

The ERICA Series

15. Goodwill analysis on a panel of European consolidated groups (2016-2020)

March 2023



ERICA Working Group

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European Committee of Central
Balance Sheet Data Offices

Members of the ERICA (European Records of IFRS Consolidated Accounts) WG

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Banque Nationale de Belgique

Riccardo Renzi

Banca d'Italia

Javier González

Banco de España

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Bank of Greece

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Bank of Greece

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Banque de France

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Centrale dei Bilanci / Cerved Group

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Deutsche Bundesbank

Lena Leontyeva

Deutsche Bundesbank

Birgit Bernhard

Oesterreichische Nationalbank

Sabine Wukovits

Oesterreichische Nationalbank

Ioannis Gkrintzalis

European Central Bank

Izabela Ruta (observer)

IASB

IMPORTANT INFORMATION ABOUT THE SOURCE USED (ERICA¹ DATABASE) AND ABOUT THE FIGURES BY COUNTRY

The data used in this study is obtained from publicly available financial statements of European non-financial listed groups, having been treated manually by CBSO statisticians and accounting specialists, to be fitted into a standard European format (ERICA format). In some cases, this manual treatment involves interpretation of the original data, a constraint that readers of this document should bear in mind.

The database does not represent the total population of European non-financial groups. Nevertheless, the coverage of listed European groups attained with ERICA (in the whole dataset of approximately 1,000 groups) is well attuned to the situation and national composition of the stock markets. The analyses performed in this document, with the proviso expressed in the previous paragraph, provide a general view of the position and performance of listed non-financial European groups. However, the analysis includes some remarks on the performance of listed European groups according to the country where the parent company is based. The largest ERICA groups are multinationals, so it must be borne in mind that the performance of groups belonging to any given country does not necessarily reflect the performance of the country itself.

The opinions of the authors of this document do not necessarily reflect those of the national central banks for which they work or those of the ECCBSO.

All the graphs and tables presented in the document are from the same source (ECCBSO-ERICA database).

¹ ERICA (European Records of IFRS Consolidated Accounts) is a database of the European Committee of Central Balance Sheet Data Offices.

THE ERICA SERIES:

15. Goodwill analysis on a panel of European consolidated groups (2016-2020)

(Document prepared by Clémence Charavel and Baptiste Collin, Banque de France)

ERICA (European Records of IFRS Consolidated Accounts) WG

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1. Introduction

There has been a long debate on the accounting treatment of goodwill (IFRS 3) and the strengths and weaknesses of the impairment model (IAS 36) under which goodwill is not amortised but subject to an annual impairment test². More recently, in 2020, the International Accounting Standards Board (IASB)³ re-opened the debate in a study submitted for public consultation on the treatment of goodwill⁴, which seeks to improve the information that companies give investors about the businesses they have acquired. It also addresses the issue on whether amortisation of goodwill should be reintroduced.

The ERICA database contains information on listed European companies reporting under IFRS standards. It is fed with information from about 1 000 companies each year. The study is based on a sample of 668 companies present in the ERICA database each year between 2016 and 2020.

The objective of this study is to analyse goodwill amounts recognised in this sample through two prisms:

1/ to understand the goodwill evolution;

2/ to assess the relevance of amounts of goodwill recognised in annual accounts, particularly with regard to the risk of overestimation.

To that end, we will analyse the different factors contributing to goodwill evolution in the first part and we will then focus on changes in intrinsic factors (acquisitions, cessions, impairments), i.e. that result from managerial decisions taken at the company level. In the second part, we will compare goodwill and goodwill impairments with financial elements in order to assess the relevance of amounts of goodwill recognised in corporate accounts. To do so, we will look at whether the market and companies have the same perception of the economic environment and whether impairments recorded as part of the impairment-only model do actually contribute to excessive growth of goodwill in accounts.

² For instance, in June 2015, the IASB published its report and feedback statement on its [PIR of IFRS 3](#).

³ Organisation in charge of developing international accounting standards IFRS.

⁴ [Discussion Paper: Business Combinations—Disclosures, Goodwill and Impairment \(comment period revised April 2020\) \(ifrs.org\)](#).

2. Goodwill: amount, aspects of change and illustration of business combinations

2.1. Goodwill and its recognition principles

Goodwill is an intangible asset arising from a business combination. When an acquiring company takes over a business for more than its fair value, the excess is recognised as goodwill in the balance sheet of the consolidating company. We refer here to the concept of goodwill under IFRS 3 Business Combinations, as the ERICA database is composed of companies that are subject to IFRS.

Goodwill is therefore the positive difference between the acquisition price of a company and its fair value. This difference is explained by the fact that the value of a company cannot be measured solely in its accounts. While the balance sheet and the income statement make it possible to estimate the sale price of a company, other parameters resulting from the consequences of the takeover must be taken into account, notably the management of the company. Goodwill reflects the sum of human, strategic, financial, economic and accounting components and can be explained by, among others:

- the target's earnings growth prospects;
- the benefits of the purchase of the brand;
- synergy with the group's products;
- the acquisition of technological know-how;
- human capital;
- the ousting of a competitor;
- entry into a new market.

