

# **IBA Market Data**

## **Sample Report**



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## IBA Market Data

IBA Market Data is the largest and most useful collection of transaction data for small to medium businesses. It is an invaluable resource for the Market Approach to valuation of privately held businesses, and now it is available without IBA membership requirements. The premier data source for the Market Approach, IBA Market Data provides more and better transaction data:

- More comps: over 33,000 comparables
- More industries: over 780 SIC codes
- More large sales: over 4,000 over \$1M
- More recent: over 5,000 from the last 5 years

With IBA Market Data, you have not only a large number of comparables across a large number of SIC / NACIS codes, but for the first time you will have access to the expanded data as well. Besides Price/Sales, Price/EBT, SIC, NAICS, Location, Annual Gross, Annual Earnings, Owner's Comp, Sales Price, Business Description, sale date, and geographic area, there are fifteen asset fields (for one year) and sixteen income statement fields (for three years). The expanded data does not exist for every transaction, but there is a significant amount of expanded data and it's growing every month.

### Web-Based Data Delivery

IBA Market Data from ValuSource is web-based, so you have no delays for shipping or installation problems. Simply point your web browser to the ValuSource data website, log in with your unique ID and password (provided with your subscription), and select IBA Market Data from the menu. A simple interface allows you to select the data you wish to use.

### Why You Need IBA Market Data

Business valuers have relied on IBA Market Data for over two decades. IBA Market Data is simply the largest collection of useful data on small business transactions. Now, in 2009, for the first time, you can use the IBA Market Data without an IBA membership. The depth and breadth of the IBA Market Data, coupled with the outstanding technical support and training from ValuSource, makes this a very valuable part of your Market Approach calculations.

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## Finding the Right Data

IBA Market Data makes it easy to zero in on the right data for your Market Approach calculations.

### Selecting an Industry

IBA Market Data defines industries by Standard Industrial Classification (SIC) codes. You can specify up to three codes at a time. IBA Market Data also allows you to search for industries by description keywords.

A. Industry  
\*ENTER 1 - 3 SIC CODES  
    
ENTER DESCRIPTION KEYWORD(S)

## Selecting a Location

IBA Market Data makes it simple to refine your search by location. You can select a state, or you can choose one of sixteen geographic areas. These areas include the regions and divisions defined by the United States Census Bureau, plus three additional commonly accepted areas.



### Census Regions

Midwest  
Northeast  
South  
West

### Census Divisions

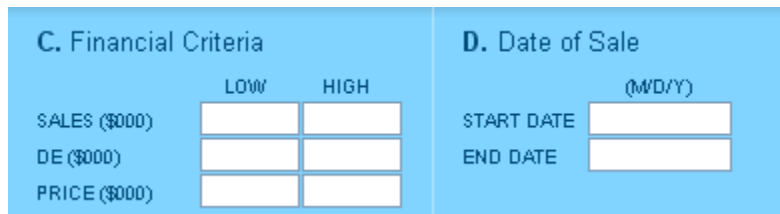
East North Central  
East South Central  
Middle Atlantic  
Mountain  
New England  
Pacific  
South Atlantic  
West North Central  
West South Central

### Other Areas

East  
Northwest  
Southwest

## Specifying Financial Criteria and Transaction Date Range

You can quickly and easily specify a range of Sales, Discretionary Earnings (DE), and/or Price. You can also specify a range for the transaction date.



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## Exporting the Data

IBA Market Data provides three ways to export the transaction records to a Microsoft® Excel workbook. You select an export option from the bottom of the screen.



- ▶ The **Data Only** option downloads just the data, with no analysis worksheets or charts. If you prefer to create your own analysis, select this option.
- ▶ The **Direct Market Data Method Report** option downloads the data plus the analysis worksheets and charts for applying the Direct Market Data Method. For more information about this option, see page 4.
- ▶ The **Transaction Analysis** option downloads the data plus analysis worksheets and charts provided by ValuSource. For more information about this option, see page 8.

# Direct Market Data Method Report

The Direct Market Data Method Report provides the data and analysis needed to apply the Direct Market Data Method. The Institute of Business Appraisers (IBA) provides detailed information about the Direct Market Data Method, including how to apply the method and its theoretical basis, on their website ([www.go-iba.org](http://www.go-iba.org)). To learn about the method, please review the tutorials under the Market Data section on the IBA home page. Each of the analysis worksheets and charts included in the report workbook are explained below.

## Extended Data

The Extended Data worksheet contains all of the data available for the downloaded transactions. A subset of this data is used in the analysis performed in the workbook.

