PWC Use cases
PROJECT II

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CLUSTER ENTITIES AND ANALYZE EACH CLUSTER

PWC financial information for several entities have been provided to us for a specific financial year.

PROBLEM STEPS :

1. Data preparation & cleaning
2. Analysis of the features
3. Clustering Techniques
4. Visualization

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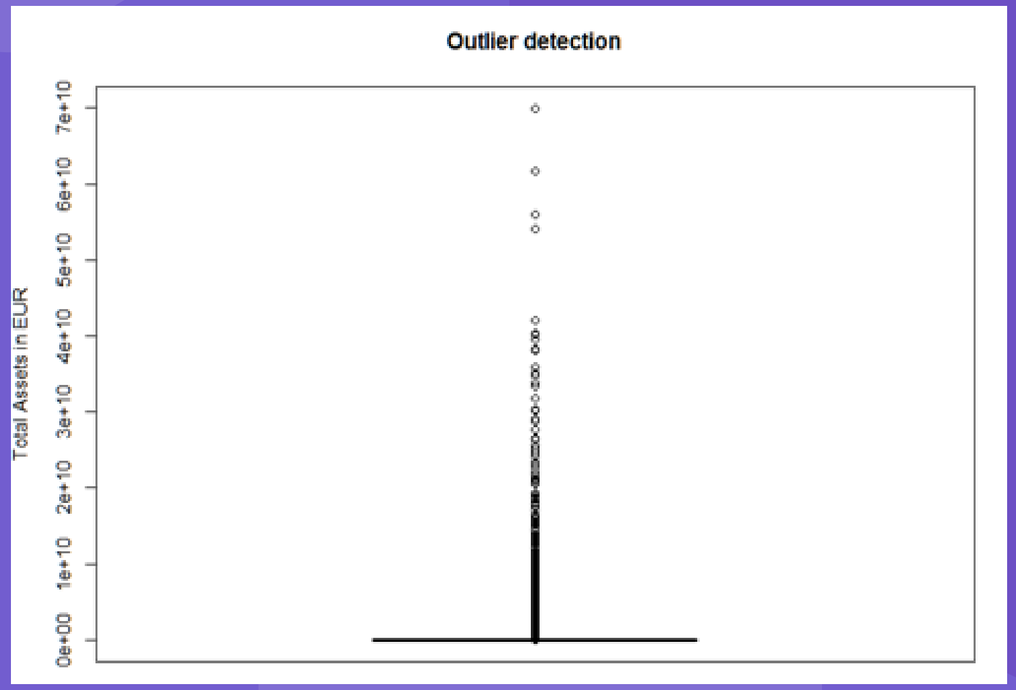
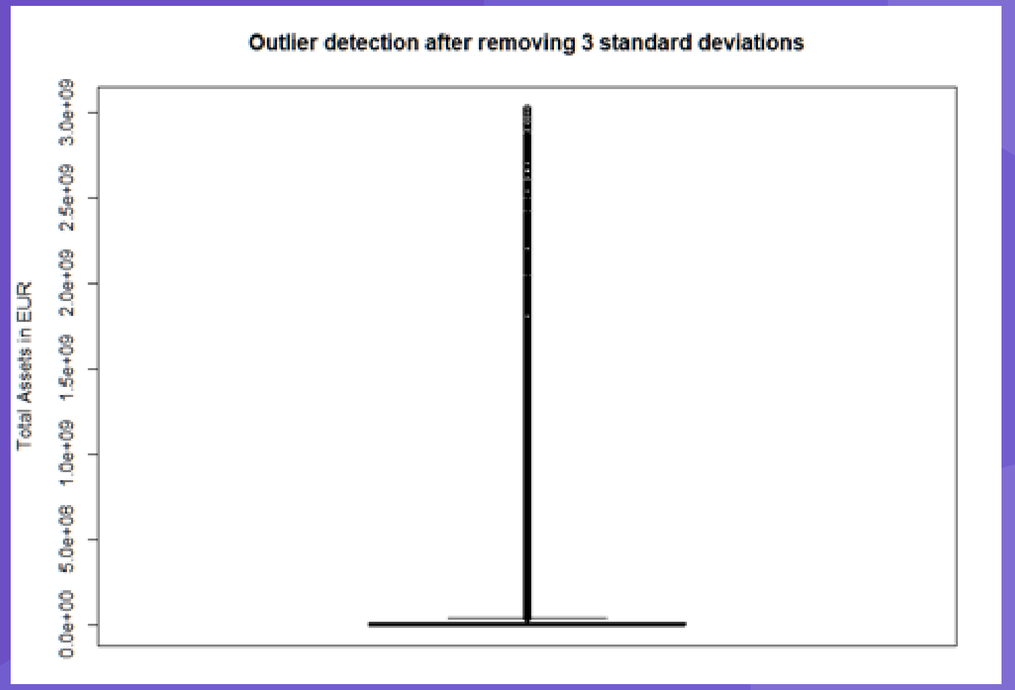
DATA PREPARATION / CLEANING PROCESS

