

# Purchase price allocation study

December 2020

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# Introduction

- We are proud to present the ninth edition of our Purchase Price Allocation study. This study presents statistics on publicly disclosed purchase price allocation studies and economic useful lives for the years 2018 and 2019. The source of this analysis is the PPAlyser database. PPAlyser is a subscription database which contains financial details of publicly disclosed purchase price allocations, discount rates and impairments. Besides purchase price allocation data, PPAlyser also provides data on economic useful lives. For more information, visit [www.ppanalyser.com](http://www.ppanalyser.com).
- This analysis presents a selection of statistics. These include statistics for each industry, region and type of intangible. In addition you will find statistics on economic useful lives.
- Should you have any questions or comments, please do not hesitate to contact us, [info@ppanalyser.com](mailto:info@ppanalyser.com).

# Criteria & Methodology

- The source used for this study is the [PPAnalyser](#) database. PPAAnalyser 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 PPA's included in the database was made based on the following criteria:
  - Year: 2018 and 2019
  - Financial information disclosed: only PPAs were included that disclosed both the purchase price as well as the allocation of intangibles.
- Intangibles identified in the PPAs and discount rates were assigned to one of the following intangible categories:
  - Marketing related intangible assets
  - Customer related intangible assets
  - Artistic related intangible assets
  - Contract related intangibles
  - Technology related intangibles
  - Research & Development related intangibles
- All amounts were converted to USD using a single exchange rate for 2018 and 2019.
- When analysing the proportion of tangible assets, intangible assets and goodwill compared to total assets, total assets is determined by summing up the value of each individual asset.

# Criteria & Methodology

- We classified the PPAs and impairments into the following industry categories:
  - Agriculture, forestry and fishing
  - Construction
  - Finance, insurance and real estate
  - Manufacturing
  - Mining
  - Public administration
  - Retail trade
  - Services
  - Transportation and public utilities
  - Wholesale trade
- Consolidated statistics were determined based on percentages of the individual PPAs (i.e. not weighted).
- For economic useful lives a distinction is made between intangibles with definite and indefinite lifetimes. Both are disclosed and analysed separately.
- We segmented the allocation results across seven size categories (in USD x millions):
  - > 1,000
  - 500 - 1,000
  - 250 - 500
  - 100 - 250
  - 50 - 100
  - 25 - 50
  - < 25

# Statistics

## Allocation based on transaction size

- The median purchase price in the year 2018 decreased by 15.1% compared to the year 2019, from approximately USD 42.8 million to 36.3 million. The number of transactions decreased in 2019, however it should be noted that transactions that occurred in 2019 are typically not all disclosed in the annual reports of 2019, therefore a reporting delay exists.
- Similarly an decrease in the overall median purchase price can be observed, the purchase price of transactions for most categories decreased. Only the purchase price of transactions of less than USD 25 million increased with 22.7% respectively.
- The majority of the purchase price allocations included in this study are published in US annual reports. For 2019, the proportion of US related PPAs increased from 55.5% to 61.8% and the proportion of European PPAs increased from 10.8% to 12.1%.

Comparison	Number of transactions			
	2019		2018	
	#	% of total	#	% of total
United States	256	61.8%	570	55.5%
Canada	51	12.3%	202	19.7%
Europe	50	12.1%	111	10.8%
Other	57	13.8%	144	14.0%
<b>Total</b>	<b>414</b>	<b>100.0%</b>	<b>1027</b>	<b>100.0%</b>

	Transactions		Median PP (x 1000)		
	2019	2018	2019	2018	% change
PP > 1,000	28	79	1,992,700	2,520,100	-20.9%
500 < PP < 1,000	31	71	682,100	697,000	-2.1%
250 < PP < 500	29	86	324,000	352,924	-8.2%
100 < PP < 250	50	133	149,341	150,426	-0.7%
50 < PP < 100	47	119	64,457	72,287	-10.8%
25 < PP < 50	57	126	33,861	35,316	-4.1%
PP < 25	172	413	7,729	6,300	22.7%
<b>Total</b>	<b>414</b>	<b>1027</b>	<b>36,339</b>	<b>42,815</b>	<b>-15.1%</b>