Summary														
ID	SIC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date	SIC	Business Description	Age	Owned	F
3600	5812	Italian Restaurant	155	21	35	0.23	1.67	MA	07/01/96	5812	Italian Restaurant			
3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96	5812	Deli, Sandwich			
3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96	5812	Deli, Sandwich Shop			
3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97	5812	Deli, Sandwiches			
3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97	5812	Diner, Breakfast/Lunch			
3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97	5812	Deli/caterer			
3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97	5812	Deli, Sandwiches			
3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96	5812	Restaurant			
3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96	5812	Franchise Deli			
3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97	5812	Deli, Franchise			
3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97	5812	Family Restaurant			
3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97	5812	Deli			
3731	5812	Deli, Franchise	510	74	230	0.45	3.11	TN	07/01/97	5812	Deli, Franchise			
3786	5812	Pizza Rest.	347	61	90	0.26	1.48		08/01/97	5812	Pizza Rest.			
3792	5812	Coffee Shop	131	34	28	0.21	0.82		08/01/97	5812	Coffee Shop			
3798	5812	Restaurant	400		350	0.88			01/01/98	5812	Restaurant			
3808	5812	Drive-Thru, Carry-Out	1,000	100	160	0.16	1.60		07/01/93	5812	Drive-Thru, Carry-Out			
3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97	5812	Sandwich Shop			
4567	5812	Restaurant, full service	600		325	0.54		DC	01/01/85	5812	Restaurant, full service			
4568	5812	Restr., continental	600		200	0.33		VA	12/01/85	5812	Restr., continental			
4569	5812	Restaurant	4,193		1,700	0.41		CA	05/01/87	5812	Restaurant			
4570	5812	Dunkin Donuts	700	120	400	0.57	3.33		01/01/90	5812	Dunkin Donuts			
4571	5812	Deli	225		50	0.22		NY	05/01/91	5812	Deli			
4572	5812	Restaurant	234		155	0.66		NY	08/01/91	5812	Restaurant			
4573	5812	Restaurant	4,244	290	2,108	0.50	7.27	FL	11/01/91	5812	Restaurant			
4574	5812	Restaurant	265		350	1.32		FL	03/01/92	5812	Restaurant			
4575	5812	Restaurant	365		120	0.33		AZ	04/01/84	5812	Restaurant			
4576	5812	Restaurant Lounge	480		170	0.35		OR	04/01/84	5812	Restaurant Lounge			
4577	5812	Coffee Shop, Chain	1,400		625	0.45		WA	05/01/84	5812	Coffee Shop, Chain			
4578	5812	Sandwich Shop	35		32	0.91		CA	11/01/84	5812	Sandwich Shop			
4579	5812	Rest - independ.	350		375	1.07		MN	11/01/84	5812	Rest - independ.			
4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84	5812	Diner			
4581	5812	Deli Carry-Out	362		225	0.62		VA	01/01/85	5812	Deli Carry-Out			
4582	5812	Diner	162		35	0.22		NY	02/01/85	5812	Diner			
4583	5812	Restaurant	85		35	0.41		NY	04/01/85	5812	Restaurant			
4584	5812	Restaurant/Bar	92		25	0.27		TX	04/01/85	5812	Restaurant/Bar			
4585	5812	Restaurant/Bar	550		309	0.56		DC	04/01/85	5812	Restaurant/Bar			
4586	5812	Restaurant, steak house	572		375	0.66		TX	04/01/85	5812	Restaurant, steak house			
4587	5812	Restr-Dinner House	453		196	0.43		AZ	05/01/85	5812	Restr-Dinner House			

## Select Trans

The Select Trans worksheet shows the selection status for all of the downloaded transactions. You can manually select the transactions to analyze.

Selected	ID	STC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date
True	3600	5812	Italian Restaurant	155	21	35	0.23	1.67	MA	07/01/96
True	3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96
True	3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96
True	3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97
True	3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97
True	3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97
True	3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97
True	3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96
True	3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96
True	3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97
True	3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97
True	3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97
True	3731	5812	Deli, Franchise	510	74	230	0.45	3.11	TN	07/01/97
True	3786	5812	Pizza Rest.	347	61	90	0.26	1.48	MA	08/01/97
True	3792	5812	Coffee Shop	131	34	28	0.21	0.82	MA	08/01/97
False	3798	5812	Restaurant	400		350	0.88			01/01/98
True	3808	5812	Drive-Thru, Carry-Out	1,000	100	160	0.16	1.60	FL	07/01/97
True	3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97
False	4567	5812	Restaurant, Full service	600		325	0.54		DC	01/01/85
False	4568	5812	Restr., continental	600		200	0.33		VA	12/01/85
False	4569	5812	Restaurant	4,193		1,700	0.41		CA	05/01/87
True	4570	5812	Dunkin Donuts	700	120	400	0.57	3.33		01/01/90
False	4571	5812	Deli	225		50	0.22		NY	05/01/91
False	4572	5812	Restaurant	234		155	0.66		NY	08/01/91
True	4573	5812	Restaurant	4,244	290	2,108	0.50	7.27	FL	11/01/91
False	4574	5812	Restaurant	265		350	1.32		FL	03/01/92
False	4575	5812	Restaurant	365		120	0.33		AZ	04/01/84
False	4576	5812	Restaurant Lounge	480		170	0.35		OR	04/01/84
False	4577	5812	Coffee Shop, Chain	1,400		625	0.45		WA	05/01/84
False	4578	5812	Sandwich Shop	35		32	0.91		CA	11/01/84
False	4579	5812	Rest - independ.	350		375	1.07		MN	11/01/84
True	4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84
False	4581	5812	Deli Carry-Out	362		225	0.62		VA	01/01/85
False	4582	5812	Diner	162		35	0.22		NY	02/01/85
False	4583	5812	Restaurant	85		35	0.41		NY	04/01/85
False	4584	5812	Restaurant/bar	92		25	0.27		TX	04/01/85
False	4585	5812	Restaurant/Bar	550		309	0.56		DC	04/01/85
False	4586	5812	Restaurant, steak house	572		375	0.66		TX	04/01/85
False	4587	5812	Restr-Dinner House	453		196	0.43		AZ	05/01/85

## Trans Selected

The Trans Selected worksheet contains the selected transactions. The data used in the analysis is drawn from this worksheet. The Trans Selected worksheet is updated automatically every time you change the transactions that are selected in the Select Trans sheet. You can deselect transactions from this worksheet. To assist you in selecting outliers, the worksheet calculates the variation from mean for Sales, Discretionary Earnings (DE), Price, Price / Sales, and Price / DE.