- Currencies convertion
- Basic statistical test : identification of extreme values
- Basic box plots : indentification of outliers
- Removing everything beyond 3 standard deviations
- From 72644 companies to 69047 companies





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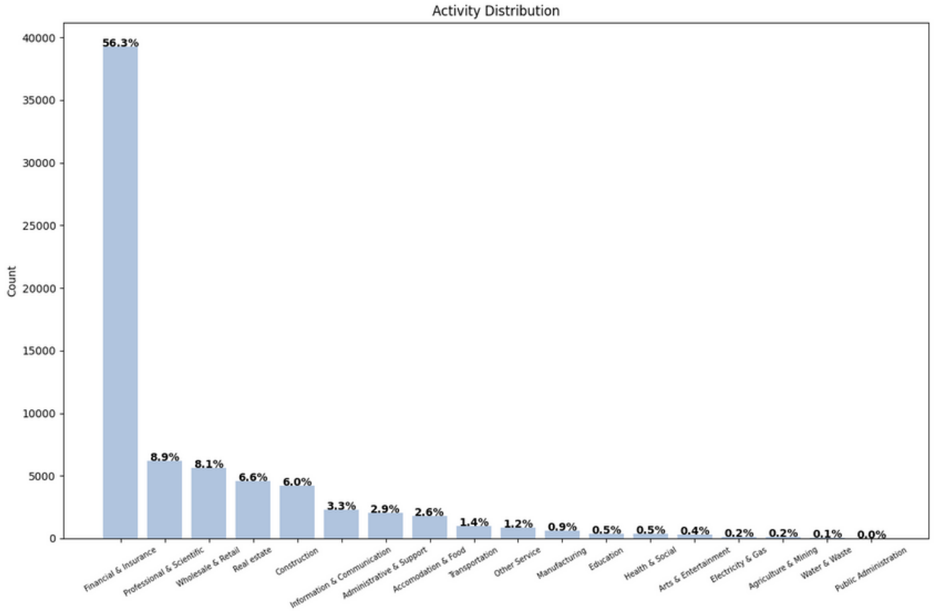
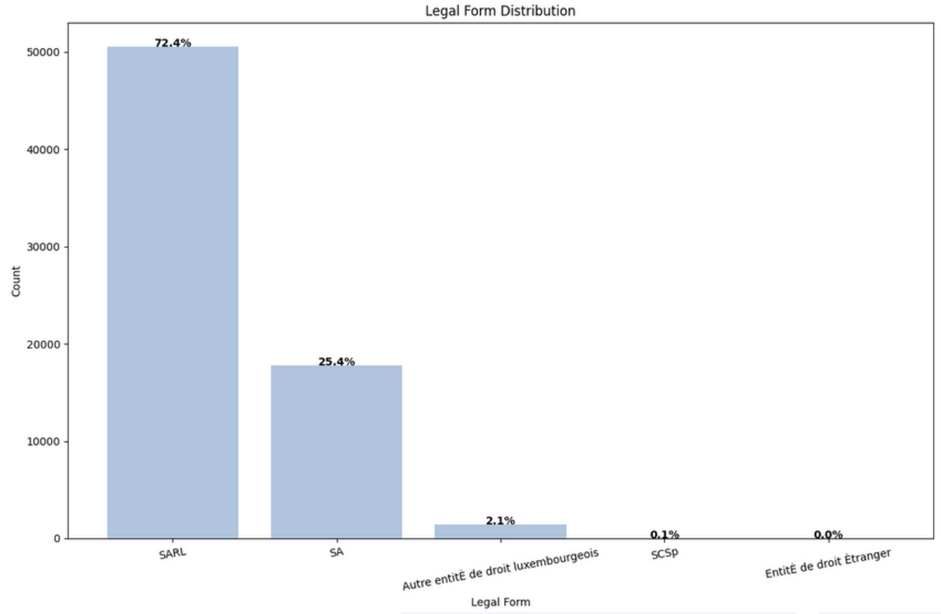
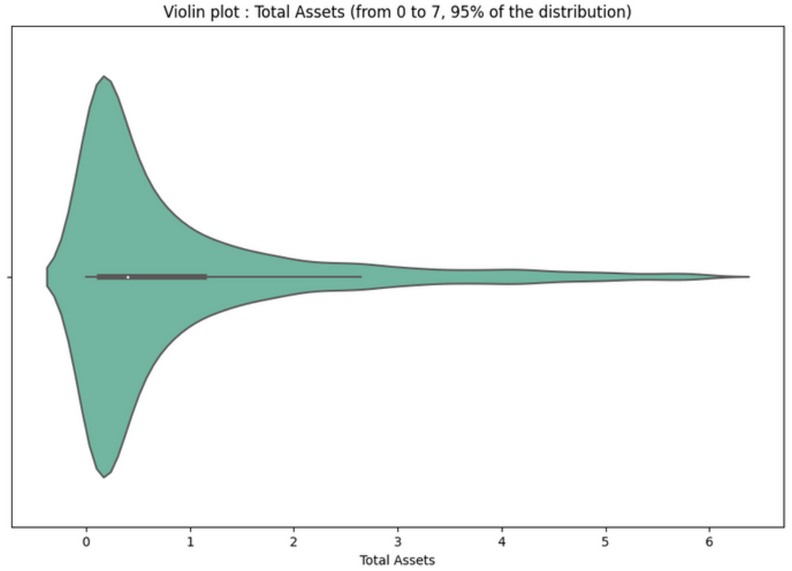
Summary statistics

