Summaries of Restricted Stock Studies from *Valuing a Business* 5th ed.

SEC Institutional Investor Study

In a major SEC study of institutional investor actions, one topic was the amount of discount at which transactions in restricted stock (or letter stock) occurred compared with the prices of identical but unrestricted stock on the open market.[1] The most pertinent summary tables from that study are reproduced in Exhibits A19–1 and A19–2.

Exhibit A19–1 presents the price discount from stock market prices on letter stock transactions disaggregated by the market in which the unrestricted stock trades. The four categories are the New York Stock Exchange (NYSE), American Stock Exchange (AMEX), over the counter (OTC) reporting companies, and OTC nonreporting companies. A *reporting company* is a publicly traded company that must file Forms 10-K, 10-Q, and other information with the SEC. A *nonreporting company* is one whose stock is publicly traded OTC but is not subject to the same reporting requirements. A company whose stock is traded OTC can avoid becoming a SEC reporting company either by maintaining its total assets under $1 million or by keeping its number of stockholders under 500.

Because most closely held businesses (even substantial close corporations) are much smaller than typical well-known public companies, the smaller nonreporting public companies may have characteristics that are more comparable with the subject closely held business. However, since these nonreporting public companies need not report to the SEC, the analyst may have trouble obtaining annual and interim reports for them.

[1] "Discounts Involved in Purchases of Common Stock," in U.S. 92nd Congress, 1st Session, House, *Institutional Investor Study Report of the Securities and Exchange Commission* (Washington, DC: Government Printing Office, March 10, 1971, 5:2444B2456, Document No. 92–64, Part 5).

Exhibit A19–1

Table XIV–45 of SEC *Institutional Investor Study*: Discount by Trading Market

	Discount															
	15.0% to 0.0%		0.1% to 10.0%		10.1% to 20.0%		20.1% to 30.0%		30.1% to 40.0%		40.1% to 50.0%		50.1% to 80.0%		Total	
Trading Market	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**	**No. of Trans**	**Value of Purchases**
Unknown	1	$1,500,000	2	$2,496,583	1	$205,000	0	$0	2	$3,332,000	0	$0	1	$1,259,995	7	$8,793,578
NYSE	7	3,760,663	13	15,111,798	13	24,503,988	10	17,954,085	3	11,102,501	1	1,400,000	4	5,005,068	51	78,838,103
ASE	2	7,263,060	4	15,850,000	11	14,548,750	20	46,200,677	7	21,074,298	1	44,250	4	4,802,404	49	109,783,439
OTC (reporting)	11	13,828,757	39	13,613,676	35	38,585,259	30	35,479,946	30	58,689,328	13	9,284,047	21	8,996,406	179	178,477,419
OTC (nonreporting)	5	8,329,369	9	5,265,925	18	25,122,024	17	11,229,155	25	29,423,584	20	11,377,431	18	13,505,545	112	104,253,033
Total	26	$34,681,849	67	$52,337,982	78	$102,965,021	77	$110,863,863	67	$123,621,711	35	$22,105,728	48	$33,569,418	398	$480,145,572

Exhibit A19–2

Table XIV–47 of SEC *Institutional Investor Study*: Discount by Size of Transaction and Sales of Issuer

	Discount													
	50.1% or More		40.1% to 50.0%		30.1% to 40.0%		20.1% to 30.0%		10.1% to 20.0%		0.1% to 10.0%		Total	
Trading Market	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**	**No. of Trans**	**Size of Trans**
Less than 100	11	$2,894,999	7	$2,554,000	17	$19,642,364	16	$12,197,394	6	$12,267,292	9	$12,566,000	66	$62,122,049
100–999	7	474,040	2	1,221,000	0	0	1	500,000	1	1,018,500	2	3,877,500	13	7,091,040
1,000–4,999	8	4,605,505	13	8,170,747	12	10,675,150	15	9,865,951	10	9,351,738	3	2,295,200	61	44,964,291
5,000–19,999	6	1,620,015	4	1,147,305	13	25,986,008	25	27,238,210	24	21,441,347	47	12,750,481	119	90,183,366
20,000–99,999	3	605,689	3	4,372,676	6	11,499,250	8	11,817,954	18	22,231,737	17	36,481,954	55	87,009,260
100,000 or More	2	1,805,068	0	0	2	2,049,998	3	7,903,586	10	24,959,483	7	10,832,925	24	47,551,060
Total	37	$12,005,316	29	$17,465,728	50	$69,852,770	68	$69,523,095	69	$91,270,097	85	$78,804,060	338	$338,921,066

SOURCE: *Institutional Investor Study Report of the Securities and Exchange Commission*, Chapter XIV Section F.8., "Discounts Involved in Purchases of Common Stock," H.R. Doc. No. 64, Part 5, 92d Cong., 1st Sess. (1971), pp. 2444–56.