Selected	ID	STC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date	Sales	DE	Price	Price / Sales	Price / DE
True	3600	5812	Italian Restaurant	155	21	35	0.23	1.67	MA	07/01/96	-0.71	-0.78	-0.88	-0.71	-0.88
True	3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96	-0.67	-0.83	-0.85	-0.67	-0.85
True	3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96	-0.27	0.01	-0.71	-0.27	-0.71
True	3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97	-0.43	-0.52	-0.83	-0.43	-0.83
True	3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97	-0.72	-0.51	-0.88	-0.72	-0.88
True	3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97	-0.30	-0.41	-0.54	-0.30	-0.54
True	3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97	-0.72	-0.67	-0.88	-0.72	-0.88
True	3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96	-0.62	-0.51	-0.85	-0.62	-0.85
True	3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96	-0.37	-0.45	-0.40	-0.37	-0.40
True	3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97	-0.52	-0.26	-0.73	-0.52	-0.73
True	3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97	-0.41	-0.63	-0.82	-0.41	-0.82
True	3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97	-0.86	-0.44	-0.84	-0.86	-0.84
True	3731	5812	Deli, Franchise	510	74	230	0.45	3.11	TN	07/01/97	-0.04	-0.13	-0.22	-0.04	-0.22
True	3786	5812	Pizza Rest.	347	61	90	0.26	1.48	MA	08/01/97	-0.35	-0.29	-0.69	-0.35	-0.69
True	3792	5812	Coffee Shop	131	34	28	0.21	0.82	MA	08/01/97	-0.75	-0.60	-0.90	-0.75	-0.90
True	3808	5812	Drive-Thru, Carry-Out	1,000	100	160	0.16	1.60	FL	07/01/97	0.33	0.17	-0.45	0.33	-0.45
True	3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97	-0.78	-0.87	-0.81	-0.78	-0.81
True	4570	5812	Dunkin Donuts	700	120	400	0.57	3.33		01/01/90	-0.13	0.11	-0.36	-0.13	-0.36
True	4573	5812	Restaurant	4,244	290	2,108	0.50	7.27	FL	11/01/91	7.00	2.40	6.18	7.00	6.18
True	4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84	-0.76	-0.82	-0.92	-0.76	-0.92
True	4591	5812	Deli with pizza	89	56	28	0.31	0.50	CA	04/01/86	-0.83	-0.34	-0.90	-0.83	-0.90
True	4593	5812	Restaurant	94	32	40	0.43	1.25		06/01/86	-0.82	-0.63	-0.86	-0.82	-0.86
True	4595	5812	Deli	132	46	34	0.26	0.74	NY	08/01/86	-0.75	-0.46	-0.88	-0.75	-0.88
True	4596	5812	Restaurant, Family Style	369	103	194	0.53	1.88	CA	08/01/86	-0.30	0.21	-0.34	-0.30	-0.34
True	4597	5812	Deli-Office Bldg	169	20	85	0.50	4.25	CA	09/01/86	-0.68	-0.77	-0.71	-0.68	-0.71
True	4598	5812	Restaurant	268	105	400	1.49	3.81		09/01/86	-0.49	0.23	-0.36	-0.49	-0.36
True	4599	5812	Donut Shop (Franchise)	144	31	70	0.49	2.26	CA	10/01/86	-0.73	-0.64	-0.76	-0.73	-0.76
True	4600	5812	Restaurant	625	253	645	1.03	2.55		11/01/86	0.18	1.96	1.20	0.18	1.20
True	4601	5812	Deli-gyros	197	46	83	0.42	1.80	CA	12/01/86	-0.63	-0.46	-0.72	-0.63	-0.72
True	4602	5812	Deli-retail	550	147	391	0.71	2.66	CA	12/01/86	0.04	0.72	0.33	0.04	0.33
True	4603	5812	Deli-office bldg.	422	80	450	1.07	5.63	CA	04/01/87	-0.20	-0.06	0.53	-0.20	0.53
True	4605	5812	Restaurant, Family Style	534	10	200	0.37	20.00		07/01/87	0.01	-0.88	-0.32	0.01	-0.32
True	4606	5812	Restaurant w/cocktail	285	13	160	0.56	12.31	CA	09/01/87	-0.48	-0.85	-0.46	-0.48	-0.46
True	4608	5812	Restaurant-Family	90	27	49	0.54	1.81	TN	02/01/88	-0.83	-0.68	-0.83	-0.83	-0.83
True	4609	5812	Deli-Retail	550	147	400	0.73	2.72	CA	03/01/88	0.05	0.72	-0.35	0.05	-0.35
True	4611	5812	Yogurt Store	444	107	275	0.62	2.57	CA	04/01/88	-0.16	0.25	-0.06	-0.16	-0.06
True	4612	5812	Deli W/Routes	151	47	74	0.49	1.57	CA	05/01/88	-0.72	-0.45	-0.75	-0.72	-0.75
True	4613	5812	Restaurant-Family	1,150	95	235	0.20	2.47	TN	06/01/88	1.17	0.11	-0.20	1.17	-0.20
True	4614	5812	Deli/Wholesale Pasta	320	140	145	0.45	1.04	CA	07/01/88	-0.40	0.64	-0.51	-0.40	-0.51

## Limits

The Limits worksheet calculates the 10% and 25% data points used to create the lines on the charts. The limit lines are explained in detail in the tutorials that appear on the IBA website.