DISTRIBUTION

- 56% in Finance & Insurance
- Massive representation of SARL (75%)

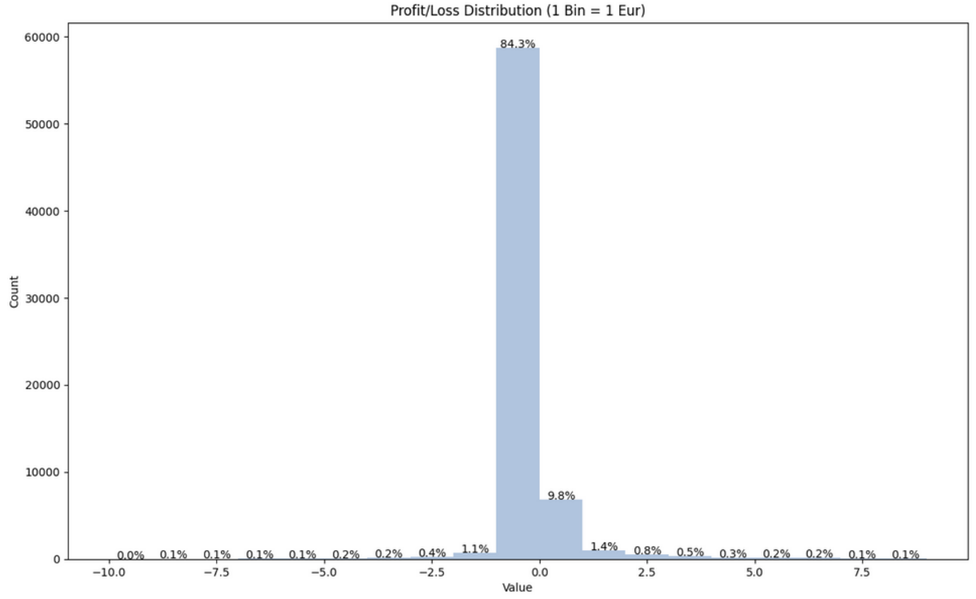






- Dominance of low value assets (between 0 and 1 eur).