# Statistics

## Allocation across industries

- The median purchase price of all transactions decreased in 2019 to approximately USD 36.3 million (-15%).
- Most transactions are observed in the manufacturing sector, with 40% of the total amount of the transactions in 2019. The second largest sector is the services sector with 28% of the total.
- When looking at the median purchase price, the most statistically significant increase can be observed in the transportation and public utilities industry (105%) and the most significant decrease in the wholesale trade industry (-70%).\*

	Number of transactions				Median purchase consideration		
	2019	% of PPA's 2019	2018	% of PPA's 2018	2019	2018	% change
All industries	414	100%	1027	100%	36,339	42,814	-15%
Agriculture, Forestry, Fishing	1	0%	5	0%	45,515	33,503	36%
Construction	3	1%	15	1%	237,596	77,679	206%
Finance, Insurance, Real Estate	41	10%	79	8%	58,388	43,610	34%
Manufacturing	164	40%	422	41%	29,476	57,279	-49%
Mining	11	3%	46	4%	103,374	76,504	35%
Public Administration	7	2%	6	1%	19,139	138,328	-86%
Retail Trade	22	5%	44	4%	10,373	23,252	-55%
Services	116	28%	263	26%	44,867	30,000	50%
Transportation & Public Utilities	34	8%	110	11%	78,413	38,195	105%
Wholesale Trade	15	4%	37	4%	9,485	31,648	-70%

- Observations based on less than 10 transactions were not taken into account for this analysis.

# Statistics

## Allocation across intangibles

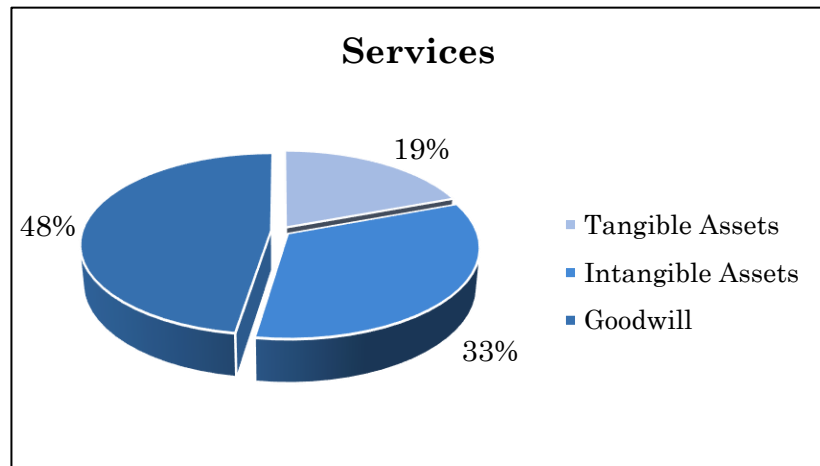
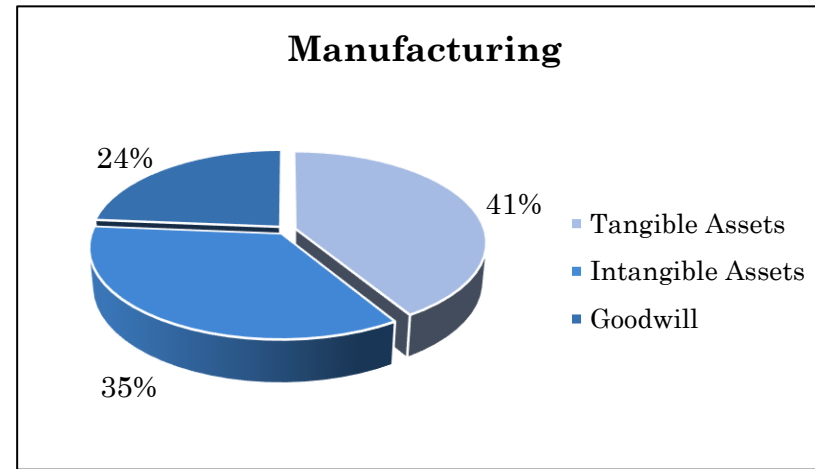
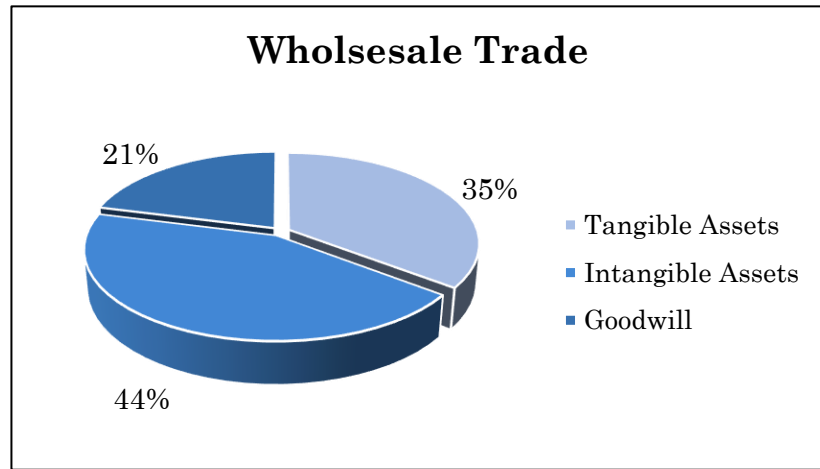
- Overall, the proportion of intangible assets (incl. goodwill) in relation to total assets increased across almost all asset class sizes (1.4% on average). The largest increase can be observed for transactions with assets values between 25 million and 50 million (9.4%) and the largest decrease can be observed for transactions with asset values under USD 25 million (-6.5%).
- The total proportion of intangible assets (excl. goodwill) in relation to total assets increased with 6.0% on average.
- The total proportion of goodwill in relation to total assets decreased slightly with 1.0% on average.