In a disruptive economy that relies more on innovation, both technical and in terms of organisation and market strategy, goodwill is increasingly one of the defining assets of companies. Many accounting professionals consider goodwill to be one of the most difficult assets to value.

Goodwill is recorded in the balance sheet at its historical cost. According to IFRS (IAS 36), it has an unlimited (but not indefinite) life, which means that it is not amortised, but must be tested for impairment at least once a year, whether or not there is any indication of impairment, and as soon as there is an indication of impairment, possibly several times a year. Impairment tests are therefore intended to ensure that recoverable amounts of assets are not lower than their carrying amounts, which would ultimately reduce equity. It is not possible to determine the recoverable amount of goodwill directly. The absence of cash flows at the level of goodwill prompts company accountants to attach the goodwill to a cash-generating unit⁵ (CGU) and to the determination of the value of the CGU. Impairment tests are therefore carried out at the level of the cash-generating units (CGUs) to which the goodwill belongs. The recoverable amount of a cash-generating unit is the higher of its fair value less costs to sell and its value in use, determined using the discounted cash flow method or another more appropriate method. The calculation of the value in use is prospective and includes an estimate of future cash flows which depends in particular on discount rate and terminal growth rate.

When the recoverable amount of a CGU is less than its carrying amount, an impairment loss is recognised in the income statement. An impairment loss recognised on goodwill cannot be reversed in a subsequent period. The main objective of this prohibition is to avoid any volatility of the indicator by steering results through the interplay of charges and reversals. Nevertheless, it may be a brake on depreciating goodwill. The introduction of an annual impairment test instead of amortisation limits the risk of a possible overvaluation of goodwill resulting from amortisation over a long period of time (20 years) but also has disadvantages:

⁵ A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows generated by other assets or groups of assets.

- The announcement of a goodwill impairment represents a negative signal for future profitability. The market can anticipate this deterioration and integrate it in the prices;
- Monitoring goodwill over the long term can be very difficult due to the "scattering" of goodwill caused by restructuring;
- Impairment charge on goodwill can lead to greater volatility, reduced control and lower earnings expectations;
- Importance of judgment (subjectivity) in calculating the impairment (taking into account the discount rate, estimated data);
- In the event of a negative economic context in which a company's profit plunges and where future prospects have deteriorated with the crisis, it could underestimate the impairment on goodwill in order not to deteriorate results even more.

As mentioned in the introduction, there has been a long debate about the strengths and weaknesses of an impairment-only model and whether the amortisation of goodwill should be reintroduced. The issue of reintroducing goodwill amortisation is regularly coming to the fore.

2.2. Presentation of goodwill in the sample studied

The sample used for the analysis comes from the ERICA database (listed non-financial corporations) which contains 668 companies present in the database between 2016 and 2020, referred to as the fixed sample. This sample is fed by data from eight countries: Austria, France, Germany, Italy, Belgium, Spain, Greece, Portugal⁶. 80% of the groups of the sample recognise goodwill each year. Goodwill is highly concentrated among a handful of companies as more than 80% of goodwill is reported by the 50 companies recording the highest amounts of goodwill. Around 15% of groups have no goodwill on their balance sheet over the entire period.

TABLE 1 SAMPLE USED TO STUDY GOODWILL

	2016	2017	2018	2019	2020
Nb of companies in the sample	668	668	668	668	668
Nb of companies recognising goodwill	536	536	545	551	556
Nb of companies recognising no goodwill all over the period	97	97	97	97	97
Amount of goodwill in the sample (G €)	816	825	878	900	870
Share of goodwill recognised by the 50 companies recognising the largest amounts of goodwill	82%	82%	88%	82%	81%

N.B. Amounts of goodwill in the study refer to amounts net of accumulated impairment losses (as they are presented in balance sheet).

Source: ERICA 2020 dataset.

The left-hand graph of Chart 1 shows that the amount of goodwill recorded in the fixed sample increases each year except for 2020 where it decreases. We will explain this change in more detail.

