2013 Purchase Price Allocation Study

December 2014

PPAnalyser

Table of Contents

Introduction

We are proud to present the second edition of our Purchase Price Allocation Study. In this study you will find statistics on publically disclosed purchase price allocation studies of 2013 and 2012. The source for our analysis is the PPAnalyser database. PPAnalyser is a subscription database that includes financial details of publically disclosed purchase price allocations. Besides purchase price allocation data, PPAnalyser also provides economic useful life data used in PPA analyses. For more information visit www.ppanalyser.com.

In this second edition you will find a selection of statistics. These include statistics per type of industry, type of intangible and per region. In addition you will find statistics on economic useful lives.

Should you have any questions or comments, please don't hesitate to contact us on ppastudy@ppanalyser.com.

Criteria & methodology

- The source we used for this study was the PPAnalyser database. PPAnalyser includes purchase price allocation data that was identified by searching for purchase price allocations disclosed in annual and quarterly reports.
- For the purpose of this study a selection of PPAs included in the database was made based on the following criteria:
  - Year: 2012 and 2013.
  - Financial information disclosed: only those PPAs were included that disclosed both the purchase price as well as the allocation of intangibles.
- Intangibles identified in the PPAs were assigned to one of the following intangible categories:
  1. Marketing related intangible assets
  2. Customer related intangible assets
  3. Artistic related intangible assets
  4. Contract related intangible assets
  5. Technology related intangible assets
  6. Research & Development related intangible assets
- All amounts were converted to USD using a single exchange rate for 2012 and a single exchange rate for 2013.
- When analysing the proportion of tangible assets, intangible assets and goodwill compared to total assets, total assets is determined by the purchase price net of liabilities.

Criteria & methodology

- We classified the PPAs into the following industry categories:
  - Agriculture, Forestry, Fishing
  - Construction
  - Finance, Insurance, Real Estate
  - Manufacturing
  - Mining
  - Public Administration
  - Retail Trade
  - Services
  - Transportation & Public Utilities
  - Wholesale Trade
- We segmented the allocation results across seven size categories (in USD x Millions):
  - > 1,000
  - 500 - 1000
  - 250 - 500
  - 100 - 250
  - 50 - 100
  - 25 – 50
  - < 25
- Consolidated statistics were determined based on the percentages of the individual PPA's (i.e. not weighted).
- For categories with less then 10 PPA's the results are not significant and are not discussed in this analysis.
- For economic useful life a distinction is made between intangibles with definite and indefinite lifetime. Both are disclosed and analysed separately.

Statistics

Allocation based on transaction size

- The median purchase price in the year 2013 increased by 15% compared to the year 2012, from 42.9 million USD to 49.2 million USD. The number of transactions decreased in 2013, however it should be noted that transactions that took place in 2013 are typically not all disclosed in the annual reports of 2013, therefore a reporting delay exists.
- Although an increase in the median purchase price can be observed, the purchase price of transactions above 1 billion decreased by 15%.

Year	# transactions	Median purchase price (x 1000)
2013	463	49,236
2012	1009	42,900
% Change		15%

	Number of transactions		Median purchase price (x1000)		
Purchase Price:	2013	2012	2013	2012	% change
PP > 1000	42	71	2,076,085	2,440,394	-14.9%
500 < PP < 1000	35	56	676,000	654,023	3.4%
250 < PP < 500	38	80	352,530	356,745	-1.2%
100 < PP < 250	65	138	159,272	152,412	4.5%
50 < PP < 100	52	123	67,833	66,757	1.6%
25 < PP< 50	57	130	36,246	36,800	-1.5%
PP < 25	175	411	8,711	8,500	2.5%

Statistics

Allocation across industries

Purchase price

- The median purchase price of all transactions increased in 2013 to approximately USD 49.2 million (+15%).
- Most transactions are observed in the manufacturing sector, with 46% of the total amount of transactions in 2013. The second largest sector is the services sector with 24% of the total amount of transactions.
- When looking at the median purchase consideration, the most significant increases can be observed in the Finance, Insurance, Real Estate industry (+39%) and the Manufacturing industry (+35%). The most significant decreases can be observed in the Mining industry (-19%), Retail trade (-25%) and the Wholesale Trade industry (-16%)[1]