	Int. asset % of total assets			Goodwill as % of total assets			Total Int. (incl. Goodwill) as % of total assets		
	2019	2018	% change	2019	2018	% change	2019	2018	% change
Total assets > 1,000	31%	26%	19.2%	33%	36%	-8.3%	63%	61%	3.3%
500 < Total assets < 1,000	29%	31%	-6.5%	40%	35%	14.3%	70%	66%	6.1%
250 < Total assets < 500	25%	25%	0.0%	39%	36%	8.3%	64%	60%	6.7%
100 < Total assets < 250	35%	32%	9.4%	37%	38%	-2.6%	72%	70%	2.9%
50 < Total assets < 100	31%	30%	3.3%	35%	38%	-7.9%	67%	68%	-1.5%
25 < Total assets < 50	34%	30%	13.3%	37%	35%	5.7%	70%	64%	9.4%
Total assets < 25	32%	31%	3.2%	26%	31%	-16.1%	58%	62%	-6.5%
<b>Average</b>			<b>6.0%</b>			<b>-1.0%</b>			<b>1.4%</b>



# Statistics

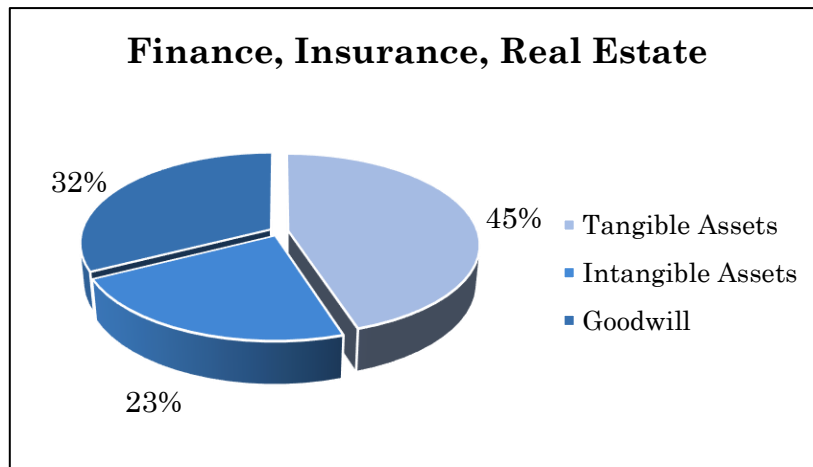
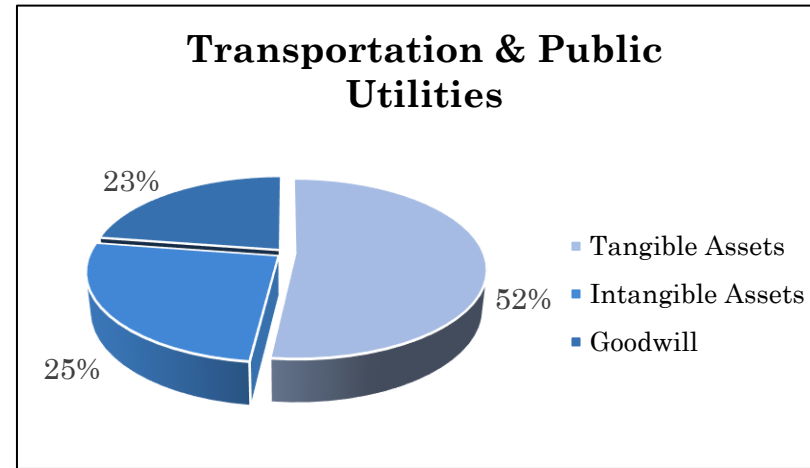
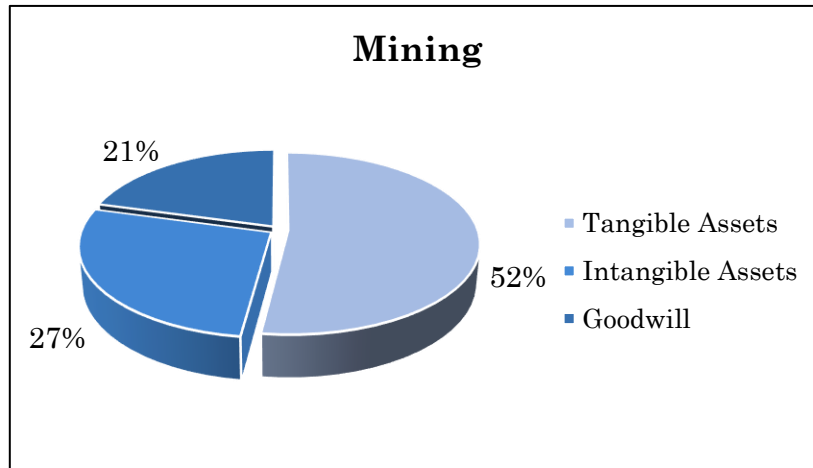
## Allocation across intangibles & industries (1/2)



- The industries with the highest proportion of intangible assets compared to total assets are the wholesale trade (44%), manufacturing industry (35%), and the services industry (33%).
- The industries with the highest proportion of goodwill compared to total assets are the services industry (48%), the retail trade industry (37%), and the finance, insurance and real estate industry (23%).\*

# Statistics

## Allocation across intangibles & industries (2/2)



- The industries with the highest proportion of tangible assets compared to total assets are the mining industry (52%), the transportation & public utilities industry (52%), and the finance, insurance and real estate industry (45%).\*

• Observations based on less than 10 transactions were not taken into account for this analysis.