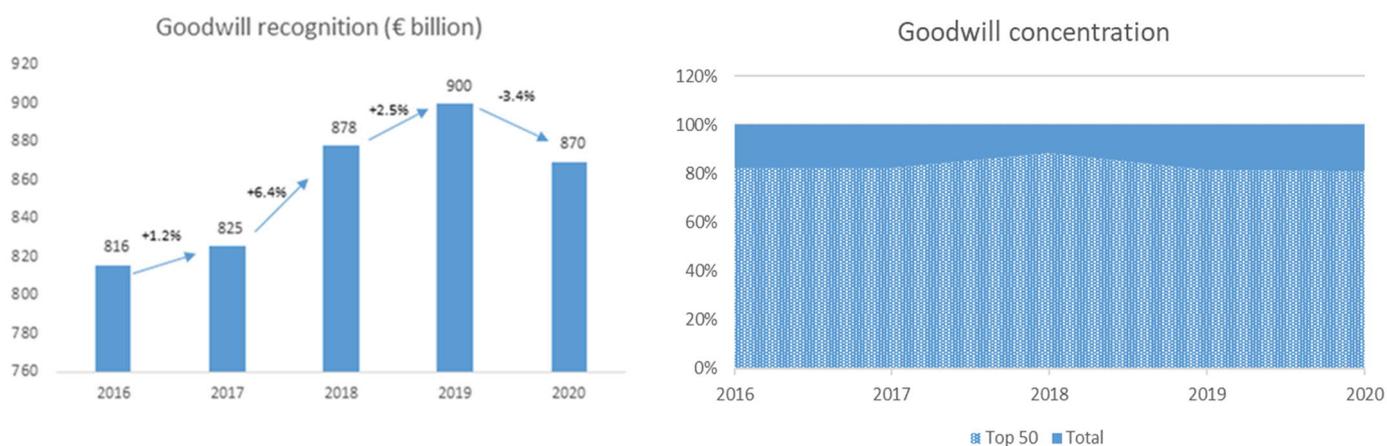
As mentioned above, goodwill is highly concentrated among very few companies: more than 80% of goodwill is concentrated in the 50 groups with the largest amounts of goodwill. The 50 groups recording the largest amounts of goodwill over the entire period varies little from one year to the next:

⁶ A more detailed description of the sample is given in the Appendix.

41 groups are present in the TOP50 each year between 2016 and 2020. Among these 50 groups, we naturally find leaders or major players in their respective sectors.

The concentration of goodwill means that the change in goodwill of a limited number of companies is representative of the total change in goodwill in the sample. In what follows, we will look at the change in goodwill in a sub-sample of companies, those that contribute significantly to the total change in goodwill. This sub-sample is determined each year and in each sector by selecting the companies that explain at least 80% of the variation in goodwill.

CHART 1 GOODWILL RECOGNITION AND GOODWILL CONCENTRATION IN THE SAMPLE STUDIED (2016 – 2020)



Source: ERICA 2020 dataset.

2.3. Components of the change in goodwill

To help understand the trend in goodwill, we will look at the change in goodwill by contributing factor.

Positive changes in goodwill amounts may result from:

- Mergers and acquisitions;
- Accounting restatements;
- Currency effects.

Negative changes in goodwill amounts may result from:

- Disposals;
- Impairment losses;
- Accounting restatements;
- Currency effects.

➤ *Changes in goodwill due to accounting restatements*

The valuation of goodwill is based on facts and circumstances existing at the date of acquisition. The resulting goodwill amount may be provisional because not all information is available and an adjustment to its value is possible. The adjustment period is 12 months from the date of acquisition, which is the date on which control of the acquired company is obtained. Accounting restatements related to the final estimate of goodwill may be made in the following year and may result in a change in the value of goodwill recorded in the balance sheet. The accounting restatements may result in an increase or decrease in goodwill.

➤ *Change in goodwill due to currency effects*

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on consolidation, are translated into euros using the exchange rate prevailing at each balance sheet date⁷, while equity is translated at historical rates. Income and expenses of foreign operations are translated into euros at the weighted average exchange rate. The resulting translation differences during the year are recognised in other comprehensive income within equity (accumulated since the acquisition of the subsidiary took place).

- ⇒ The exchange rate impact on goodwill is greater when there is a significant change in the exchange rate of the euro against the currencies in which the accounts of consolidated subsidiaries are drawn up.
- ⇒ They lead to an increase in goodwill when the euro depreciates against the currencies in which the financial statements of consolidated subsidiaries are drawn up: the amount of goodwill recorded in the financial statements of subsidiaries converted into euros is higher, other things being equal.
- ⇒ Conversely, when the euro appreciates during the year, the currency effect is negative on the amount of goodwill translated into euros: the amount of goodwill in euros is lower, other things being equal.
- ⇒ The overall impact of exchange rate fluctuations on a company that prepares its consolidated financial statements in euros is the sum of the impact of the exchange rate fluctuations between the euro and each of the currencies in which the subsidiaries prepare their financial statements.

In the ERICA database, most companies prepare their consolidated accounts in euros, but some use US dollars. The exchange rate effects observed in the database therefore reflect the variation in the exchange rate of the euro and the US dollar against the currencies in which the subsidiaries prepare their accounts. The main foreign currency in which the subsidiaries of our scope of companies prepare their financial statements is the US dollar, but significant exchange rate effects are observed in relation to the currencies of the South American states, the Australian dollar and the British pound.