	Number of transactions				Median purchase consideration		
	2013		2012		2013	2012	% change
	#	%	#	%	Amt	Amt	%
All industries	463	100.0%	1,009	100.0%	49,236	42,900	15%
Agriculture, Forestry, Fishing	2	0.4%	5	0.5%	474,017	16,810	2,720%
Construction	6	1.3%	6	0.6%	15,169	98,507	-85%
Finance, Insurance, Real Estate	29	6.3%	106	10.5%	156,110	112,581	39%
Manufacturing	212	45.8%	372	36.9%	73,600	54,345	35%
Mining	10	2.2%	46	4.6%	163,424	200,881	-19%
Public Administration	6	1.3%	6	0.6%	150,696	48,950	208%
Retail Trade	11	2.4%	37	3.7%	32,073	43,000	-25%
Services	111	24.0%	288	28.5%	34,875	26,000	34%
Transportation & Public Utilities	57	12.3%	88	8.7%	29,833	32,573	-8%
Wholesale Trade	19	4.1%	55	5.5%	34,702	41,200	-16%

[1] Agriculture, Forestry and Fishing, Construction and Public Administration are ignored as the amount of transactions for these industries is too low to arrive at sensible observations

Statistics

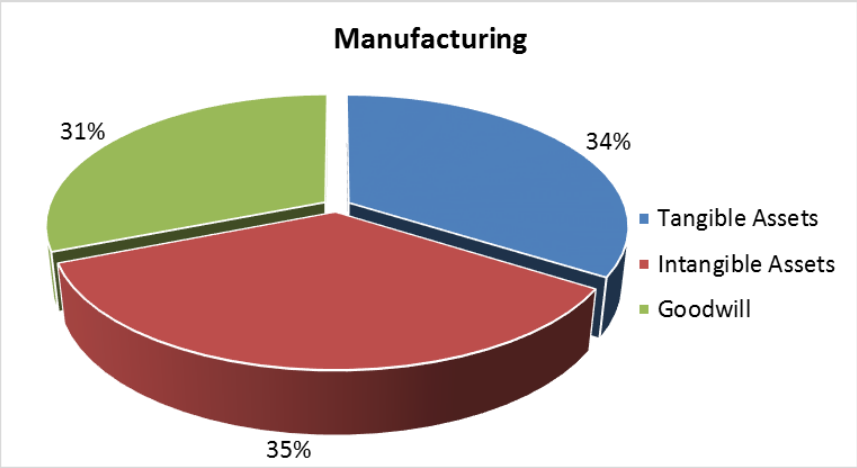
Allocation across intangibles

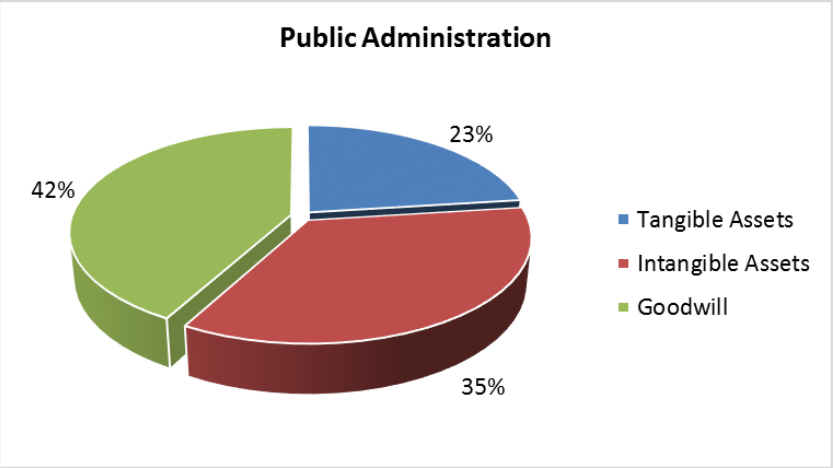
- Overall, the proportion of intangible assets (incl. goodwill) in relation to total assets increased across all transaction sizes (+3.9%). An exceptional decrease can be observed for transactions values between 25 million USD & 50 million USD (-8%). Also, the higher the transaction size, the higher the proportion of intangibles assets compared to total assets.
- The proportion of intangible assets (excl. goodwill) in relation to total assets increased in 2013 for nearly all transactions (+5.3% on average). The proportion of goodwill in relation to total assets decreased with 1.6% on average. These observations suggest a shift from allocation to goodwill to an allocation to intangible assets.
- The increase of intangible values is in line with the shift of transactions from asset intensive industries (Mining, Construction etc.) towards intangible intensive industries (Finance, Insurance, Real Estate and Services)