Price / Sales				Price / DE			
Descending	Ascending	Number of Transactions		Descending	Ascending	Number of Transactions	
15,4167	0.0053	Total	4,268	450,0000	0.0443	Total	4,268
12,5410	0.0142	10% Rounded to Integer	427	236,1702	0.0741	10% Rounded to Integer	427
6,5000	0.0182	25% Rounded to Integer	1067	162,0000	0.0741	25% Rounded to Integer	1067
6,5000	0.0208	<b>Ratio Limits</b>		140,0000	0.0781	<b>Ratio Limits</b>	
6,4286	0.0208	10% Upper Limit	0.6471	101,0000	0.0870	10% Upper Limit	3,8636
5,8571	0.0278	10% Lower Limit	0.1863	76,0000	0.0919	10% Lower Limit	0,7778
5,3158	0.0297	25% Upper Limit	0.4886	51,0000	0.1053	25% Upper Limit	2,3810
5,1429	0.0321	25% Lower Limit	0.2629	50,0000	0.1349	25% Lower Limit	1,1111
5,0000	0.0347	<b>Chart Data</b>		48,0000	0.1714	<b>Chart Data</b>	
4,7778	0.0385	Sales	Low High	45,0000	0.1714	DE	Low High
4,6667	0.0412	10% Upper Limit Price	7 302,160	43,0000	0.1786	10% Upper Limit Price	1 22,508
3,6667	0.0417	10% Lower Limit Price	5 195,515	40,0000	0.1818	10% Lower Limit Price	4 86,963
3,3333	0.0433	25% Upper Limit Price	1 56,303	39,0909	0.2000	25% Upper Limit Price	1 17,506
3,0894	0.0433	25% Lower Limit Price	3 147,635	38,1944	0.2000	25% Lower Limit Price	2 53,590
3,0549	0.0435			37,5000	0.2000		
2,8889	0.0435			36,0000	0.2198		
2,8846	0.0441			35,0000	0.2263		
2,8809	0.0469			33,0000	0.2273		
2,7350	0.0484			32,7731	0.2273		
2,7350	0.0484			30,0000	0.2308		
2,5000	0.0484			30,0000	0.2308		
2,4444	0.0500			28,1818	0.2308		
2,3256	0.0521			28,0000	0.2375		
2,2941	0.0521			26,1538	0.2475		
2,2083	0.0528			26,0000	0.2475		
2,1065	0.0533			25,4545	0.2500		
2,1065	0.0533			25,0000	0.2532		
2,0619	0.0551			25,0000	0.2532		
2,0574	0.0556			24,4444	0.2532		
2,0574	0.0556			24,3750	0.2600		
2,0574	0.0563			23,0769	0.2600		
2,0571	0.0594			23,0000	0.2632		
1,9792	0.0594			23,0000	0.2632		
1,9763	0.0603			23,0000	0.2640		
1,8939	0.0604			21,8000	0.2642		
1,8904	0.0625			21,6842	0.2738		
1,8904	0.0625			20,8000	0.2778		
1,8692	0.0632			20,5000	0.2800		

## Tools

The Tools worksheet automates analysis tasks. You can select transactions by search criteria (such as Sales or Discretionary Earnings), sort the transactions in all of the worksheets at once, export the selected transactions to a new workbook, and more.

### Ratio Validation

Check the ratio fields for data. The tools on this sheet will only select transactions with data for these ratios:

Price / Sales

Price / DE

**PLEASE NOTE:**  
When ratio validation is turned off, you may see errors in the charts.

Apply now to the selected transactions:

[Right-Click Here](#)

### Select by Criteria

Select transactions that meet the following criteria. Blank criteria are ignored.

	Min	Max
Sales		
DE		
Price		
Price / Sales		
Price / DE		
Sale Date		
SIC		
State		
Description		

[Right-Click Here](#)

### Select Worksheets and Charts

Choose the worksheets and charts to display. If you export transactions, only the displayed charts are included in the new workbook.

[Right-Click Here](#)

### Sort Transactions

Sort the transaction data on all worksheets by these criteria:

Sort by (1)

Then by (2)

Then by (3)

Order (1)

Order (2)

Order (3)

[Right-Click Here](#)

### Select All

Select all of the transactions.

[Right-Click Here](#)

### Export Selected Transactions

Copy the selected transactions and the displayed charts to a new workbook.

[Right-Click Here](#)

[Click here for Help](#)

[Click here for Definitions](#)

**PLEASE NOTE:**  
Yellow cells respond to right-clicks.

## Statistics

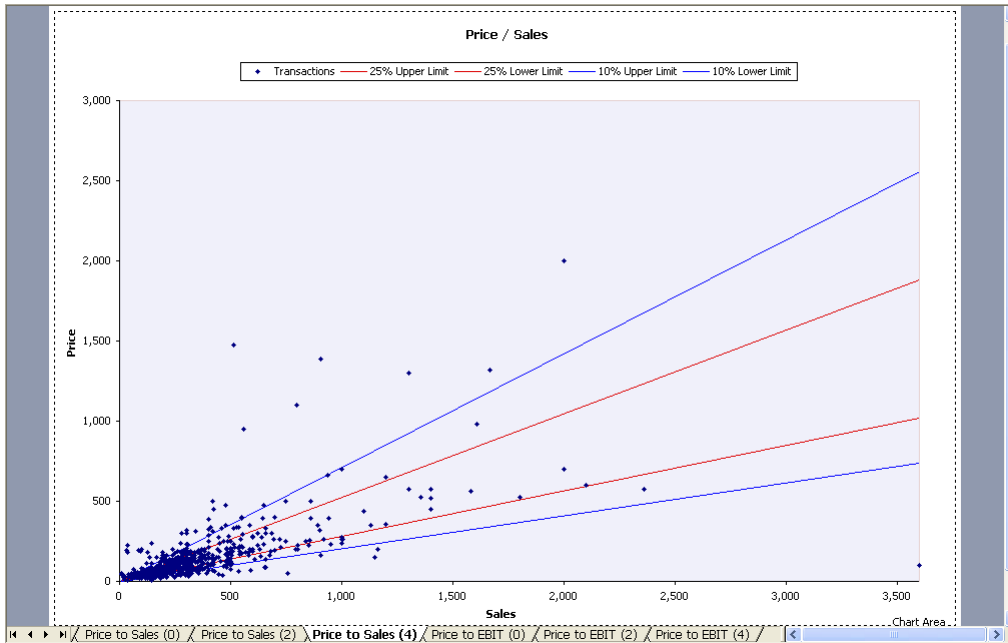
The Statistics worksheet provides two groups of statistics, one for all of the downloaded transactions, and one for the selected transactions.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1															
2		<b>All Transactions</b>													
3			<b>Sales</b>	<b>DE</b>	<b>Price</b>	<b>Price / Sales</b>	<b>Price / DE</b>								
4		Low	\$0	(\$1,400)	\$0	0.01	0.04								
5		High	\$302,160	\$22,508	\$306,000	15.42	450.00								
6		Mean	\$549	\$77	\$290	0.44	2.65								
7		Median	\$222	\$50	\$80	0.37	1.60								
8		Standard Deviation	\$6,073	\$413	\$4,753	0.49	9.22								
9		Coefficient of Variation				1.10	3.48								
10		Harmonic Mean				0.30	1.32								
11		Count	5,944	4,725	6,145	5,731	4,284								
12															
13		<b>Transactions Selected</b>													
14			<b>Sales</b>	<b>DE</b>	<b>Price</b>	<b>Price / Sales</b>	<b>Price / DE</b>								
15		Low	\$7	\$1	\$2	0.01	0.04								
16		High	\$302,160	\$22,508	\$306,000	15.42	450.00								
17		Mean	\$531	\$85	\$294	0.43	2.64								
18		Median	\$245	\$56	\$85	0.36	1.60								
19		Standard Deviation	\$5,574	\$432	\$5,322	0.46	9.23								
20		Coefficient of Variation				1.08	3.49								
21		Harmonic Mean				0.29	1.31								
22		Count	4,268	4,268	4,268	4,268	4,268								
23															
24															
25															
26															
27															
28															
29															
30															
31															
32															