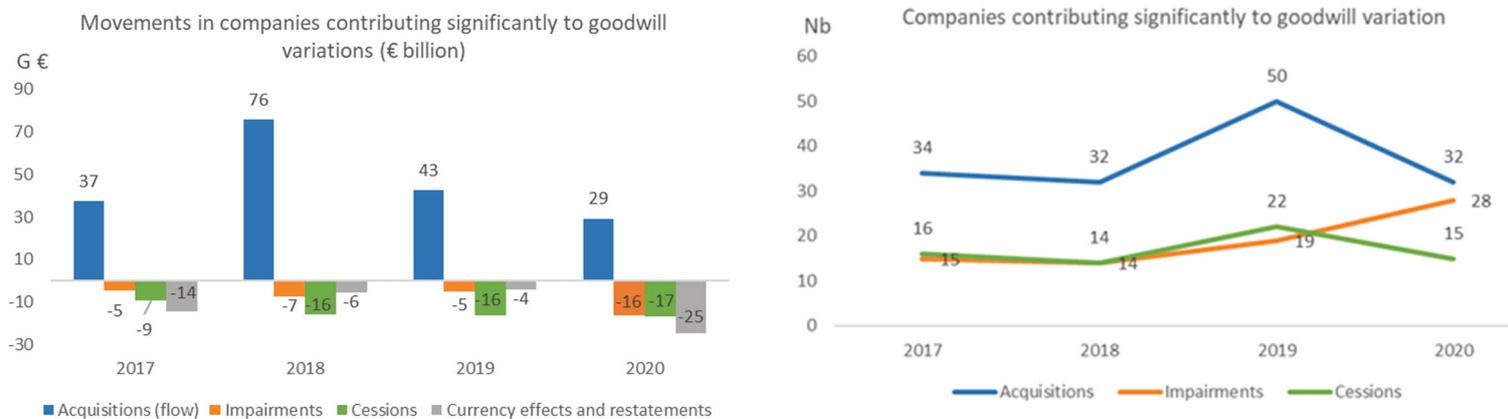
Chart 2 shows the components of the goodwill variation in the sub-sample of companies contributing significantly to goodwill variation and the corresponding number of companies recording those movements.

First, we note that goodwill flows due to acquisitions are volatile over the period with a peak in 2018. It is worth noting that this increase in goodwill (€37 to €76 billion) is not accompanied by any similar increase in the number of companies recording significant acquisitions, which on the contrary falls slightly (34 in 2017 to 32 in 2018).

Second, we observe that goodwill impairments rose significantly in 2020, due to the COVID-19 crisis. While impairments do not exceed €7 billion between 2017 and 2019, this amount reaches €16 billion in 2020. Contrary to what we observe on amounts of goodwill due to acquisitions, this rise in impairment volume is accompanied by a similar increase in the number of companies affected by impairments (19 in 2019 to 28 in 2020). The same correlation between the annual change in impairment and changes in the number of companies recording impairments is observed in the fixed sample (see right-hand graph of Chart 3).

⁷ It corresponds to the consolidated presentation currency vs foreign functional currency -> translation differences are to be taken into account during the homogenisation process to prepare consolidated statements.

CHART 2 COMPONENTS OF THE GOODWILL VARIATION IN THE SUB-SAMPLE OF COMPANIES CONTRIBUTING SIGNIFICANTLY TO GOODWILL VARIATION AND THE CORRESPONDING NUMBER OF COMPANIES RECORDING THOSE MOVEMENTS (2017 – 2020)

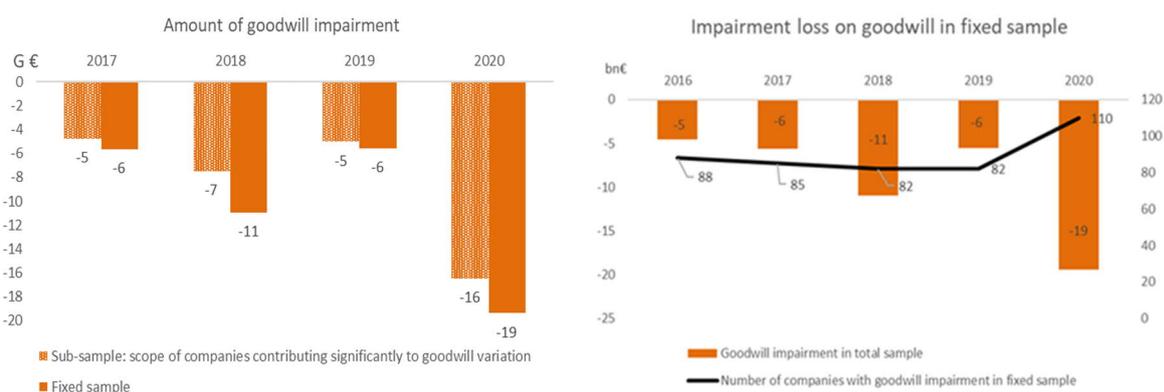


Source: ERICA 2020 dataset.