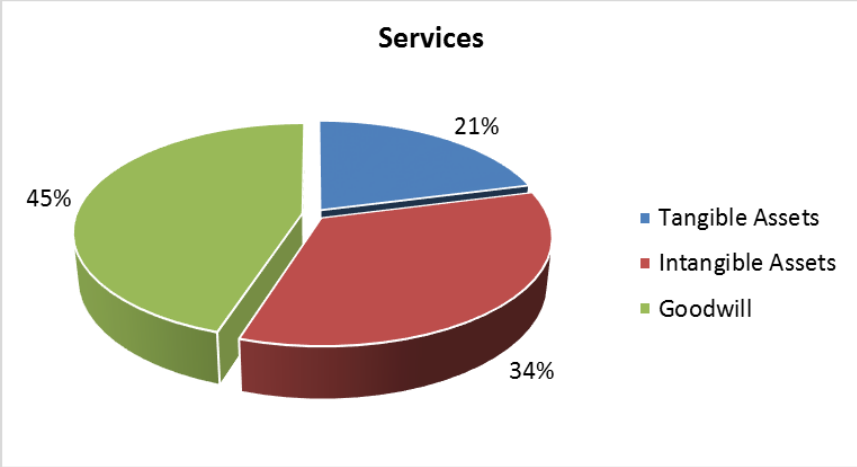
	Intangible asset % of total assets			Goodwill as % of total assets			Intangibles (incl. Goodwill) as % of total assets		
	2013	2012	% change	2013	2012	% change	2013	2012	% change
Total assets > 1000	31%	29%	2.0%	36%	27%	9.0%	68%	56%	12.0%
500 < Total assets < 1000	40%	29%	11.0%	32%	27%	5.0%	72%	56%	16.0%
250 < Total assets < 500	37%	28%	9.0%	32%	37%	-5.0%	69%	65%	4.0%
100 < Total assets < 250	35%	26%	9.0%	27%	35%	-8.0%	62%	61%	1.0%
50 < Total assets < 100	36%	29%	7.0%	30%	37%	-7.0%	66%	66%	0.0%
25 < Total assets < 50	29%	30%	-1.0%	28%	35%	-7.0%	57%	65%	-8.0%
Total assets < 25	33%	33%	0.0%	37%	35%	2.0%	70%	68%	2.0%
Average			**5.3%**			**-1.6%**			**3.9%**

Statistics

Allocation across intangibles & industries (1/4)