## Charts

The charts show the relationship between two variables—either Price to Sales, or Price to Discretionary Earnings (DE)—with each selected transaction appearing as a point showing the transaction's values for the two variables. In addition the charts may also show the upper and lower 10% and 25% limit lines for the selected transactions. There are six charts in the workbook:

- **Price to Sales (0)** — No limit lines
- **Price to Sales (2)** — 25% limit lines
- **Price to Sales (4)** — 25% and 10% limit lines
- **Price to DE (0)** — No limit lines
- **Price to DE (2)** — 25% limit lines
- **Price to DE (4)** — 25% and 10% limit lines



## Transaction Analysis

Each of the analysis worksheets and charts included in the Transaction Analysis workbook are explained below.

## Extended Data

The Extended Data worksheet contains all of the data available for the downloaded transactions. A subset of this data is used in the analysis performed in the workbook.

Summary													
ID	STC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date	STC	Business Description	Age	Owned
3600	5812	Italian Restaurant	135	21	35	0.23	1.67	MA	07/01/96	5812	Italian Restaurant		
3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96	5812	Deli, Sandwich		
3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96	5812	Deli, Sandwich Shop		
3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97	5812	Deli, Sandwiches		
3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97	5812	Diner, Breakfast/Lunch		
3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97	5812	Deli/caterer		
3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97	5812	Deli, Sandwiches		
3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96	5812	Restaurant		
3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96	5812	Franchise Deli		
3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97	5812	Deli, Franchise		
3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97	5812	Family Restaurant		
3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97	5812	Deli		
3731	5812	Deli, Franchise	510	74	230	0.45	3.11	TN	07/01/97	5812	Deli, Franchise		
3786	5812	Pizza Rest.	347	61	90	0.26	1.48		08/01/97	5812	Pizza Rest.		
3792	5812	Coffee Shop	131	34	28	0.21	0.82		08/01/97	5812	Coffee Shop		
3798	5812	Restaurant	400		350	0.88			01/01/98	5812	Restaurant		
3808	5812	Drive-Thru, Carry-Out	1,000	100	160	0.16	1.60		07/01/93	5812	Drive-Thru, Carry-Out		
3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97	5812	Sandwich Shop		
4567	5812	Restaurant, full service	600		325	0.54		DC	01/01/85	5812	Restaurant, full service		
4568	5812	Restr., continental	600		200	0.33		VA	12/01/85	5812	Restr., continental		
4569	5812	Restaurant	4,193		1,700	0.41		CA	05/01/87	5812	Restaurant		
4570	5812	Dunkin Donuts	700	120	400	0.57	3.33		01/01/90	5812	Dunkin Donuts		
4571	5812	Deli	225		50	0.22		NY	05/01/91	5812	Deli		
4572	5812	Restaurant	234		155	0.66		NY	08/01/91	5812	Restaurant		
4573	5812	Restaurant	4,244	290	2,108	0.50	7.27	FL	11/01/91	5812	Restaurant		
4574	5812	Restaurant	265		350	1.32		FL	03/01/92	5812	Restaurant		
4575	5812	Restaurant	365		120	0.33		AZ	04/01/84	5812	Restaurant		
4576	5812	Restaurant Lounge	480		170	0.35		OR	04/01/84	5812	Restaurant Lounge		
4577	5812	Coffee Shop, Chain	1,400		625	0.45		WA	05/01/84	5812	Coffee Shop, Chain		
4578	5812	Sandwich Shop	35		32	0.91		CA	11/01/84	5812	Sandwich Shop		
4579	5812	Rest - independ.	350		375	1.07		MN	11/01/84	5812	Rest - independ.		
4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84	5812	Diner		
4581	5812	Deli Carry-Out	362		225	0.62		VA	01/01/85	5812	Deli Carry-Out		
4582	5812	Diner	162		35	0.22		NY	02/01/85	5812	Diner		
4583	5812	Restaurant	85		35	0.41		NY	04/01/85	5812	Restaurant		
4584	5812	Restaurant/bar	92		25	0.27		TX	04/01/85	5812	Restaurant/bar		
4585	5812	Restaurant/Bar	550		309	0.56		DC	04/01/85	5812	Restaurant/Bar		
4586	5812	Restaurant, steak house	572		375	0.66		TX	04/01/85	5812	Restaurant, steak house		
4587	5812	Restr-Dinner House	453		196	0.43		AZ	05/01/85	5812	Restr-Dinner House		

## Select Trans

The Select Trans worksheet shows the selection status for all of the downloaded transactions. You can manually select the transactions to analyze.