# Statistics

## Overview allocation across intangibles & industries

- The most frequently identified intangibles are customer, marketing and technology related intangibles. Contract, R&D and artistic related intangibles are observed less frequently.
- The proportion of customer related intangibles to total assets is highest in the wholesale trade (23.5%) and manufacturing industry (12.3%).\*
- The proportion of marketing related intangibles to total assets is highest in retail trade industry (5.6%) and the manufacturing industry (2.7%).\*
- The proportion of technology related intangibles to total assets is highest in the retail trade (10.8%) and the manufacturing industry (7.3%) .

2019	Count						Intangible as a % of Total Assets					
Comparison	Marketing	Customer	Technology	Contract	R&D	Artistic	Marketing	Customer	Technology	Contract	R&D	Artistic
Agriculture, Forestry, Fishing	1	-	-	-	-	-	4.4%	-	-	-	-	-
Construction	-	6	1	-	-	-	-	15.3%	3.0%	-	-	-
Finance, Insurance, Real Estate	13	21	5	7	-	-	0.3%	1.4%	0.5%	10.3%	-	-
Manufacturing	69	74	50	27	11	-	2.7%	12.3%	7.3%	1.0%	0.5%	-
Mining	2	3	3	1	-	1	0.0%	6.6%	0.3%	0.0%	-	0.1%
Public Administration	2	4	1	-	-	-	2.0%	8.5%	3.9%	-	-	-
Retail Trade	10	10	2	5	-	-	5.6%	1.9%	10.8%	7.9%	-	-
Services	75	80	61	15	1	-	0.4%	2.5%	0.8%	0.1%	0.0%	-
Transportation & Public Utilities	7	9	-	4	-	-	0.0%	8.0%	-	10.4%	-	-
Wholesale Trade	4	4	3	1	-	-	0.8%	23.5%	0.1%	0.3%	-	-
<b>Total</b>	<b>183</b>	<b>211</b>	<b>126</b>	<b>60</b>	<b>12</b>	<b>1</b>						

# Statistics

## Useful lives

- The number of PPAs with a disclosed economic useful life increased slightly with 0.3% (from 28.9% in 2018 to 29.2% in 2019).
- The portion of indefinite useful lives decreased from 5.3% of the useful lives in 2018 to 1.9% in 2019.
- Indefinite useful lives are not included in further analysis of useful lives data.