Exhibit A19–1 indicates that, compared with their free-trading counterparts, the price discounts on the letter stocks were the least for NYSE-listed stocks and increased, in order, for AMEX-listed stocks, OTC reporting companies, and OTC nonreporting companies. For OTC nonreporting companies, the largest number of observations fell in the 30% to 40% price discount range. Slightly over 56% of the OTC nonreporting companies had price discounts greater than 30% on the sale of their restricted stock—compared with the stock market price of their free-trading stock. A little over 30% of the OTC reporting companies were discounted over 30%, and over half had price discounts over 20%.

Using midpoints of the price discount range groups from Exhibit A19–1—and even including those that sold at price premiums for one reason or another—the overall mean average price discount was 25.8% and the median price discount was about the same. The study also noted, "Average discounts rose over the period January 1, 1966, through June 30, 1969," and average discounts were "27.9% in the first half of 1969."[2] For nonreporting OTC companies (which are more comparative with smaller businesses), the average price discount was 32.6%, and the median price discount again was about the same.

Since the time of the SEC study, the efficiency of the OTC market has improved considerably. This has been aided by the development of inexpensive and virtually instantaneous electronic communications and the advent of the Nasdaq system. Since the market in which restricted OTC shares will eventually trade once the restrictions expire (or are removed) is now somewhat more efficient, one would expect the differential in price discounts for restricted listed versus OTC stocks to be less pronounced. This generally has been the case.

Exhibit A19–2 presents the discounts from open market prices on letter stock transactions, disaggregated by the subject companies' annual sales volumes into six groups. Companies with the largest sales volumes tend to receive the smallest discounts, and companies with the smallest sales volumes tend to receive the largest discounts. Well over half the companies with sales under $5 million (i.e., the three smallest of the six size categories used) had price discounts of over 30%. However, this may not be a size effect but just further evidence of the influence of the trading market. This is because most of the largest companies were listed on the NYSE, by far the most liquid market at that time.

Gelman Study

In 1972, Milton Gelman published the results of his study of prices paid for restricted securities by four closed-end investment companies specializing in restricted securities investments.[3] From 89 transactions between 1968 and 1970, Gelman found that (1) both the arithmetic average and median price discounts were 33% and that (2) almost 60% of

[2] Ibid., p. 2452.

[3] Milton Gelman, "An Economist-Financial Analyst's Approach to Valuing Stock of a Closely Held Company," *Journal of Taxation* (June 1972), pp. 353–354. Copyright 1972 by Warren Gorham & Lamont, 31 St. James Avenue, Boston, MA 02116, (800) 950–1216.

the purchases were at price discounts of 30% and higher. The distribution of price discounts found in the Gelman study is presented in Exhibit A19–3.

Exhibit A19–3

Gelman Study Distribution of Price Discounts

Size of Discount	No. of Common Stocks	% of Total
Less than 15.0%	5	6
15.0–19.9	9	10
20.0–24.9	13	15
25.0–29.9	9	10
30.0–34.9	12	13
35.0–39.9	9	10
40.0 and Over	32	36
Total	89	100

SOURCE: Milton Gelman, "An Economist-Financial Analyst's Approach to Valuing Stock of a Closely Held Company," *Journal of Taxation*, June 1972, p. 354.

Trout Study

In a study of letter stocks purchased by mutual funds from 1968 to 1972, Robert Trout attempted to construct a financial model that would provide an estimate of the price discount appropriate for a private company's stock.[4] His multiple regression model involved 60 purchases and found an average price discount of 33.45% for restricted stock from freely traded stock. As the SEC study previously indicated, Trout also found that companies with stock listed on national exchanges had lower discounts on their restricted stock transactions than did companies with stock traded OTC.

Moroney Study

In an article published in the March 1973 issue of *Taxes*, Robert E. Moroney presented the results of a study of the prices paid for restricted securities by 10 registered investment companies.[5] The study reflected 146 purchases. The average price discount for the 146 transactions was 35.6%, and the median price discount was 33.0%.