Select Transactions										
Selected	ID	STC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date
True	3600	5812	Italian Restaurant	155	21	35	0.23	1.67	MA	07/01/96
True	3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96
True	3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96
True	3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97
True	3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97
True	3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97
True	3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97
True	3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96
True	3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96
True	3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97
True	3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97
True	3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97
False	3731	5812	Deli, Franchise	510	74	230	0.45	3.11	TN	07/01/97
True	3786	5812	Pizza Rest.	347	61	90	0.26	1.48	MA	08/01/97
True	3792	5812	Coffee Shop	131	34	28	0.21	0.82	MA	08/01/97
False	3798	5812	Restaurant	400		350	0.88		MA	01/01/98
False	3808	5812	Drive-Thru, Carry-Out	1,000	100	160	0.16	1.60	MA	07/01/93
True	3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97
False	4567	5812	Restaurant, Full service	600		325	0.54		DC	01/01/85
False	4568	5812	Restr., continental	600		200	0.33		VA	12/01/85
False	4569	5812	Restaurant	4,193		1,700	0.41		CA	05/01/87
False	4570	5812	Dunkin Donuts	700	120	400	0.57	3.33	MA	01/01/90
False	4571	5812	Deli	225		50	0.22		NY	05/01/91
False	4572	5812	Restaurant	234		155	0.66		NY	08/01/91
False	4573	5812	Restaurant	4,244	290	2,108	0.50	7.27	FL	11/01/91
False	4574	5812	Restaurant	265		350	1.32		FL	03/01/92
False	4575	5812	Restaurant	365		120	0.33		AZ	04/01/84
False	4576	5812	Restaurant Lounge	480		170	0.35		OR	04/01/84
False	4577	5812	Coffee Shop, Chain	1,400		625	0.45		WA	05/01/84
False	4578	5812	Sandwich Shop	35		32	0.91		CA	11/01/84
False	4579	5812	Rest - independ.	350		375	1.07		MN	11/01/84
True	4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84
False	4581	5812	Deli Carry-Out	362		225	0.62		VA	01/01/85
False	4582	5812	Diner	152		35	0.22		NY	02/01/85
False	4583	5812	Restaurant	85		35	0.41		NY	04/01/85
False	4584	5812	Restaurant/bar	92		25	0.27		TX	04/01/85
False	4585	5812	Restaurant/Bar	550		309	0.56		DC	04/01/85
False	4586	5812	Restaurant, steak house	572		375	0.66		TX	04/01/85
False	4587	5812	Restr-Dinner House	453		196	0.43		AZ	05/01/85

## Trans Selected

The Trans Selected worksheet contains the selected transactions. The data used in the analysis is drawn from this worksheet. The Trans Selected worksheet is updated automatically every time you change the transactions that are selected in the Select Trans sheet. You can deselect transactions from this worksheet. To assist you in selecting outliers, the worksheet calculates the variation from mean for Sales, Discretionary Earnings (DE), Price, Price / Sales, and Price / DE.

Transactions Selected										Variation from Mean				
Selected	ID	STC	Business Description	Sales	DE	Price	Price / Sales	Price / DE	State	Sale Date	Sales	DE	Price	Price / Sales
True	3600	5812	Italian Restaurant	155	21	35	0.23	1.67	MA	07/01/96	-0.11	-0.62	-0.61	-0.50
True	3606	5812	Deli, Sandwich	175	44	45	0.26	1.02	MA	12/01/96	-0.23	-0.20	-0.50	-0.42
True	3610	5812	Deli, Sandwich Shop	386	86	84	0.22	0.98	MA	07/01/96	0.69	0.56	-0.07	-0.42
True	3620	5812	Deli, Sandwiches	305	41	50	0.16	1.22	MA	02/01/97	0.34	-0.25	-0.45	-0.42
True	3624	5812	Diner, Breakfast/Lunch	148	42	34	0.23	0.81	MA	03/01/97	-0.35	-0.24	-0.62	-0.42
True	3626	5812	Deli/caterer	372	50	135	0.36	2.70	MA	05/01/97	0.63	-0.09	0.49	-0.42
True	3646	5812	Deli, Sandwiches	146	28	35	0.24	1.25	MA	09/01/97	-0.36	-0.49	-0.61	-0.42
True	3695	5812	Restaurant	201	42	45	0.22	1.07	PA	10/01/96	-0.12	-0.24	-0.50	-0.42
True	3709	5812	Franchise Deli	335	47	175	0.52	3.72	TN	10/01/96	0.47	-0.14	0.94	-0.42
True	3721	5812	Deli, Franchise	256	63	80	0.31	1.27	AL	04/01/97	0.12	0.15	-0.11	-0.42
True	3723	5812	Family Restaurant	315	32	52	0.17	1.63	TN	01/01/97	0.38	-0.42	-0.42	-0.42
True	3725	5812	Deli	76	48	46	0.61	0.96	TN	04/01/97	-0.67	-0.13	-0.49	-0.42
True	3786	5812	Pizza Rest.	347	61	90	0.26	1.48	MA	08/01/97	0.52	0.11	0.00	-0.42
True	3792	5812	Coffee Shop	131	34	28	0.21	0.82	MA	08/01/97	-0.42	-0.36	-0.69	-0.42
True	3888	5812	Sandwich Shop	119	11	57	0.48	5.18	FL	07/01/97	-0.48	-0.80	-0.37	-0.42
True	4580	5812	Diner	125	15	23	0.18	1.53	NY	07/01/84	-0.45	-0.73	-0.75	-0.42
True	4591	5812	Deli with pizza	89	56	28	0.31	0.50	CA	04/01/86	-0.61	0.02	-0.69	-0.42
True	4593	5812	Restaurant	94	32	40	0.43	1.25	MA	06/01/86	-0.59	-0.42	-0.56	-0.42
True	4595	5812	Deli	132	46	34	0.26	0.74	NY	08/01/86	-0.42	-0.16	-0.62	-0.42
True	4596	5812	Restaurant/ w nightclub	369	103	194	0.53	1.88	CA	08/01/86	0.62	0.87	1.15	-0.42
True	4597	5812	Deli-Office Bldg	169	20	85	0.50	4.25	CA	09/01/86	-0.26	-0.64	-0.06	-0.42
True	4598	5812	Restaurant	268	105	400	1.49	3.81	MA	09/01/86	0.18	0.91	3.43	-0.42
True	4599	5812	Donut Shop (Franchise)	144	31	70	0.49	2.26	CA	10/01/86	-0.37	-0.44	-0.23	-0.42
True	4601	5812	Deli-gyros	197	46	53	0.42	1.80	CA	12/01/86	-0.14	-0.16	-0.08	-0.42
True	4603	5812	Deli-office bldg	422	80	450	1.97	5.63	CA	04/01/87	0.85	0.44	3.96	-0.42
True	4606	5812	Restaurant w/cocktail	285	13	160	0.56	12.31	CA	09/01/87	0.75	-0.76	0.72	-0.42
True	4608	5812	Restaurant-Family	90	27	49	0.54	1.81	TN	02/01/88	-0.60	-0.51	-0.46	-0.42
True	4611	5812	Yogurt Store	444	107	275	0.62	2.57	CA	04/01/88	0.95	0.95	2.04	-0.42
True	4612	5812	Deli W/Routes	151	47	74	0.49	1.57	CA	05/01/88	-0.34	-0.14	-0.15	-0.42
True	4614	5812	Deli/Whlse Pasta	320	140	145	0.45	1.04	CA	07/01/88	0.40	1.55	0.60	-0.42
True	4615	5812	Snack bar	38	10	51	1.34	5.10	GA	01/01/89	-0.83	-0.82	-0.44	-0.42
True	4616	5812	Breakfast, lunch	42	19	11	0.26	0.58	ME	01/01/89	-0.82	-0.65	-0.88	-0.42
True	4617	5812	Breakfast, lunch	45	30	28	0.62	0.93	ME	01/01/89	-0.80	-0.45	-0.69	-0.42
True	4618	5812	Cafe	45	7	33	0.73	4.71	NC	01/01/89	-0.80	-0.87	-0.63	-0.42
True	4619	5812	Ice cream/yogurt	46	7	25	0.54	3.57	FL	01/01/89	-0.80	-0.87	-0.72	-0.42
True	4620	5812	Deli	54	1	30	0.56	30.00	FL	01/01/89	-0.76	-0.98	-0.67	-0.42
True	4621	5812	Coffee shop, office.	60	53	14	0.23	0.26	OK	01/01/89	-0.74	-0.04	-0.85	-0.42
True	4625	5812	Yogurt shop	60	10	35	0.58	3.50	IL	01/01/89	-0.74	-0.82	-0.61	-0.42
True	4626	5812	Sandwich shop	66	11	30	0.45	2.73	AZ	01/01/89	-0.71	-0.80	-0.67	-0.42

