Third Edition

The Comprehensive Guide to the Use and Application of Transaction Databases

Excerpt From:

Heidi Walker, CPA, ABV, ASA
The Comprehensive Guide to the Use and Application of the Transaction Databases

THIRD EDITION

Heidi P. Walker
CPA, ASA, ABV
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For my girls.

About the Author
Heidi P. Walker, CPA, ASA, ABV, is a director in the Business Valuation and Litigation Support Group at Meyers, Harrison & Pia LLC, a leading provider of business valuation, litigation support, economic damages, and financial forensic investigations. She has performed valuations of business interests for a variety of purposes including, but not limited to, family law matters, estate and gift tax matters, shareholder litigation, business damages, buy-sell agreements, buying and selling businesses, employee stock ownership plans, and breach of contract. Ms. Walker has spoken both locally and nationally on a variety of business valuation topics and has contributed to numerous publications on the subject of business valuation. She is a member of the American Society of Appraisers, the American Institute of Certified Public Accountants, and the Maine Society of Certified Public Accountants.
Introduction

Transactional databases provide analysts and businesses with a wealth of information about the prices of privately held companies. When determining the value of a particular company, transactional databases are one of the places analysts look to derive indications of the price at which buyers and sellers might converge.

Putting the Transaction Method in Context

To put this method of valuation in context, we begin by considering what drives value. This is a complex topic, about which thousands of books have been written and lectures have been given. Generally, they all come down to two drivers: cash flow (how much and at what rate of expected growth) and risk. In re Nellson Nutraceutical Inc., 2006 Bankr. LEXIS 3186 (Nov. 29, 2006):

At the heart of any valuation methodology is a simple task: the expert determines an appropriate metric of value and applies a multiple to that metric to determine the enterprise value of the company.

A “simple task”?! The math is simple, yes. But the part about determining the “appropriate metric of value” and determining what multiple to apply to that metric is not so simple. On one hand, the company has a historical track record of earnings. That record can be viewed, taken into consideration, and analyzed. The business owner or analyst has expectations about the future cash flow of the company, based on its past performance (assuming an established enterprise) and on market and economic analysis. Valuations are based upon this expectation of the future.

On the other hand, there is risk in achieving the cash flow expectations. That risk is expressed as a rate of return—20%, for example. A multiple is the inverse of a rate of return—a 20% rate of return equals a multiple of 5. The rate of return is the trade-off investors require to assume the risk of a particular investment. In simple terms, it expresses how long they are willing to wait until they are paid back. For example, if you tell me your company will have $100 of cash flow per year and I invest $1,000 in your company and say I will accept a 10% rate of return, then I’m willing to wait 10 years to get my money back (assuming that all I get back is dividends and that I ignore the time value of money).
Rates of return have two components: cash flow (i.e., dividends) and capital appreciation. Thus, to the extent the return is not from dividends, the investor will look to capital appreciation to help meet his or her investment objective.

Public Companies Versus Private Companies
It’s often different in closely held companies. Investors there may wear two hats: investor and employee. As employees, they seek (or should seek) a fair wage for services rendered (or, if they are not paying themselves a fair wage, the analyst should adjust it to a fair wage). As investors, they also seek a return on their investments in the company itself. That return is independent of, and unrelated to, the compensation they receive for the work they do.

Ways of Estimating Rates of Return
Business owners and analysts have many proxies that provide valuable information on the risk the market perceives in investments in general and in specific industries in particular. None is perfect. All require adjustment for any privately held company. But these proxies are an expression of returns that investors seek. Analysts generally estimate rates of return in four ways:

1. From public markets by using the capital asset pricing model (CAPM). Analysts start with composite data from the S&P 500, including a “beta” (systematic risk factor), either for an industry or a size cohort. They adjust it for small companies, then further modify it for the specific company, including growth expectations;

2. From public markets using the buildup method (which suffers from the unfortunate acronym of “BUM”). BUM is the same as CAPM, except that there is no beta. In its place is one or two adjustments, depending on the analyst, for external risk factors, including the specific company’s competitive domain;

3. From industry-specific public markets, with subsequent adjustments for size, the specific company, and expected growth. This method is called the guideline public company (GPC) method. The resulting rate of return is expressed as a valuation multiple (e.g., price-to-earnings ratio); and

4. From transaction databases, further refining it to the specific company, including expected growth. The rate of return, like the GPC method, is expressed as a multiple.