# PPA with useful life disclosure	2019		2018	
Comparison	#	%	#	%
Total PPA's	414	100%	1027	100%
Total PPA's with disclosed useful life	121	29.2%	297	28.9%

Useful lives (in)definite	2019		2018	
Comparison	#	%	#	%
Definite useful lives	717	98.1%	751	94.7%
Indefinite useful lives	14	1.9%	42	5.3%
Total	731	100%	793	100%

# Statistics

## Useful life per intangible asset

- In 2019 the highest economic useful life was observed for customer related intangibles, with a median of 10 years.\*
- When comparing 2019 to 2018, a few changes can be observed. The median economic useful life of marketing related intangibles decreased, with 6 months. The median economic life of contract related intangibles increased with 1.5 years. The median economic useful life of customer and technology related intangibles stayed the same.\*

Interquartile range (in years)	2019				2018			
Comparison	Lower	Median	Upper	Count	Lower	Median	Upper	Count
Marketing- related	3.0	5.0	9.3	83	3.0	5.5	10.0	201
Customer related intangible assets	5.0	10.0	13.0	98	5.0	10.0	15.0	277
Artistic related intangible assets	-	-	-	-	5.0	7.2	9.6	5
Contract related intangible assets	5.0	9.5	16.0	12	4.8	8.0	11.8	47
Technology related intangible assets	5.0	7.0	9.0	59	5.0	7.0	10.0	189
R&D related intangible assets	12.5	15.0	17.5	2	5.1	5.2	10.4	2

- Observations based on less than 10 transactions were not taken into account for this analysis.

# Statistics

## Useful life per intangible asset and industry

- The economic useful life attributed to marketing related intangibles is highest in the manufacturing and services industry (5 years) and lowest in the finance, insurance and real estate industry (3 years).\*
- The economic useful life attributed to customer related intangibles is highest in the finance, insurance, real estate industry (15 years) and lowest in the services industry (8 years).\*
- The economic useful life attributed to technology related intangibles is highest in the manufacturing industry (9 years) and lowest in the services industry (5.3 years). \*

	Marketing	Customer	Technology	Contract	R&D	Artistic		Marketing	Customer	Technology	Contract	R&D	Artistic
2019	Count of PPAs with eco. useful life							Median Economic useful life (years)					
Agriculture, Forestry, Fishing	-	-	-	-	-	-		-	-	-	-	-	-
Construction	-	1	1	-	-	-		-	10.0	12.0	-	-	-
Finance, Insurance, Real Estate	5	12	3	2	1	-		3.0	15.0	4.0	22.5	20.0	-
Manufacturing	21	28	22	4	1	-		5.0	10.0	9.0	7.0	10.0	-
Mining	-	-	-	-	-	-		-	-	-	-	-	-
Public Administration	2	1	-	-	-	-		10.5	3.0	-	-	-	-
Retail Trade	4	1	1	-	-	-		25.0	5.0	5.0	-	-	-
Services	30	38	30	4	-	-		5.0	8.0	5.3	8.0	-	-
Transportation & Public Utilities	3	4	-	1	-	-		4.0	9.5	-	19.0	-	-
Wholesale Trade	-	1	-	-	-	-		-	15.0	-	-	-	-
<b>Total</b>	<b>65</b>	<b>86</b>	<b>57</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>Median Tot.</b>	<b>5.0</b>	<b>10.0</b>	<b>7.0</b>	<b>9.5</b>	<b>15.0</b>	<b>-</b>

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## About PPAlyser

*PPAnalyser is 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 PPAlyser, an online subscription database that includes data of over 10,000 purchase price allocation studies disclosed between 2007 and 2020. For more information visit [www.ppanalyser.com](http://www.ppanalyser.com).*