Moroney points out:

> It goes without saying that each cash purchase of a block of restricted equity securities fully satisfied the requirements that the purchase price be one, "at which

[4] Robert R. Trout, "Estimation of the Discount Associated with the Transfer of Restricted Securities," *Taxes* (June 1977), pp. 381–85.

[5] Robert E. Moroney, "Most Courts Overvalue Closely Held Stocks," *Taxes* (March 1973), pp. 144–54.

> the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts." Reg. Sec. 20.2031–1(b)[6]

Moroney contrasts the evidence of the actual cash deals with the lower average price discounts for lack of marketability adjudicated in most prior court decisions on gift and estate tax cases. He points out, however, that the empirical evidence on the prices of restricted stocks was not available as a benchmark for quantifying lack of marketability discounts at the time of the prior cases. And, he suggests that higher price discounts for lack of marketability be allowed subsequently based on relevant data available.

Maher Study

Another well-documented study on lack of marketability discounts for closely held business ownership interests was performed by J. Michael Maher and published in *Taxes*.[7] Maher's analytical method was similar to Moroney's in that it compared prices paid for restricted stocks with the market prices of their unrestricted counterparts. Maher found that mutual funds were not purchasing restricted securities during 1974 and 1975, which were very depressed years for the stock market. Therefore, the data actually used covered the five-year period from 1969 through 1973. The study showed, "The mean discount for lack of marketability for the years 1969–1973 amounted to 35.43%."[8] Maher further eliminated the top and bottom 10% of purchases in an effort to remove especially high- and low-risk situations. The result was almost identical with the outliers removed, with a mean price discount of 34.73%.

Standard Research Consultants Study

In 1983, Standard Research Consultants (SRC) analyzed recent private placements of common stock to test the current ap#plicability of the SEC study.[9] SRC studied 28 private placements of restricted common stock from October 1978 through June 1982. Price discounts ranged from 7% to 91%, with a median of 45%.

[6] Ibid., p. 151.

[7] J. Michael Maher, "Discounts for Lack of Marketability for Closely-Held Business Interests," *Taxes* (September 1976), pp. 562–571.

[8] Ibid., p. 571.

[9] William F. Pittock and Charles H. Stryker, "Revenue Ruling 77–287 Revisited," *SRC Quarterly Reports* (Spring 1983), pp. 1–3.

Willamette Management Associates Study

Willamette Management Associates analyzed private placements of restricted stocks for the period January 1, 1981, through May 31, 1984. The early part of this study overlapped the last part of the SRC study, but few transactions took place during the period of overlap. Most of the transactions in the Willamette Management Associates study occurred in 1983.

Willamette Management Associates identified 33 transactions during that period (1) that could reasonably be classified as arm's length and (2) for which the price of the restricted shares could be compared directly with the price of trades in identical but unrestricted shares of the same company at the same time. The median price discount for the 33 restricted stock transactions compared with the prices of their freely tradable counterparts was 31.2%.

The slightly lower average percentage price discounts for private placements during this time may be attributable to the somewhat depressed pricing in the public stock market. This, in turn, reflected the recessionary economic conditions prevalent during most of the period of the study.

Silber Study

In a 1991 article in the *Financial Analysts Journal*, William L. Silber presented the results of his analysis of 69 private placements of common stock of publicly traded companies between 1981 and 1988.[10] He found that the average price discount was 33.75%, which is very consistent with earlier studies.

Silber examined four factors in relation to the observed discount: (i) percentage size of the block in relation to total shares outstanding, (ii) earnings, (iii) revenues, and (iv) market capitalization.

The Silber Study divided the companies into two groups. The first group consisted of private placements with a restricted stock discount below 35%, and the second group consisted of private placements with a restricted stock discount above 35%. The study found that firms with higher revenues, earnings, and market capitalization, deemed to represent characteristics of less risky companies, were associated with lower discounts. Conversely, private placements of firms with lower revenues, earnings, and market capitalizations tended to have higher discounts. Block size was found to be positively related to the discount; that is, he found that the size of the price discount tended to be higher for private placements that were larger as a percentage of the shares outstanding.

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[10] William L. Silber, "Discounts on Restricted Stock: The Impact of Illiquidity on Stock Prices," *Financial Analysts Journal* (July–August 1991), pp. 60–64.