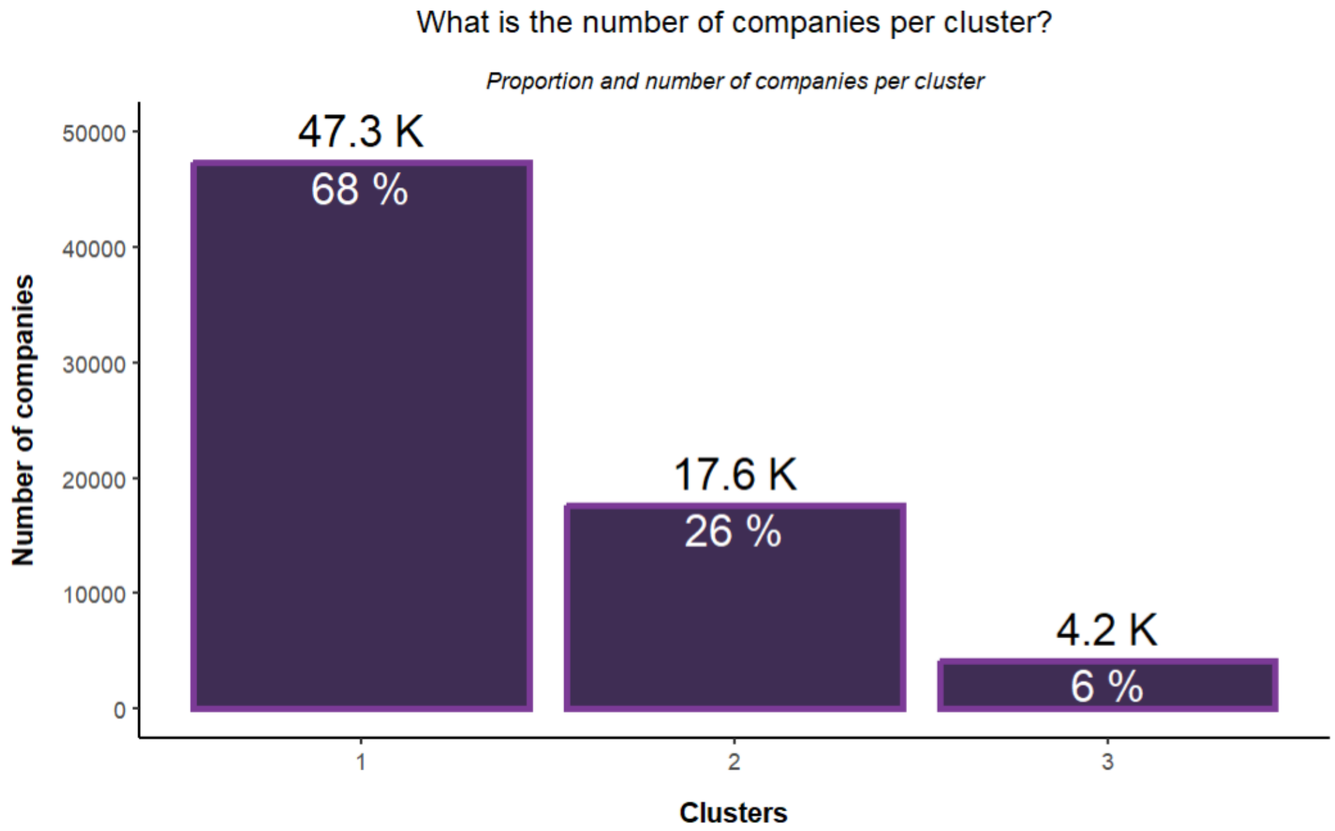
- Massive domination of a Profit/Lossbetween 0 and -1 (85%)
- So between -3M and 0,3M €