Exhibit 1 is a side-by-side comparison of these four methods.

<table>
<thead>
<tr>
<th>Adjustment:</th>
<th>Rate of Return BUM</th>
<th>Rate of Return CAPM</th>
<th>Guideline Public Company</th>
<th>Private Transaction Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Company</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Growth</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Size</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
Some analysts believe that the GPC method is not relevant for nonpublic companies. For all but the smallest segments of the market (think microcompanies, such as beauty salons, dry cleaners, and bicycle-repair shops), I believe that a properly selected group of guideline companies provides a composite rate of return that is more refined than that which can be obtained from the entire marketplace. To reduce the risk of major error, more GPCs are better than fewer.

Why Use Transactional Databases?
Of late, transactional data have occasionally been described as being more useful as a sanity check than an actual method by which to value a business. I disagree. I believe many analysts feel this way because they do not know how to use the data properly and using it is a lot harder than it looks! But consider this: Investors absolutely use it, academic research supports it, and the courts require it. For example, bankruptcy courts have generally recognized three standard methodologies in business valuation, one of which is the comparable transaction analysis. Analysts simply must understand the transactional environment in which a company operates to value it properly; we must think like investors. And we must understand the data we are using.

While use of guideline transactions theoretically requires few adjustments, as compared with public company trading multiples and rates of return, the complexity of the method arises in that each database:

- Collects data differently;
- Reports on data differently;
- Sets different tolerances for transactions included;
- Screens and refines data differently; and
- Defines financial concepts (price, earnings, etc.) differently.

As such, using the transaction databases to determine how businesses are being priced in a particular industry requires great care and attention to detail (not to mention the fact that it can consume a hefty portion of a valuation budget). We think nothing of making adjustments from a rate of return derived from the entire public market; yet, when it comes to making adjustments to a smaller slice of a more similar market, we are more hesitant. Reconciliation of the methods used can reduce the likelihood of major errors. For example, guideline public company data give the analyst perspective and insights that are not available from transactional databases. The analyst might also learn from the public markets that market multiples in a particular industry are high because of consolidation and roll-ups. That, in turn, may lead the analyst to discover who is buying and possibly even why. Likewise, transactional data can inform the analyst about aspects of transactions that matter to buyers, such as covenants, financing terms, and earnouts. All of this can bear on the valuation of a private company. In In re Hanover Direct, Inc. Shareholders Litigation (Sept. 24, 2010), the court said:

Although there is no single preferred or accepted valuation methodology under Delaware law that establishes beyond question a company’s value, there are commonly accepted methodologies
that a prudent expert should use in coordination with one another to demonstrate the reliability of its valuation. If a [DCF] reveals a valuation similar to comparable companies or comparable transaction analysis, I have more confidence that both analyses are accurately valuing a company.

Recall that our reason for looking to the public and private markets is to obtain a proxy for a rate of return—nothing more. These methods should reconcile with each other because investors in public or private companies expect returns on their cash investments. Public markets and transactional databases are where we look for guidance. The relationship of data available is seen in Exhibit 2.

As the valuation profession advances, we continue to learn about these data sets and how they should be analyzed and used in valuing private companies. Much of their current utility is in the application and reconciliation to each other. Using one source without the valuable information that might be provided by another could cause the analyst to miss critical insights in arriving at a conclusion.

As analysts of private equity, we can access many sources of information, from both public markets and private databases. Each source can inform the analyst about investment risks. All require careful analysis and adjustments before being applied to any private company.

For this text, we investigated the information provided by the transaction databases, one of the important underpinnings of a complete valuation.

In addition to understanding the valuable information the various databases provide, it is also important to understand the downside risk inherent in the use of such data. This text will undertake a comprehensive review of the advantages and disadvantages of using these data. Among the most notable:

**Advantages of the Use of Transaction Data**

- The availability and integrity of transaction data have increased dramatically in recent years;
• The data allow analysts to value companies based on prices of actual businesses that have sold in the market;
• The data are relatively easily understood by business owners, analysts, attorneys, and judges alike; and
• The mathematics involved are relatively simple.