Third, it should be noted that currency and restatements effects have a significant impact on changes in goodwill. In 2020, although the low level of acquisitions and the increase in impairments contribute to the negative change in goodwill, the negative impact of currency and restatement effects contributes largely to the negative variation in goodwill. It is worth noting that currency and restatement effects are not intrinsic to goodwill as they do not reflect decisions taken at company level, but rather reflect the company's economic and monetary environment.

In the ERICA database, the amount of goodwill impairment is broken down by company. We note on the left-hand graph of Chart 3 that companies we have selected in the sub-sample are representative of the total impairments recorded in the database.

CHART 3 GOODWILL IMPAIRMENT IN THE SUB-SAMPLE



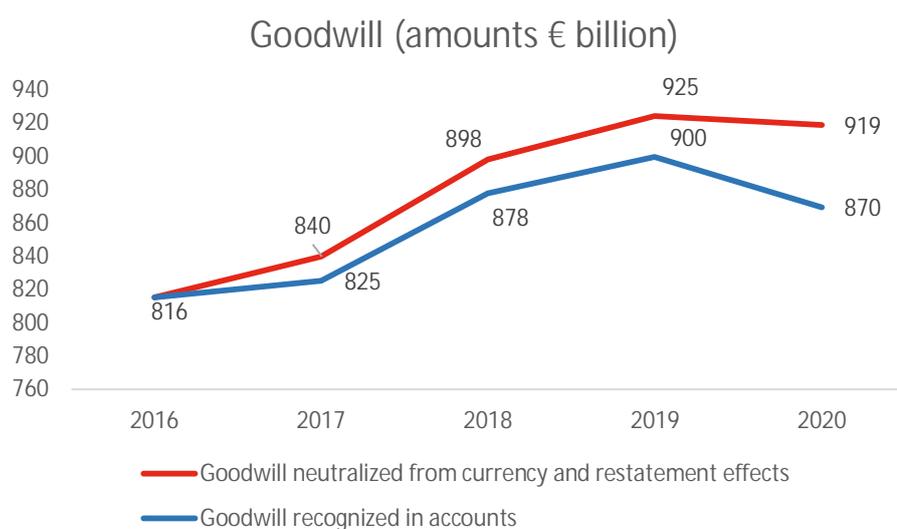
Source: ERICA 2020 dataset.

After having described the change in goodwill by contributing factor, it is interesting to isolate changes in the volume of goodwill or changes due to business strategies carried out companies.

2.4. Illustration of the main movements intrinsic to goodwill

Changes in goodwill due to currency effects and accounting restatements do not reflect a change due to managerial decisions but are undergone by the company. The graph below shows the annual change in goodwill once neutralised for the main exchange rate effects and restatements on goodwill to be able to capture the change in goodwill due to operations intrinsic to the nature of goodwill: acquisitions, disposals and impairments. For this purpose, we have recalculated the amounts of goodwill by cumulative flows from 2017 to 2020 excluding the currency and restatements effects on the sub-sample of companies contributing significantly to goodwill variation (see Chart 4).

CHART 4 CUMULATIVE CHANGES IN GOODWILL IN THE SUB-SAMPLE EXCLUDING CURRENCY AND RESTATEMENTS EFFECTS (2016 – 2020)



Source: ERICA 2020 dataset.

The blue curve corresponds to the amount of goodwill recorded in the fixed sample. The red curve represents the outstanding goodwill recalculated by cumulative flows excluding the main exchange rate effects and accounting restatements. Accounting restatements have little impact compared to exchange rate effects, except in 2019 when the impact of restatements on goodwill was greater and in the opposite direction to the exchange rate effects. Overall, we note that although the curve in 'volume' is higher, it moves in the same direction as goodwill recognised in the accounts.

Table 2 illustrates the main movements in acquisitions, disposals and impairments⁸ recorded in sectors that contribute most to the annual change in goodwill (in red in Table 2)⁹.

⁸ The explanations come from the information contained in the annual reports or in the press.

⁹ It should be noted that changes in a company's sector from one year to the next have been neutralised for the analysis of the change in goodwill by sector because, here again, such a change does not reflect the intrinsic change in goodwill.

TABLE 2 SECTORS' CONTRIBUTION TO GOODWILL VARIATION

Sectors contribution to variation	2017	2018	2019	2020
Chemicals	0.1	3.6	0.2	0.6
Construction	0.1	0.2	0.3	0.0
Energy	0.1	0.5	1.9	0.3
Food products	1.1	0.2	0.5	0.2
Information and communication	0.4	0.4	0.0	1.0
Machinery and equipment	0.6	0.1	0.1	1.1
Metals, electronic & electrical equipment	-	0.0	0.3	0.8
Other manufacturing	0.7	0.1	0.5	0.0
Other services	0.4	0.4	0.0	0.0
Real estate	-	0.0	0.4	0.2
Retail trade	-	0.5	0.1	0.0
Transportation and storage	-	0.2	1.8	0.1
Vehicle manufacturing	0.1	0.4	0.1	0.0
Wholesale	0.1	0.1	0.1	0.1
Total	3.0	7.0	2.9	0.6

Source: ERICA 2020 dataset.