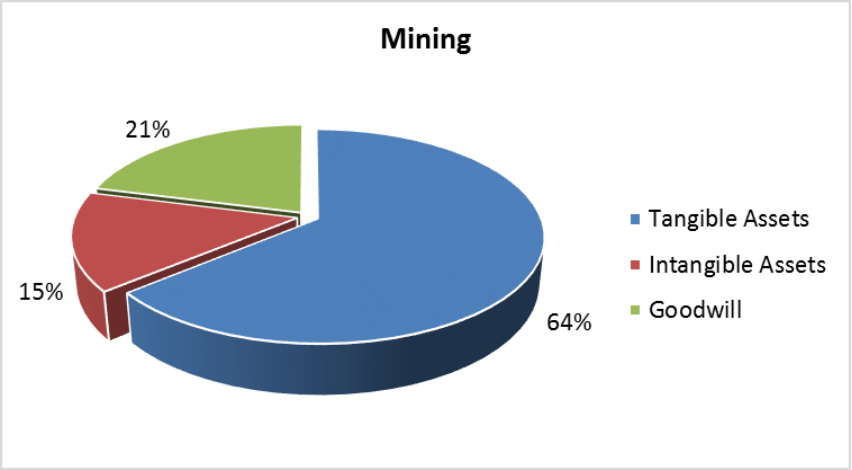


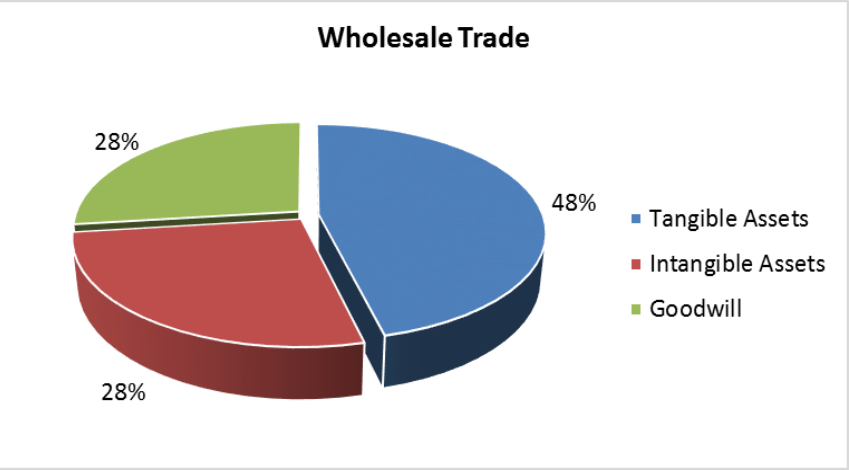


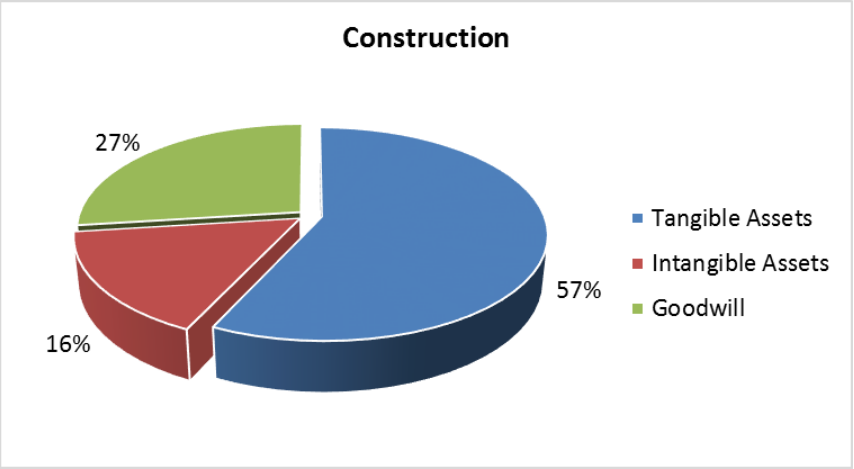
- The next 3 slides discuss the proportion of tangibles, intangibles and goodwill compared to total assets across industries.
- The industries with the highest proportion of intangibles assets compared to total assets are Manufacturing, Public Administration and Services (as expected).
- For Manufacturing, an almost equal share among goodwill, intangibles and tangibles can be observed.
- Public Administration and Services both have the highest share of goodwill among all industries.