**Disadvantages of the Use of Transaction Data**

• Use of the data can be deceptively easy: Proper use of the various transaction databases requires in-depth knowledge of each one the analyst uses, which vary in important ways; and
• Significant and costly mistakes in application of this method are common.

The transaction method is included in the market approach to business valuation. The theory behind the method is that prices of similar businesses that have sold in the marketplace can provide a reasonable approximation for the value of a company. Actual sales prices of privately or publicly owned companies in the same or a similar line of business as the company seeking a valuation are used to develop pricing multiples. These pricing multiples, typically of revenue, measure profitability or book value and are applied to the company seeking valuation to arrive at an indication of value.

This method may also be referred to as the guideline merged and acquired company method, merger and acquisition (M&A) method, direct market data method, market data method, guideline transaction method, or comparable sales method. The method is distinguished from the guideline public company method, which is predicated on trading metrics of publicly traded stocks. The guideline public company method is not covered in this guide.

The purpose of this guide is to demonstrate proper use of the data provided by the transaction databases when applying the transaction method of valuation. Although the guide provides examples of the application of the *data*, such examples are for illustrative purposes only. This guide does not address market approach *methodology*. The reader is responsible for knowledge of such methodology and application to any particular valuation engagement.

**Databases Included in This Text**

Several databases offer merger and acquisition data of public and privately owned companies. The following, used most frequently by business appraisers, will be discussed in detail in this book:

• *Pratt's Stats*—a searchable online database of sales of privately owned companies, covering both “Main Street” businesses and larger M&A transactions;
• *Public Stats*—a fully searchable public company M&A transaction database detailing transactions of 100% of public companies;
• **BIZCOMPS**—a database of transactions of private businesses, primarily small, Main Street businesses, by private buyers;

• **IBA Market Data**—a database of transactions of small to midsize businesses;

• **FactSet Mergerstat**—a database that tracks global formal transfers of ownership of at least 5% of a company’s common equity where both buyer and seller are disclosed and the transaction involves the sale of a stake in business operations as opposed to stand-alone assets;

• **DoneDeals**—a database focused on sales of private and public midmarket companies with purchase prices between $1 million and $1 billion;

• **S&P Capital IQ**—a subscription-based online platform providing extensive financial information covering a wide range of public and private companies;

• **GF Data Resources**—a searchable database that provides data on private equity-sponsored M&A transactions with enterprise values of $10 million to $250 million; and

• **ktMINE**—a database of intellectual property licensing records gathered from publicly available sources, such as the SEC database and other public websites.

The organization of the text for each chapter will provide the reader with the following information to facilitate comparison from one database to another. Note that not all of the databases fit precisely into the following format:

1. Overview;
2. Accessing the data;
3. Sample transaction report;
4. What is included in the transaction data;
5. Assets and liabilities assumed to be transferred in the deals;
6. Special issues regarding the use of the database;
7. General steps to follow when using the data; and

Throughout the text, we will refer to the “subject company” to indicate any company for which comparable transaction data are sought.

The information is provided in this consistent manner for each database so that the reader may, to the greatest extent possible, be able to cross-reference from one database to another to facilitate comparisons when using multiple databases (as many analysts do), as well as facilitate a consistent application. The databases vary widely in the number of data points they provide, the size of the
deals they report, the number of transactions available, the format in which the information is provided, and the way important terms such as “price,” “revenue,” and “earnings” are defined. Careful attention to terminology is necessary for proper application.

With the exception of BIZCOMPS, which limits the reported deal price to that paid for fixed assets and goodwill, the databases report the deals as they occurred, including whatever mix of assets and liabilities are transacted in the deal. This affects everything about how these databases are used in a valuation setting, including how multiples are selected, the utility of statistical measures, and the assets and liabilities of the subject company added to or subtracted from each once the multiple has been applied. If the transactions selected represent dissimilar bundles of assets and liabilities, each transaction multiple may need to be applied individually or in like groups and adjusted for the remaining assets and liabilities of the subject company, then compared on an aggregate basis. Alternatively, the prices might be adjusted to include only a certain group of assets and liabilities, with the remaining assets and liabilities of the subject company being adjusted after applying the multiple. This may be a quantum leap from how analysts have traditionally thought of using a group of transactions from the databases.