FMV Opinions, Inc. Study

An article in the January/February 1994 issue of *Estate Planning* referenced a study by FMV Opinions, Inc., that "examined over 100 restricted stock transactions from 1979 through April 1992."[11] The FMV study found a mean price discount of only 23%.

Management Planning, Inc. Study

A detailed study of restricted public securities was conducted by the valuation firm Management Planning, Inc. This study is titled "Analysis of Private Sales of Unregistered Common Stock, January 1, 1980–December 31, 1996." The results of this study are reported in *The Handbook of Advanced Business Valuation*.[12]

There was clear size effect in the Management Planning Study, with smaller companies tending to have larger discounts, as shown in Exhibit A19–4.

[11] Lance S. Hall and Timothy C. Polacek, "Strategies for Obtaining the Largest Valuation Discounts," *Estate Planning* (January/February 1994), pp. 38–44.
[12] Robert Oliver and Roy Meyers, "Discounts Seen in Private Placements of Restricted Stock: The Management Planning, Inc., Long-Term Study (1980–1996)" (Chapter 5) in Robert F. Reilly and Robert P. Schweihs, eds. *The Handbook of Advanced Business Valuation*, (New York: McGraw-Hill, 2000).

Exhibit A19–4

Analysis of Restricted Stock Discounts by Revenue Size Based upon Data from the Management Planning, Inc. Study

Revenues	Percent of Sample	Average Revenues ($ Millions)	Average Discounts	Standard Deviations	Range of Discounts Low	Range of Discounts High
Under $10 million	28.6%	6.6	32.9%	15.6%	2.8%	57.6%
$10–$30 million	22.4%	22.5	30.8%	11.2%	15.3%	49.8%
$30–$50 million	20.4%	35.5	25.2%	15.1%	5.2%	46.3%
$50–$100 million	16.3%	63.5	19.4%	7.3%	11.6%	29.3%
Over $100 million (adjusted)*	8.2%	224.9	14.9%	10.5%	0.0%	24.1%
Overall sample averages	95.9%	47.5	27.7%	14.1%	0.0%	57.6%
*Over $100 million (actual calculation)	4.1%	187.1	25.1%	17.9%	0.0%	46.5%

NOTE: Excludes Sudbury Holdings, Inc., whose private placement consisted of 125% of the pre-transaction shares outstanding. Excludes Starrett Housing Corp. which is one of the five most thinly traded companies in the sample.

The purpose of the Management Planning restricted stock study was to compare (1) the per share prices paid in private placements of restricted stock with (2) the same company's freely traded, stock market price. The Management Planning study shows that in the vast majority of cases, restricted shares are privately placed at a lower price than the concurrent publicly traded price of the same stock. The difference in price, or discount, stems from the burden of the holding period, and resultant lack of liquidity, placed on the restricted stock. The restricted shares, it should be remembered, can be expected to have marketability after the initial two- to three-year holding period (a one- to two-year holding period for shares privately placed after April 29, 1997) and the various other Rule 144 requirements are met. In contrast, there is little likelihood that the typical privately held security will ever have the ready liquidity of a public stock or access to the infrastructure that supports our efficient public stock markets. Nonetheless, research and understanding of the discounts in private placements of restricted stock provide a good starting point for estimating the size of discounts for lack of marketability.

The private placement of restricted stock is a means by which corporations raise capital. This alternative is selected when, for reasons related to control issues, costs, or timing, it is not advantageous or practical to raise new equity capital in the already established market for a company's stock. Management Planning found three publications to be excellent sources of private placement transactions. All are now published by Securities Data Publishing (SDP), located in New York. (They were formerly published by Dealer's Digest, Inc.) Up until 1989, Management Planning reviewed *Investment Dealers Digest*. When *Investment Dealers Digest* reduced its coverage of private placements in 1989, Management Planning first switched to *Private Placement Letter* and, later, to *Private Equity Week*. Using these three publications as a source, Management Planning reviewed all the private placements that were reported from January 1, 1980, to December 31, 1996. In selecting the transactions for further analysis, they established the following initial tests, or screening.

- The company selling stock in a private placement should make its financial statements available to the public.

- The company should have a publicly held and actively traded common stock "counterpart" equal in all other respects to the unregistered stock.
- Sufficient data on the private transaction should be readily available.
- The publicly traded common stock counterpart should be selling at a price of at least $2 per share.
- The company should be a domestic corporation.
- The company should not be characterized as being in the "developmental" stage at the time of the transaction.