## Tools

The Tools worksheet automates analysis tasks. You can select transactions by search criteria (such as Sales or Discretionary Earnings), sort the transactions in all of the worksheets at once, export the selected transactions to a new workbook, and more.

The screenshot shows the 'Tools' worksheet interface with several functional panels:

- Ratio Validation:** Includes checkboxes for 'Price / Sales' and 'Price / DE', a 'PLEASE NOTE' section, and a 'Right-Click Here' button.
- Select by Criteria:** Features a table for selecting transactions based on criteria (Sales, DE, Price, Price / Sales, Sale Date) with 'Min' and 'Max' values. It also includes fields for SIC, State, and Description, along with 'Select All' and 'Deselect All' buttons.
- Sort Transactions:** Provides options to sort data by (1), (2), and (3) criteria, with 'Order' options for each, and a 'Right-Click Here' button.
- Select Worksheets and Charts:** Allows users to choose worksheets and charts to display, with a 'Right-Click Here' button.
- Export Selected Transactions:** Offers to copy selected transactions and charts to a new workbook, with a 'Right-Click Here' button.
- Histogram Y Axis:** Explains the default scaling of histogram Y axes and offers a 'Common Histogram Y Axis' option, with a 'Right-Click Here' button.
- PLEASE NOTE:** A red-bordered box stating 'Yellow cells respond to right-clicks.'
- Help and Definitions:** Green buttons for 'Click here for Help' and 'Click here for Definitions'.

The status bar at the bottom shows the current path: `File > About > Extended Data > Select Trans > Trans Selected > Tools > Statistics > Histogram Data > Price to Sales > P-to-S`.

## Statistics

The Statistics worksheet provides two groups of statistics, one for all of the downloaded transactions, and one for the selected transactions.

The screenshot displays the 'Statistics' worksheet with two summary tables:

All Transactions					
	Sales	DE	Price	Price / Sales	Price / DE
Low	\$0	(\$1,400)	\$0	0.01	0.04
High	\$302,160	\$22,508	\$306,000	15.42	450.00
Mean	\$549	\$77	\$290	0.44	2.65
Median	\$222	\$50	\$80	0.37	1.60
Standard Deviation	\$6,073	\$413	\$4,753	0.49	9.22
Coefficient of Variation				1.10	3.48
Harmonic Mean				0.30	1.32
Count	5,944	4,725	6,145	5,731	4,284

Transactions Selected					
	Sales	DE	Price	Price / Sales	Price / DE
Low	\$7	\$1	\$2	0.01	0.07
High	\$500	\$538	\$910	6.50	162.00
Mean	\$228	\$55	\$90	0.43	2.27
Median	\$204	\$50	\$73	0.38	1.53
Standard Deviation	\$115	\$34	\$69	0.37	4.61
Coefficient of Variation				0.86	2.03
Harmonic Mean				0.31	1.27
Count	3,502	3,502	3,502	3,502	3,502

The status bar at the bottom shows the current path: `File > About > Extended Data > Select Trans > Trans Selected > Tools > Statistics > Histogram Data > Price to Sales > P-to-S`.