Statistics

Allocation across intangibles & industries (2/4)



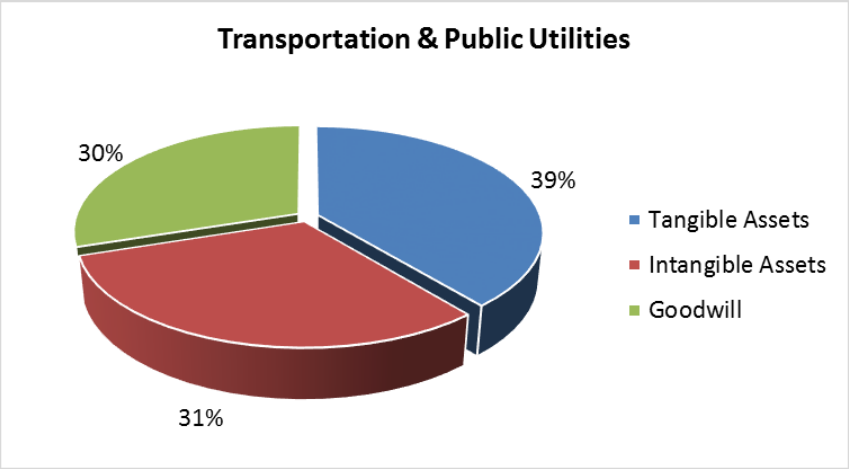


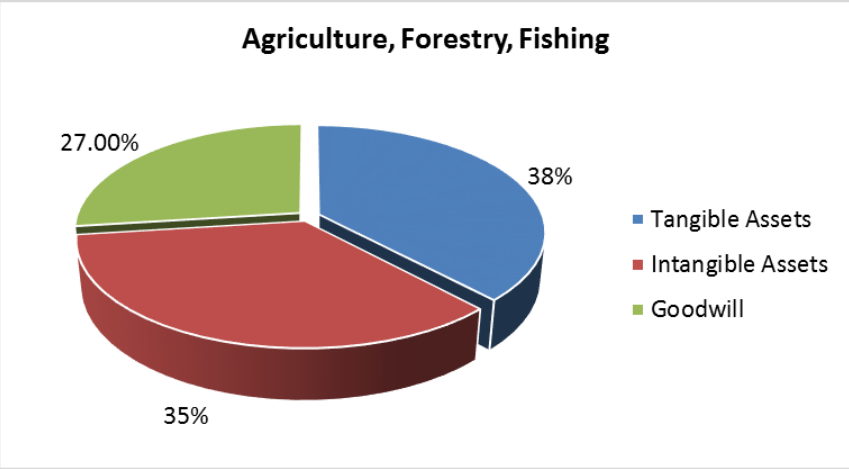


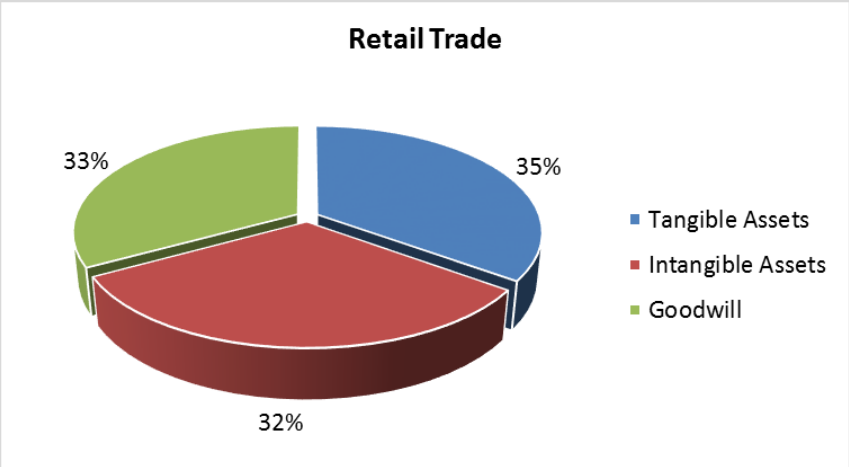
- Mining, Wholesale Trade and Construction have the highest proportion of tangible assets compared to total assets among all industries.
- The highest proportion of tangible assets among total assets is identified in the mining industry (57%).
- Mining and Construction both have the lowest percentage of intangible assets (15% and 16% respectively).