In **2017**, the 3.0% increase in goodwill was mainly due to transactions in six sectors.

The increase in goodwill in the Food Products sector accounts for almost half of the total change in goodwill in 2017 (+ 1.1% corresponding to €8 billion worth of goodwill), 80% of which can be explained by the acquisition of an American organic and plant-based milk giant by a French group. This acquisition strengthens the geographical positioning of the French brand in North America and gives Europe more leverage for developing the plant-based range.

The Other Manufacturing sector contributes to +0.7% of the total change in goodwill in 2017. Three-quarters of the change in this sector is explained by the acquisition of a Spanish hospital group by one German group which intends to be the largest operator in private hospitals in Europe.

The increase in goodwill in the Machinery and Equipment sector contributes +0.6% of the total change in goodwill and is explained almost exclusively (98%) by the acquisitions made by one German group. On the one hand, the purchasing group is focusing its medium-term growth strategy on the development of industrial software. On the other hand, in its energy-related business area, it is merging with a Spanish group to create a global leader in the construction of wind turbines, a sector that is growing rapidly in the wake of the global climate agreement signed in Paris in December 2015.

The increase in goodwill in the Information and Communication sector contributes +0.4% of the change in goodwill in 2017 and is explained by acquisitions made by one French group (+€1.8 billion of goodwill) and one German group (+ €2.5 billion of goodwill) and an impairment recorded by one German Group (-€2 billion of goodwill):

- The aim of the French group is to pursue its strategy focused on content, media and communication by taking full control of a major player in the sector.
- The acquiring German group is an internet service provider which made several acquisitions in 2017 enabling it to expand its leading position in the European hosting and cloud applications market.
- A German group recorded an impairment due to stronger competition and a difficult overall market situation, as well as rising interest rates.

The Retail Trade sector is the only sector that makes a significant negative contribution (-0.5%) to the change in goodwill in 2017. 80% of the decline is explained by disposals made by two companies:

- 60% is explained by the split of a German group into two entities with the objective of refocusing its business: one will concentrate on consumer electronics while the other will focus on food and wholesale.
- 20% is explained by a sale made by a Belgian group in order to free up funds for the deployment of other business activities.

15% of the remaining 20% reduction in goodwill is explained by a French group recording an impairment loss on the goodwill allocated to its activities in Italy (lower margin and cash flow prospects).

Finally, the last sector contributing significantly to the change in goodwill in 2017 (+0.4%) is the Other Services sector, in which the multiple acquisitions made worldwide by a French group, whose growth strategy has been based on acquisitions for the past 10 years, account for 80% of the increase in goodwill.

2018 was the year in which goodwill increases the most over the period 2016 -2020: +7.0% which is mainly explained by transactions in four sectors.

The Chemicals sector accounted for more than half of the total change in 2018 (+3.6%), more than 75% of which is attributable to the acquisition by a German group of an American group resulting in the recording of €24.5 billion of goodwill. The aim is to achieve synergies that will enable the acquiring company to control the entire agricultural chain, thanks to its strength in the pesticides segment, particularly in Europe and Asia, and the American group's strength in the seeds and herbicides markets, notably in the Americas. After the merger, the German group doubled its agricultural business and now has a 20% share of the global seeds and crop protection market.

An acquisition by an Italian group explains more than 90% of the change in goodwill in the Transportation and Storage sector, which contributed 1.8% (€16.8 billion of goodwill) of the total change in 2018.

The change in goodwill in the Information and Communication sector made up +0.4% of the total change in 2018 and results from €4.5 billion of goodwill generated by an acquisition made by one French group and -€2.6 billion of goodwill impairment recorded by one Italian group.

The Energy sector is the only sector that made a significant negative contribution (-0.5%) to the change in goodwill in 2018. More than 85% of this decline is due to larger disposals (-€10.7 billion of goodwill) than acquisitions (+€5.9 billion of goodwill) and to a lesser extent to impairments (-€1.5 billion of goodwill) recorded by four companies:

- A German group is selling a subsidiary which combines renewable energy production, electricity distribution and marketing networks to another German group, resulting in a €9.5 billion goodwill reduction. This transaction is a further substantial step in the ongoing restructuring of the German electricity and gas generation, distribution and marketing sector.
- The German purchasing group is selling minority shares of two of its German nuclear power plants to the German selling group, resulting in a €1.3 billion reduction in goodwill, thereby addressing the competition concerns raised by the European Commission in connection with the future acquisition. Overall, one group will focus on energy production, both conventional and renewable, while the other will give priority to energy distribution and marketing to households and companies.
- A French group is acquiring several companies in the oil and gas sectors resulting in the recognition of €5.8 billion of goodwill.
- A Spanish group has recognised an impairment on goodwill of €1.5 billion recorded on conventional electricity production.