  In order to obtain the most meaningful group of private placement transactions that would have the most relevance to business valuation analysts, Management Planning established three additional tests that had to be met by each transaction.
- If the company issuing the restricted shares lost money in the year prior to the transaction, it was excluded.
- All start-up companies were excluded. Companies with less than $3 million in sales volume were also excluded.
- If the transaction involved restricted shares and the terms of the transaction conferred on the holder the right to register the shares for public trading, the transaction was excluded.

Management Planning reached the following conclusions about the final 53 transactions included in their study:

- The average lack of marketability discount was about 27%.
- The median lack of marketability discount was about 25%.
- These median and average lack of marketability discounts are slightly lower than the median (28%) and the average (29%) discounts of the entire prescreen group of 231 transactions.
- Only one of the 53 transactions occurred at a price equal to the market price.
- The remaining 52 transactions all occurred at lack of marketability discounts ranging from a low of 3% to a high of 58%.

Johnson Study

Bruce Johnson, of the firm Munroe, Park, & Johnson, studied 72 private placement transactions that occurred from 1991 through 1995.[13] This was the first half-decade after the Rule 144 restrictions were relaxed. The range was a 10% premium to a 60% discount, with an average discount for these 72 transactions of 20%.

The study analyzed four factors that might influence the size of the discount: (1) positive net income, (2) sales volume, (3) transaction value, and (4) net income strength. The results of his study are shown in Exhibit A19–5.

[13] Bruce Johnson, "Restricted Stock Discounts, 1991-95," *Shannon Pratt's Business Valuation Update* (March 1999), pp. 1–5.

Exhibit A19–5

Johnson Study

Total Net Income	**Avg Discount**
Negative	22.5%
$0 to $1M	26.0%
$1M to $10M	18.1%
+ $10M	6.3%
Total Sales	**Avg Discount**
$0 to $10M	23.5%
$10M to $50M	19.4%
$50M to $200M	17.7%
+ $200M	13.0%
Transaction Size	**Avg Discount**
$0 to $5M	26.7%
$5M to $10M	20.9%
$10M to $25M	17.0%
+ $25M	10.8%
Net Income Margin	**Avg Discount**
Negative	22.5%
0% to 5%	23.7%
5% to 10%	15.2%
+10%	11.6%

Source: Bruce A. Johnson, "Quantitative Support for Discounts for Lack of Marketability," *Business Valuation Review*, December 1999, pp. 152–55.

Columbia Financial Advisors Study

As of this writing, the only restricted stock study undertaken since the Rule 144 holding period was reduced to one year in 1997 is the one headed by Kathryn Aschwald at Columbia Financial Advisors, Inc. (CFA).[14]

Their study was divided into two parts: January 1, 1996, through April 30, 1997 (before the reduction in the Rule 144 holding period), and May 1, 1997, through December 31, 1998 (after the one-year holding period became effective, April 29, 1997).

They identified 23 transactions for the 1996 to April 1997 period, with discounts ranging from 0.8% to 67.5%, with a mean of 21%. For the May 1997 to December 1998 period, they identified 15 transactions, with a range of 0% to 30%, and a mean of 13%, and a median of 9%.

As explained by Kathryn Aschwald, author of the CFA study:

> 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

[14] Kathryn F. Aschwald, "Restricted Stock Discounts Decline as Result of 1-Year Holding Period," *Shannon Pratt's Business Valuation Update* (May 2000), pp. 1–5.

perfect sense that the discounts for restricted securities have generally declined since 1990 as the market (and liquidity) for theses [sic] securities has increased due to Rule 144A and the shortening of 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.[15]

LiquiStat Database

The LiquiStat database and study by Espen Robak at Pluris Valuation Advisors LLC. was reported in several papers published in 2007. The LiquiStat database is a continuously updated database of transactions in the secondary market for illiquid securities.[16] This sets LiquiStat apart from the rest of the restricted stock studies reviewed in this chapter. Of the three categories of empirical studies reviewed herein (restricted stock studies, pre-IPO studies, and studies of acquisition multiples for public vs. private companies), LiquiStat almost fits into a separate category. This is because all the other restricted stock studies measure the discounts taken in private placements: mostly very large corporate transactions where a (sometimes cash-strapped) company sells a significant portion of its shares to an investor or, most frequently, a group of investors. LiquiStat, on the other hand, analyzes discounts taken when investors not affiliated with the issuing company sell restricted stock in private transactions to other investors.