Statistics

Allocation across intangibles & industries (3/4)







- For Transportation & Public Utilities, Retail Trade and Agriculture, Forestry, Fishing, tangibles assets are the largest component of total assets.
- The remaining allocation among intangible assets and goodwill is approximately equal.
- The proportion of intangible assets compared to total assets is between 31% and 35%.

Statistics

Allocation across intangibles & industries (4/4)

- The most frequently identified intangibles are: marketing-, customer-, and technology related intangibles. Contract-, R&D-, and artistic related intangibles are observed less frequently[(1)].
- The proportion of marketing related intangibles is highest in Wholesale Trade and Public Administration.
- The proportion of contract related intangibles is highest in Public Administration and Finance, Insurance and Real estate. (Agriculture, forestry and fishing is not significant)
- The proportion of customer related intangibles is highest in the and Finance, Insurance and Real estate and Transportation & Public Utilities (Mining is not significant)
- For artistic and R&D related intangibles the amount of transactions is too low to make any good comments. Nevertheless Manufacturing and services have the highest number of PPA's with R&D related intangibles.

	Count						Intangible as a % of Total Assets					
Comparison	**Mark**	**Contr**	**Cust**	**Tech**	**Art**	**R&D**	**Mark**	**Contr**	**Cust**	**Tech**	**Art**	**R&D**
Total	627	144	709	481	1	40						
Agriculture, Forestry, Fishing	7	2	6	5	n/a	n/a	12.6%	24.5%	8.1%	16.7%	n/a	n/a
Construction	7	n/a	8	2	n/a	n/a	2.4%	n/a	9.1%	4.4%	n/a	n/a
Finance, Insurance, Real Estate	50	20	57	32	n/a	3	2.5%	20.7%	21.0%	14.3%	n/a	4.8%
Manufacturing	262	54	283	203	1	25	9.4%	18.4%	16.4%	20.4%	0.1%	18.9%
Mining	4	2	12	0	n/a	1	2.5%	7.5%	22.3%	23.8%	n/a	55.3%
Public Administration	10	n/a	9	4	n/a	n/a	16.2%	31.0%	14.8%	14.8%	n/a	n/a
Retail Trade	24	20	14	9	n/a	n/a	2.8%	7.1%	16.4%	21.8%	n/a	3.5%
Services	226	46	266	213	n/a	11	5.5%	11.2%	18.8%	20.3%	n/a	6.4%
Transportation & Public Utilities	37	23	54	13	n/a	n/a	7.2%	46%	21.3%	10.8%	n/a	n/a
Wholesale Trade	35	13	27	3	n/a	n/a	17%	19%	19%	19%	n/a	n/a

[(1)] For artistic related intangibles, the amount of observations is too low to arrive at representable statistics

Statistics

Allocation across regions

- The majority of the purchase price allocations included in this study are published in US annual reports. In fact, the proportion of US related PPA's increased from 73% in 2012 to 79% in 2013.
- The proportion of Canadian PPA's decreased from 14% to 8% in 2013 and the proportion of European PPA´s showed a little increase from 8% in 2012 to 9% in 2013.
- The overall median purchase price increased for all regions.
- The median purchase price is highest in the US (USD 59 Million), followed by Europe (USD 37 Million) and Canada (USD 27 Million).

	Number of transactions				Median purchase price	
	2013		2012		2013	2012
Comparison	#	% of total	#	% of total	thousands	thousands
United States	366	79%	738	73%	59,747	48,750
Canada	38	8%	137	14%	26,572	18,132
Europe	42	9%	82	8%	37,461	31,430
Other	17	4%	52	5%	22,700	19,487
Total	**463**	**100%**	**1,009**	**100%**	**49,236**	**42,900**

Statistics

Useful life per intangible asset

- The number of PPA´s that disclosed the economic useful life increased by 16% (from 31% in 2012 to 47% in 2013).
- In 2013, the highest economic useful life was observed for customer related intangibles (between 5 and 14 years). The lowest economic useful life was observed for technology related intangibles (between 3 and 10 years).
- When comparing 2013 to 2012, a few changes can be observed. In 2013, the median economic useful life of contract related intangibles increased from 6 to 8.7 years. The median economic useful life of customer related intangibles decreased from 10 to 9 years.