In **2019**, the increase in goodwill of 2.9% is mainly explained by movements recorded in five sectors.

The Energy sector contributes the most to the increase (+ 1.9%), almost all of which is attributable to the acquisition of the German purchasing group in the above-mentioned transaction (+ € 15 billion of goodwill) as a disposal in 2018 in the German vendor group accounts.

The Other Manufacturing sector contributes to +0.5% of the change in goodwill, almost all of which is due to acquisitions made by one French group and one German group.

The Food Products sector is the only sector that makes a significant negative contribution (-0.5%) to the change in goodwill, which is explained by the sale made by a Belgian world leader in beer of its Australian subsidiary to a Japanese group.

The Construction sector (mainly through acquisitions by two French groups) and the Metals, Electronic & Electrical Equipment sector (almost entirely through acquisitions by one French group) then contribute significantly to the change in goodwill, each chipping in with + 0.3 %.

In **2020**, the change in goodwill was negative (-0.6%) over the period. Only two sectors, Information and Communication and Metals, Electronic & Electrical Equipment contributes positively to goodwill variation, respectively accounting for +1.0% and +0.8% of the total change. In the Information and Communication sector, a disposal by a Spanish group (- €5.3 billion of goodwill), which wants to refocus its activities on its main markets and reduce its debt, is largely offset by the €15 billion of goodwill recorded on acquisitions, of which €9 billion is due to a German group which buys its US competitor. This acquisition was a boon for the European leader as US operators begin to roll out 5G across the country. After a long battle with regulators who feared a shake-up of competition and price hikes, the European leader's US subsidiary has become the second largest network operator in the country.

In the Metal Products sector, which records €6.8 billion of goodwill on acquisitions, €5.5 billion was recorded by a German semiconductor manufacturer upon acquiring its US rival. The deal is expected to open up additional growth potential in the automotive, industrial and Internet of Things sectors, and to reduce costs and generate revenue synergies in the long term.

Goodwill is falling in all other sectors. The Machinery and Equipment sector recorded the biggest drop (-1.1% of the total change), which is mainly the result of the sale by a German group of its energy-related business (-€10 billion of goodwill) to refocus on the digitalisation of industry.

The Chemicals sector contributed -0.6% to the change in goodwill in 2020. One French group and one German group made significant acquisitions in this sector (+ €3.4 billion of goodwill). Other movements in goodwill reflect the recording of impairments (- €3.4 billion of goodwill) by several companies due to the pandemic, which led to a reduction in demand for building materials and biofuels.

The drop in goodwill in the Energy sector (- 0.3% of the total change) is due to impairments recorded by several companies (- €2.9 billion of goodwill). Impairments are explained by the decline in energy consumption and a collapse in energy prices in the context of the pandemic in 2020. A French group recorded the only significant acquisition (+€1 billion of goodwill) in this sector thanks to the acquisition of heating network management activities in the Czech Republic.

The fall in goodwill in the Real Estate sector (- 0.2% of the total change) is explained by an impairment recorded by a French group experiencing a decline in its business due to the pandemic. In this sector, the pandemic-related crisis has led to a drop in the number of shopping malls and the organisation of events in a context of great uncertainty surrounding the pace of the economic recovery.

Finally, the decline in goodwill in the Food Products sector (-0.2% of the total change in goodwill) is attributable to an impairment recorded by the Belgian world leader in beer in a context of declining results and uncertainty about the economic recovery due to the pandemic.

To conclude this first part, we note that transactions by a handful of companies are largely behind the change in goodwill. For example, an acquisition made by a single company accounts for one-third of the total acquisitions made in 2018, a year marked by the highest amount of goodwill due to acquisitions (+€76 billion worth of goodwill in 2018 compared to around €38 billion in other years). We also note that goodwill recorded in the accounts depends not only on decisions taken at company level but is also affected by the economic environment and monetary conditions faced by the company. Furthermore, the year 2020 is special, characterised by a sharp increase in impairments (from €5 billion in 2019 to €20 billion in 2020) as well as the number of companies recording impairments due to the COVID-19 crisis.

In the second part of the study, we will contribute to the debate on how appropriate the accounting treatment on goodwill and goodwill impairments is under IFRS by relating the amount of goodwill and goodwill impairments to financial elements. We also provide information on how companies are implementing these standards.