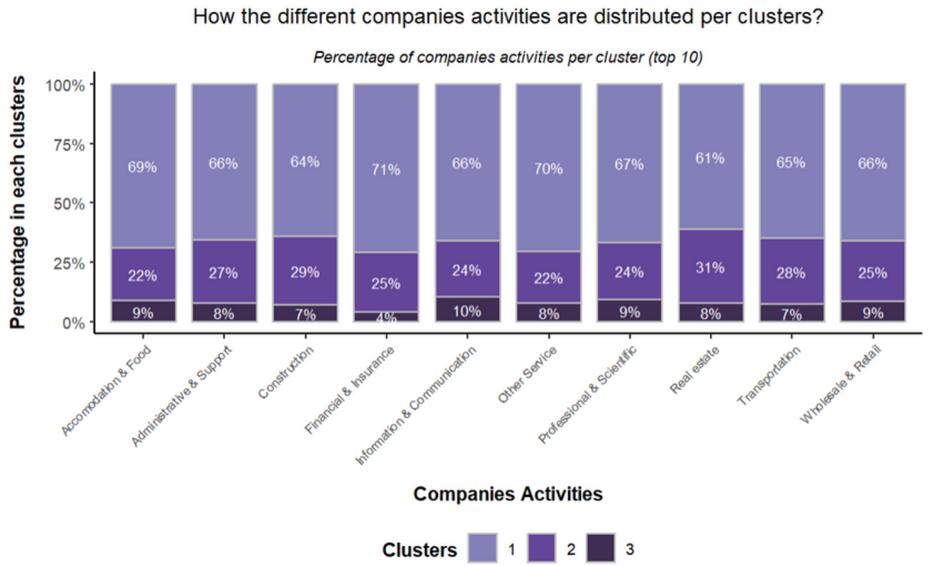
3 Presentation of the features

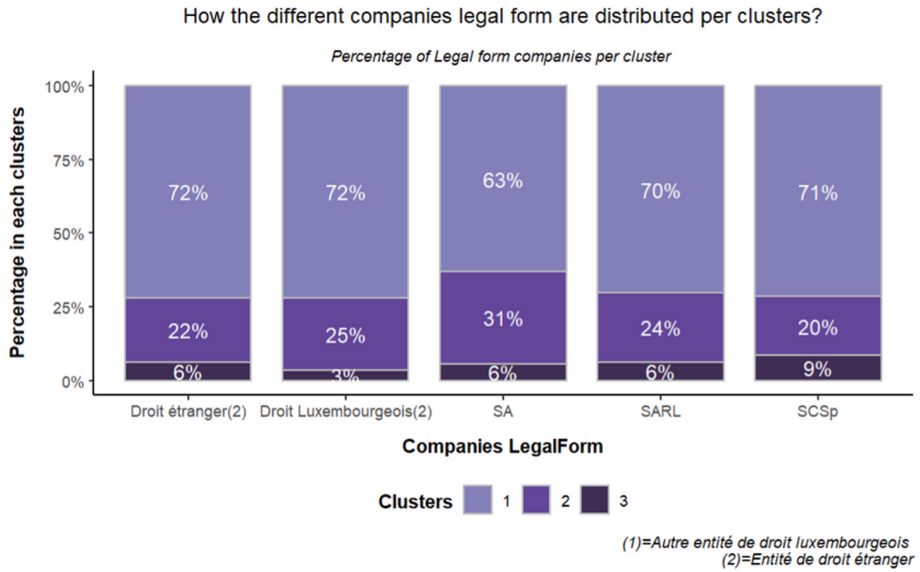
Clustering Techniques

- K mode algorithm
- Grouping profit and assets per group of 5
- Cluster 1 dominates the clustering



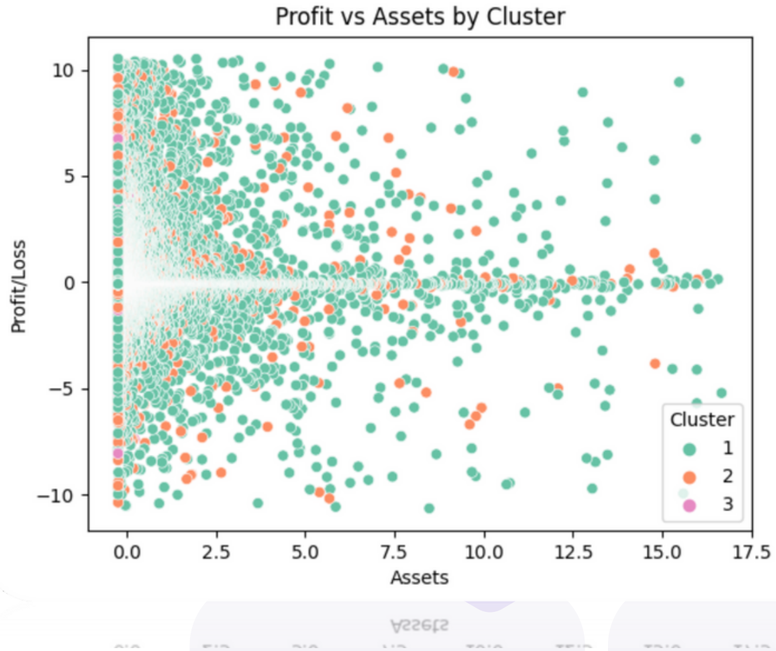
- Analysis of Company Legal form and Activities influences in the Clustering