# PPA with useful life disclosure	2013		2012	
Comparison	#	%	#	%
Total PPA's	463	100%	1009	100%
Total PPA's with disclosed useful life	218	47%	316	31%

Interquartile range (in years)	2013			2012		
Comparison	Lower	Median	Upper	Lower	Median	Upper
Marketing- related	3.0	5.0	10.0	3.0	5.0	7.0
Contract related intangible assets	5.0	8.7	13.0	3.0	6.0	10.0
Customer related intangible assets	5.0	9.0	14.0	6.0	10.0	13.0
Technology related intangible assets	5.0	7.0	10.0	5.0	7.0	9.0
R&D related intangible assets	2.9	6.5	10.0	4.0	4.3	7.0

Statistics

Useful life per intangible asset and industry

- Intangibles with the highest economic useful life (median) are custumer related intangibles (10 years), and intangibles with the lowest economic useful life are marketing related intangibles (5 years).[1]
- The economic useful life attributed to marketing related intangibles is highest in the Manufacturing industry (6 years) and lowest in the Services industry (4 years).[2]
- The economic useful life attributed to customer related intangibles is highest in the Finance, Insurance, Real Estate industry, the Manufacturing industry and the Wholesale Trade industry (10 years).[3]
- For some combinations of industries and useful life categories the amount of PPA's was too low to make any useful comments. This mostly concerns Artistic and R&D related intangibles.

	Count of PPAs with eco. useful life							Median Economic useful life (years)					
	Marketing	Contract	Customer	Technology	Artistic	R&D		Marketing	Contract	Customer	Technology	Artistic	R&D
Agriculture, Forestry, Fishing	5	1	5	n/a	n/a	4		12	20	20	11.5	n/a	n/a
Construction	1	n/a	1	n/a	n/a	n/a		8	n/a	11	n/a	n/a	n/a
Finance, Insurance, Real Estate	40	7	41	24	n/a	n/a		5	14	10	5.5	n/a	n/a
Manufacturing	128	26	175	126	2	25		6	7	10	8.2	7	4.3
Mining	1	1	5	n/a	n/a	n/a		4	13	20	n/a	n/a	n/a
Public Administration	7	n/a	6	4	n/a	n/a		2	n/a	9.5	7	n/a	n/a
Retail Trade	10	4	5	5	n/a	n/a		5.9	8	15	5	n/a	n/a
Services	134	28	163	131	n/a	5		4.5	5	8	5.7	n/a	4.5
Transportation & Public Utilities	18	5	20	8	n/a	n/a		5	11.7	9	10	n/a	n/a
Wholesale Trade	18	7	17	3	n/a	n/a		5	6	10	7.5	n/a	n/a
Total	**362**	**79**	**438**	**301**	**2**	**34**	**Median Tot.**	**5.0**	**7.0**	**10.0**	**7.6**	**7.0**	**4.3**

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[1] For artistic and R&D related intangibles, the amount of observations is considered too low to arrive at representable statistics
[2] For the Agriculture, Forestry and Fishing industry and the Construction industry, the amount of observations is considered too low to arrive at representable statistics
[3] For the Agriculture, Forestry and Fishing industry, the Construction industry, the mining industry and the Retail trade industry, the amount of observations is considered too low

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About PPAnalyser

PPAnalyser in an online subscription database developed and owned by Bridgeton Software B.V., a limited liability company based in Amsterdam, the Netherlands. Bridgeton Software develops, markets and distributes financial software. It's main product is PPAnalyser, an online subscription database that includes data of over 6,000 purchase price allocation studies disclosed between 2007 and 2014. For more information visit www.ppanalyser.com .

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