Given this, deals involving what we think of as “Main Street” businesses are often most appropriately used under the total market theory, since there is typically a large number of transactions for each Standard Industrial Classification (SIC) code. However, limited information is available for each transaction, making a transaction-by-transaction analysis impractical. When using these deals, the more transactions the appraiser has to work with, the better. This stems from the idea that a large sample size helps to mitigate the impact of any errors or imperfections in a few of the data points, thereby making the result statistically relevant. In this guide, we will demonstrate the use of these deals in the context of valuing a Main Street lawn and garden services business.

Middle-market and larger deals may at times be more appropriately used on a transaction-by-transaction basis because they provide a great deal of information on each transaction, and the transactions very often represent dissimilar bundles of assets and liabilities. In this guide, we will demonstrate the use of these deals in the context of valuing a middle-market company.

Also note that, depending on the size of the deal and whether the buyer and seller are public or private, the amount of information available for each deal will vary. Large transactions involving public companies will have the most complete data, while smaller deals with private buyers and sellers will often have more limited information. Even when sufficient data are not available to determine valuation multiples, the transactions can still provide meaningful information, offering insight into the level of transaction activity in the industry, as well as information about active buyers in the market. For example, in a fair value context, transactions without multiples can provide useful data on market participants in the subject company’s industry. In dispute situations, the data can be helpful in addressing questions about whether a market exists for a subject company.
In addition to the databases, rules of thumb and prior transactions of the subject company can also provide evidence of value and will be discussed in this text.

Additional topics covered will include the following:

- Defining market multiples

  Application of the transaction method is based on pricing *multiples*. Multiples are derived by dividing price by revenue, some measure of profitability, or some measure of book value. Before delving into the details of each of the transaction databases, this text will define the various pricing multiples that are typically calculated and used in valuing businesses.

- Common errors

  This chapter will point out some common errors and issues analysts should be aware of when using the transaction databases.

The transaction databases provide a rich and abundant source of information for analysts about buyers and sellers in the marketplace and the deals they are making. However, use of these databases is not uniform; each is quite unique. Creating value indications from any of the databases without being aware what the multiple comprises can lead to a materially incorrect conclusion of value. In our office, we often say that the databases tell us that a transaction happened; it is our job to understand that transaction and how it is to be used properly in our valuation. This text is designed to assist business analysts, business brokers, bankers, accountants, lawyers, judges, and others to better understand this valuable information source.

We begin with an understanding of the common terminology used to define market pricing multiples.
Chapter 1. Defining Market Value Multiples

The transaction method is based on actual transactions in the marketplace, from which pricing multiples can be created and then used to value companies in the same industry or companies with similar value drivers.

Transaction databases gather information on transactions from a variety of sources: business brokers and other intermediaries, Securities and Exchange Commission (SEC) reports, and a variety of other sources. Information includes the price paid, certain financial fundamentals about the company being acquired (the target), and various other information related to the deal. The extent and depth of information gathered varies extensively by database.

From the data gathered, pricing multiples can be developed. The formula for calculating valuation multiples is as follows:

\[
\text{Multiple} = \frac{\text{Price}}{\text{Parameter}}
\]

“Price” is typically either the price paid for the target’s equity or for its invested capital. “Parameter” is a financial statement measure of revenues, some form of profitability, or book value.

Price is typically defined as either equity or invested capital:

- “Equity” is defined as the owner’s interest in property after deduction of all interest-bearing liabilities.\(^1\),\(^2\)

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\(^1\) *International Glossary of Business Valuation Terms.*

\(^2\) In considering interest-bearing liabilities, in some cases, short-term debt is deducted, and, in others, it is not. This may extend to lines of credit, which are considered working capital. The point is not that there is a right or wrong level of debt to include in the value of invested capital, but rather for the user of the data to know what debt is included and be consistent with the company being valued.
• “Invested capital” is defined as the sum of equity and debt in a business enterprise. It can also include other forms of capital, such as preferred stock or other forms of equity or debt. Invested capital generally refers to the price paid for the assets of the business; it sometimes includes the operating assets.