The average holding period remaining for the shares sold in the secondary market was 138 days, which is shorter than the holding periods in restricted stock private placement studies have been assumed to be. Surprisingly, therefore, the LiquiStat data shows significantly higher discounts than in other recent studies. Based on 61 transactions in plain-vanilla common equity from April 2005 to January 2007, their study found an average and median discount of 32.8% and 34.6%, respectively.[17] As explained by Espen Robak, author of the study:

> The expected illiquidity period for the shares sold in the private placement studies may be significantly and systematically understated. … PIPE investments have become highly popular partly because issuers often register the stock shortly after the private placement. When investing, PIPE buyers have fairly strong visibility over how long they will have to wait for the shares to be registered. However, those

[15] Ibid., pp. 4–5.
[16] The transactions in the LiquiStat database are made on the Restricted Securities Trading Network (RSTN), an online trading platform managed by Restricted Stock Partners of New York, NY. More information on this trading market for restricted securities is available at www.restrictedsecurities.net.
[17] Espen Robak, "Restricted Securities and Illiquidity Discounts," *Trusts & Estates* (February 2007).

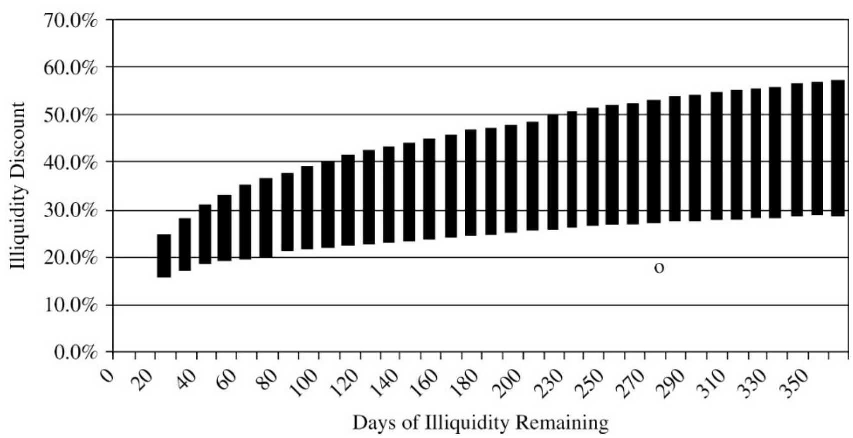
details are not always available to the authors of private placement studies. Thus, whether stock is issued with registration rights, or even a promise of registration very shortly after the placement, may be unknown. This, if true, would tend to overstate the actual expected period of illiquidity for the shares in the studies.[18]

Furthermore, the data shows that the discounts are higher for larger blocks, relative to market trading volume, shares with a greater number of days of illiquidity remaining, shares with lower share price, and riskier shares.

The LiquiStat database also provides the first-ever sample of real-world transaction data on sales of warrants.[19] The discounts for these restricted securities, which are directly comparable with the nonqualified stock options, issued by thousands of companies, are significantly higher than for restricted stock. Based on 76 transactions in illiquid warrants from April 2005 to January 2007, their study found an average and median discount of 41.5% and 44.0%, respectively. Discounts are higher for more volatile stocks, for longer times to expiration, and for options that are out-of-the-money. See Exhibit A19–6 for the LiquiStat discounts for restricted stock.

Exhibit A19–6

LiquiStat Discounts for Restricted Stocks



Source: Espen Robak, Discounts for Illiquid Shares and Warrants: The LiquiStat Database of Transactions on the Restricted Securities Trading Network." Pluris Valuation Advisors White Paper (January 2007): 30. Available at www.plurisvaluation.com/pressroom/index.htm.

[18] Espen Robak, "Lemons or Lemonade? A fresh look at restricted stock discounts," *Valuation Strategies*, (January/February 2007).

[19] Robak, supra, note 2.

Summary of Empirical Studies on Restricted Stock Transactions

The 12 empirical studies cover several hundred restricted stock transactions spanning the late 1960s through 1998. 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 19–1.

In many of the cases of restricted stock transactions tabulated in Exhibit 19–1, 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.

The Internal Revenue Service specifically recognized the relevance of restricted stock transaction data as evidence for quantification of the discount for lack of marketability in Revenue Ruling 77–287. Revenue Ruling 77–287 can be found on the online Appendix to Chapter 19.