the average cost paid to the IPO underwriter ranged from 5.5 percent of gross proceeds to 6.9 percent of gross proceeds. The PwC study suggests a trend of decreasing costs as a percentage of gross IPO proceeds as the size of the IPO increases.

The PwC study quantified additional costs related to an IPO. It suggests that the total costs associated with an IPO, on a percentage of gross proceeds, is actually greater than the 5.5 percent to 6.9 percent demanded by the underwriter.

Each of the above-described cost to obtain liquidity studies concluded that larger companies can negotiate lower underwriter fees, as a percent of the IPO gross proceeds.

The PwC study presented evidence that reasonable underwriter fees range from approximately 5 percent to 7 percent, depending on the size of the IPO.

The PwC study also concluded that the additional costs associated with an IPO make the total costs, as a percentage of gross proceeds, greater than 5 percent to 7 percent.

The Ritter and Chen study presented evidence that reasonable underwriter fees are approximately 7 percent of the IPO gross proceeds. That study did not analyze companies with IPO gross proceeds of less than \$20 million.

The Ritter study did analyze companies with IPO gross proceeds under \$20 million, indicating costs of over 10 percent of the IPO proceeds for smaller transactions.

The seller of a closely held company may incur other costs in addition to:

1. the underwriter fees and
2. the “other costs” described above.

The Illiquidity for a Controlling Ownership Interest discussion above presented six factors that contribute to the controlling ownership interest DLOM.

These six factors relate to the following:

1. Uncertain investment time horizon risk
2. “Make ready” cost risk
3. Expected sale price risk
4. Expected sale proceeds risk
5. Inability to hypothecate the ownership interest
6. Investment banker or other brokerage fees.

Only factor six, investment banker or other brokerage fees, is included in the 7 percent liquidity cost measured by Ritter and Chen, and the 5 percent to 7 percent liquidity cost measured by the PwC study.

In order to measure the controlling ownership interest DLOM, analysts should consider all costs to liquidate such controlling ownership interests.

### Subject Company Risk

Another factor that may affect the controlling ownership interest DLOM is the subject company risk. Numerous studies conclude that the DLOM size is related to the stock price volatility (one measure for risk).

**“In order to measure the controlling ownership interest DLOM, analysts should consider all costs to liquidate such controlling ownership interests.”**

**Exhibit 3  
PwC Study  
Analysis of the Number of IPOs, Gross Proceeds, and Costs Associated with IPOs**

Gross Proceeds (\$ Millions)	IPO Costs (\$ Millions)						Underwriter Discount		Average Total Costs (\$ Millions)
	External Auditor Average	Legal Average	Printing Average	Registration/ Filing Average	Misc. Average	Average (\$ Millions)	(%)		
0–50	0.6	1.0	0.2	0.1	0.2	2.0	6.9	4.1	
51–100	1.0	1.5	0.3	0.2	0.4	5.1	6.8	8.5	
101–200	1.0	1.6	0.3	0.2	0.5	9.4	6.6	13.0	
201–300	0.9	2.1	0.4	0.3	0.7	15.2	6.3	19.6	
300+	1.2	2.3	0.5	0.3	0.5	23.3	5.5	28.1	



Numerous studies also attribute company size (another measure for risk) with the DLOM size.

Analysts generally agree that a large closely held company is a “safer” investment than a similar small closely held company, all other factors being equal. This conclusion is illustrated by comparing the expected rates of return on large-capitalization companies to small-capitalization companies.

Ibbotson Associates makes this comparison in the *Ibbotson SBBI 2015 Classic Yearbook*:

One of the most remarkable discoveries of modern finance is that of a relationship between company size and return. . . . The relationship between company size and return cuts across the entire size spectrum. . . . Small-cap stocks are still considered riskier investments than large-cap stocks. Investors require an additional reward, in the form of additional return, to take on the added risk of an investment in small-cap stock.<sup>8</sup>

Large companies are perceived as safer investments than are small companies. This is because larger earnings typically enable a company to:

1. withstand downturns in the economy and the subject industry and
2. capitalize on growth opportunities.

Factors in addition to size can also affect the subject closely held company risk. The following list includes some of the factors that may affect subject company risk:

- Historical financial ratios
- Historical earnings trends/volatility
- Management depth
- Product line diversification
- Geographic diversification
- Market share
- Supplier dependence
- Customer dependence
- Deferred expenditures
- Lack of access to capital markets

Each of the above factors should be examined within the context of how they affect a controlling ownership interest investor.

The analyst typically considers how each factor affects the investor’s ability to sell or liquidate the controlling ownership interest.

## SUMMARY AND CONCLUSION

An analyst is often asked to value controlling ownership interests in closely held companies for various taxation-related reasons. Depending on (1) the valuation approach and valuation method applied and (2) the benchmark valuation variable date used, the analyst may conclude the value of a controlling, marketable ownership interest in the subject company.

In such an instance, the analyst may need to apply a valuation adjustment to conclude the value of a nonmarketable, controlling ownership interest in the subject company.

This discussion summarized the factors that analysts typically consider in order to measure the DLOM for a controlling ownership interest in a closely held business.

### Notes:

1. John Downs and Jordan Elliot Goodman, eds., *Barron’s Dictionary of Finance and Investment Terms*, 6th ed. (Hauppauge, NY: Barron’s, 2003), 406.
2. See, for example: Estate of Dunn (T.C. Memo 2000-12), Estate of Jameson (T.C. Memo 1999-43), Estate of Dougherty (T.C. Memo 1990-274), and Estate of Maggós (T.C. Memo 2000-129).
3. Hsuan-Chi Chen and Jay Ritter, “The Seven Percent Solution,” *The Journal of Finance* (June 2000): 1129.
4. Jay Ritter, “The Costs of Going Public,” *Journal of Financial Economics* (January 1987): 269–281.
5. *Ibid.*: 272.
6. Chen and Ritter, “The Seven Percent Solution.”
7. Martyn Curragh, Henri Leveque, and Neil Dhar, et al., “Considering an IPO? The Costs of Going and Being Public May Surprise You,” PricewaterhouseCoopers LLP (September 2012), <http://www.pwc.com/us/en/transaction-services/publications/cost-of-ipo-september-2012.jhtml> (accessed December 4, 2014).
8. *Ibbotson SBBI 2015 Classic Yearbook* (Chicago: Morningstar, 2015), 99, 113.

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