## Histogram Data

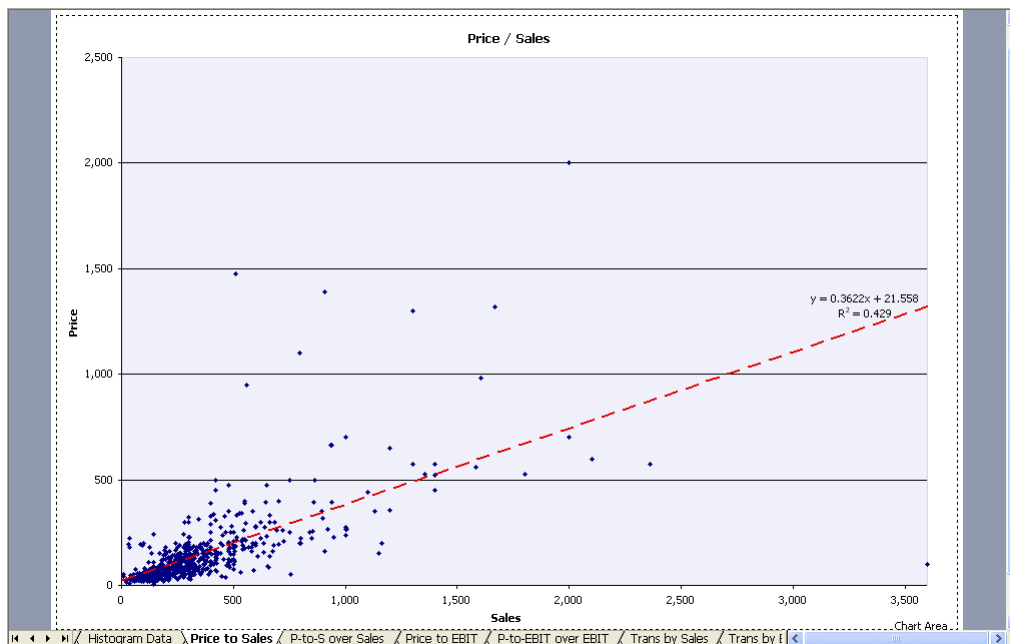
The Histogram Data worksheet contains the data used in the histogram charts.

	Sales		DE		Price		Price / Sales		Price / DE		
	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	= Bin Increment	
	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	= Lookup Index	
	= Mean	= Mean	= Mean	= Mean	= Mean	= Mean	= Mean	= Mean	= Mean	= Mean	
	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	= Mean %	
	Bins	Frequency	Bins	Frequency	Bins	Frequency	Bins	Frequency	Bins	Frequency	Percentile
9	7.00	1	1.00	12	2.00	4	0.01	1	0.07	2	1%
10	11.98	4	6.42	49	11.17	24	0.08	34	1.71	2,012	2%
11	16.96	7	11.85	71	20.34	111	0.15	105	3.35	1,133	3%
12	21.94	2	17.27	124	29.52	158	0.21	303	4.98	157	4%
13	26.92	4	22.70	162	38.69	267	0.28	455	6.62	74	5%
14	31.90	4	28.12	254	47.86	284	0.34	579	8.25	31	6%
15	36.88	14	33.55	270	57.03	390	0.41	544	9.89	16	7%
16	41.86	9	38.97	264	66.20	314	0.47	471	11.52	23	8%
17	46.84	16	44.39	288	75.37	329	0.54	330	13.16	9	9%
18	51.82	18	49.82	227	84.55	163	0.60	228	14.79	4	10%
19	56.80	13	55.24	290	93.72	211	0.67	135	16.43	4	11%
20	61.78	17	60.67	267	102.89	224	0.73	65	18.07	6	12%
21	66.76	37	66.09	205	112.06	130	0.80	59	19.70	5	13%
22	71.74	24	71.52	138	121.23	123	0.87	45	21.34	2	14%
23	76.72	32	76.94	174	130.40	113	0.93	29	22.97	2	15%
24	81.70	37	82.36	126	139.58	69	1.00	8	24.61	3	16%
25	86.68	42	87.79	85	148.75	94	1.06	26	26.24	3	17%
26	91.66	52	93.21	106	157.92	80	1.13	16	27.88	0	18%
27	96.64	42	98.64	64	167.09	64	1.19	7	29.52	2	19%
28	101.62	64	104.06	96	176.26	55	1.26	3	31.15	2	20%
29	106.60	44	109.48	42	185.43	51	1.32	7	32.79	0	21%
30	111.58	50	114.91	35	194.61	28	1.39	5	34.42	1	22%
31	116.56	41	120.33	31	203.78	40	1.46	3	36.06	1	23%
32	121.54	91	125.76	32	212.95	13	1.52	4	37.69	1	24%
33	126.52	61	131.18	15	222.12	22	1.59	1	39.33	1	25%
34	131.49	49	136.61	13	231.29	15	1.65	3	40.96	1	26%
35	136.47	90	142.03	10	240.46	14	1.72	2	42.60	0	27%
36	141.45	40	147.45	6	249.64	9	1.78	0	44.24	1	28%
37	146.43	98	152.88	8	258.81	22	1.85	0	45.87	1	29%
38	151.41	102	158.30	7	267.98	4	1.91	5	47.51	0	30%
39	156.39	88	163.73	1	277.15	8	1.98	1	49.14	1	31%
40	161.37	58	169.15	3	286.32	5	2.05	0	50.78	1	32%
41	166.35	32	174.58	1	295.49	8	2.11	7	52.41	0	33%
42	171.33	67	180.00	4	304.67	9	2.18	0	54.05	0	34%
43	176.31	53	185.42	1	313.84	2	2.24	1	55.68	0	35%

## Scatter Charts

A scatter chart shows the relationship between two variables, with each selected transaction appearing as a point showing the transaction's values for the two variables. There are four scatter charts in the workbook:

- **Price to Sales**
- **P-to-S over Sales** (Price-to-Sales over Sales)
- **Price to DE**
- **P-to-DE over DE** (Price-to-DE over DE)



## Histograms

A histogram shows how the selected transactions are distributed across the range of a given variable. For example, the Trans by Sales histogram shows how many transactions fall into each percentile of the sales range, with the minimum sales at the first percentile (1%) and the maximum sales at the one hundredth percentile (100%). There are five histograms in the workbook:

- **Trans by Sales** (Transactions by Sales)
- **Trans by DE** (Transactions by DE)
- **Trans by Price** (Transactions by Price)
- **Trans by P-to-S** (Transactions by Price-to-Sales)
- **Trans by P-to-DE** (Transactions by Price-to-DE)