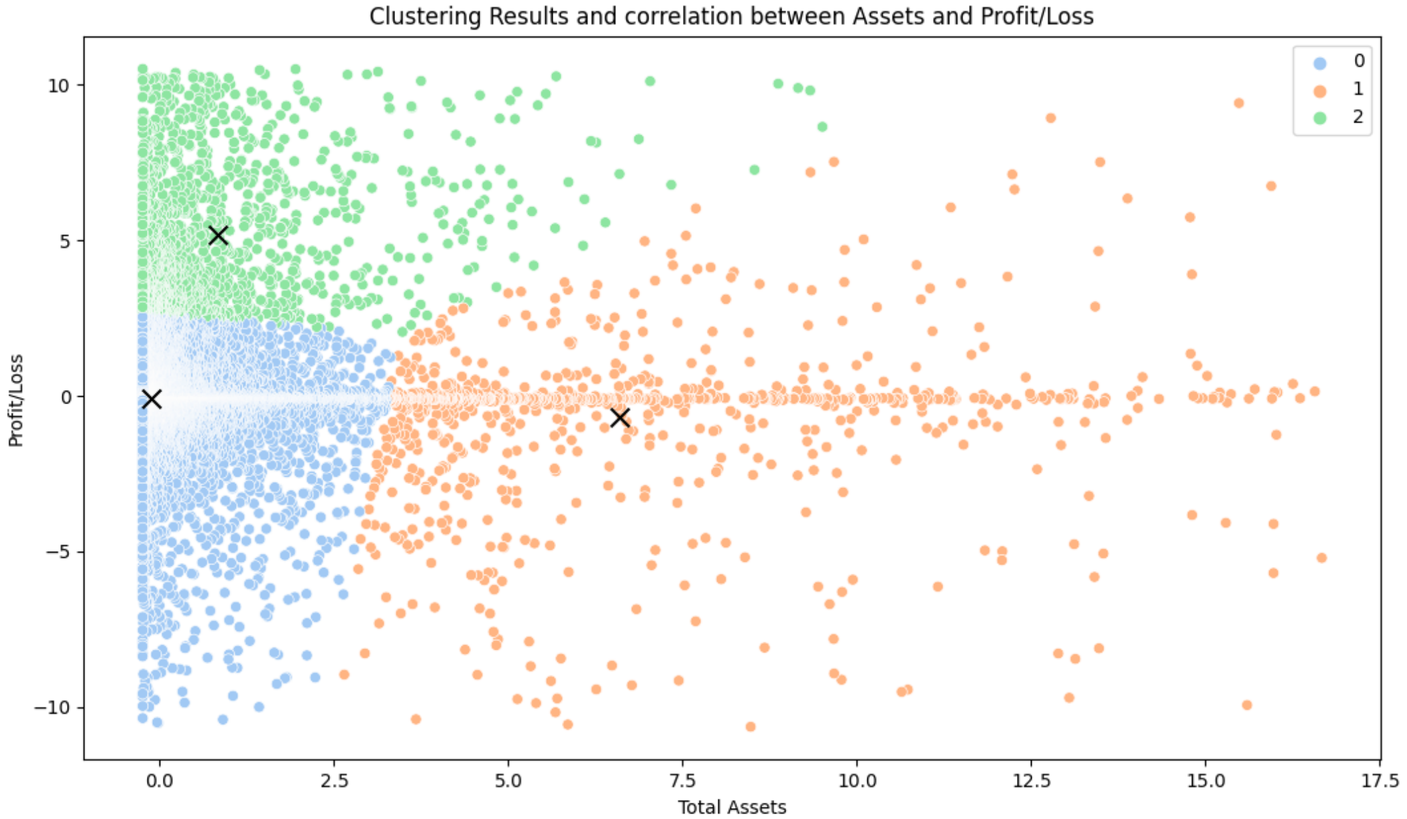
- No influences from Activities and Legal Form

Clustering visualization with Profit and Asset



- Slight influence from Profit and Asset

If Profit and Assets would have only been taking into account



4 Recommendations

Practical implementation

- The companies have similar characteristics
- No singularity
- Strong business base

- The clusters are mostly very dense.

THANKS!

Any questions?