The terms “equity” and “invested capital” are easily confused when applying pricing multiples. “Invested capital value” generally refers to the value of the company’s assets before the deduction of interest-bearing debt. “Equity value” generally refers to the value of the company, net of debt. This is confusing to many analysts because the definition of invested capital, as it is presented above, says “the sum of equity and debt in a business enterprise.” However, to be an invested capital price, it need not be “plus debt.” The important thing is that it is not net of debt. If debt assumed is part of the price paid, the assumption of debt is simply part of the manner in which the price was financed.

• Invested capital price equals the price paid for the assets of the business and may include operating assets and liabilities (defined as net working capital).

• Equity price equals the price paid for all assets and liabilities of the business, after deducting interest-bearing debt.

Even a price that is indicated as a “stock” or equity price may be an invested capital price, if it only represents the underlying assets (or underlying assets, including the net working capital) of the business.

Prices indicated as asset prices will be invested capital prices by definition, since they indicate the price before deduction for debt.

In deriving market multiples, the appraiser must match the sales price in the numerator (equity or invested capital) with the appropriate level of earnings in the denominator (debt-free or debt-inclusive). Generally, this means that:

• When calculating an equity multiple, an equity price should be matched with an after-debt (after interest and debt principal) level of income; and

• When calculating an invested capital multiple, an invested capital price should be matched with a predebt (before interest and debt principal payments) level of income.

Said another way, when using an equity price as the numerator, the denominator should include those returns available solely to equity holders. Likewise, when using an invested capital price as the numerator, the denominator should include returns available to both equity and debt holders.

When using the databases described in this text, common market value of equity (MVE) multiples include:

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3 International Glossary of Business Valuation Terms.
Chapter 1. Defining Market Value Multiples

- Price/earnings (net income after deductions for interest and tax);
- Price/net cash flow (net earnings, after deduction for interest and tax, and adjusted for cash flow items, including principal payments); and
- Price/EBT (earnings before taxes, but after interest expense).

Common market value of invested capital (MVIC) multiples include:

- MVIC/sales;
- MVIC/EBITDA (earnings before interest expense, income taxes, and noncash charges);
- MVIC/EBIT (earnings before interest expense and income taxes);
- MVIC/discretionary earnings (earnings before interest, taxes, noncash charges, and owner’s compensation);
  - Note that the various databases define discretionary earnings differently. Calculation of the subject company’s discretionary earnings must be consistent with the database being used.
- MVIC/debt-free cash flow (i.e., cash flow before deduction of principal or interest); and
- MVIC/debt-free net income (i.e., before deduction of interest).

The distinction between invested capital and equity prices is critical to the proper application of multiples and, as indicated earlier, is perhaps the most common and material error analysts make. When an invested capital multiple is applied, the interest-bearing debt of the subject company must be deducted from the result of the pricing multiple to arrive at a value of equity. When an equity multiple is applied, debt would not need to be deducted. Since this is such a material issue and it is often difficult to tell from the data provided, we generally recommend that analysts use invested capital multiples.

Further, invested capital multiples allow a better fit with the subject company. Equity multiples imply that the subject company has a capitalization that “fits” either an industry average or the mix that is contained in the data set. Since this is almost never the case, an invested capital multiple, in addition to avoiding the issues associated with determining whether the multiple is really equity or invested capital, allows the analyst to take into account the capital structure of the subject company.

Many considerations go into the selection of the most appropriate multiple(s) for any given company, including the reliability of the group of multiples selected (which might be determined by comparability of companies found, number of data points, consistency of data, statistical or other measures, etc.). In addition, consideration should be given to the importance and reliability of the financial parameter to which the data are going to be applied, which will ultimately impact the valuation conclusion. For example, in many small companies, earnings may be less reliable.
However, the company may be an asset-intensive business. In such a case, an asset multiple might warrant consideration.

We now turn to an in-depth analysis of the individual databases.
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