3. Factual elements on the links between goodwill, impairments and financial elements

In the following, we analyse changes in goodwill and goodwill impairments in relation to financial elements as this could help assess the relevance of amounts of goodwill recognised in annual accounts. In the first part, we focused on goodwill variations explained by decisions taken at the company level, i.e. intrinsic operations of goodwill (once neutralised for currency and restatements effects). In this second part, we consider the amount of goodwill recognised in accounts because this is what is subject to impairments.

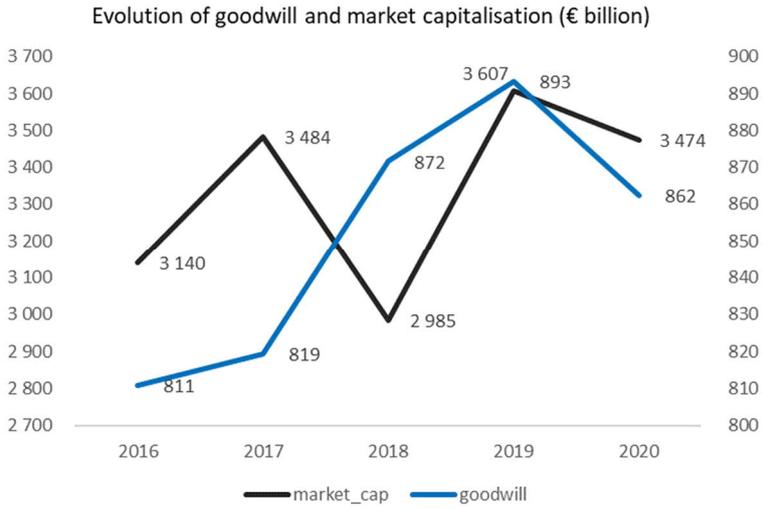
3.1. Changes in goodwill and market capitalisation

A company recognises goodwill impairment when it anticipates future economic benefits from the acquisition it makes. The market capitalisation of a company takes into account the current economic environment and the economic situation of the company, among other things. Goodwill is therefore information integrated into the market capitalisation. When the markets have the same perception as the company of an acquisition, goodwill is valued in the stock price. On the other hand, the market sanctions the merger transaction by a fall in the share price when it feels the company was mistaken in its anticipation of future economic benefits linked to the operation. Comparing the change in goodwill and the market capitalisation is an indication of the market's perception of the acquisitions made by the companies in the sample and help to assess the relevance of amounts of goodwill recognised.

Market capitalisation fluctuated widely between 2017 and 2020, with reductions in 2018 (-10%) and 2020 (-3%). While goodwill¹⁰ also fluctuated between 2017 and 2020, it was less volatile. Except for 2018, when capitalisation was down and goodwill up, a year during which investors' confidence was affected by the economic environment (Brexit and the trade war between Europe and the US), the two curves vary in the same direction over the period.

¹⁰ Amounts of goodwill in the graph differ slightly from those shown above because we are now working with a slightly smaller group of companies than the fixed sample. We have narrowed the scope of companies of the fixed sample to those for which we had the market capitalisation amount.

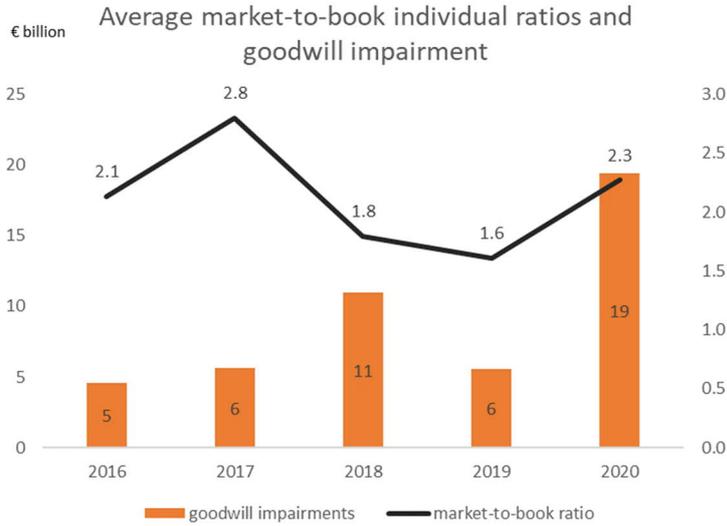
CHART 5 EVOLUTION OF GOODWILL AND MARKET CAPITALISATION (2016 – 2020)



Source: ERICA 2020 dataset.

3.2. Market-to-book ratio and goodwill impairment

CHART 6 AVERAGE OF GOODWILL IMPAIRMENTS AND MARKET-TO-BOOK RATIOS



Source: ERICA 2020 dataset.

IAS 36 states that a market-capitalisation-to-equity ratio below 1 is one of the external sources of information indicating that assets may be impaired, and should be considered when assessing the realistic values of key assumptions used in impairment testing. Symmetrically, this ratio is also an indication as to how the market perceives impairment losses.

In 2018, we observed a sharp drop in the market-capitalisation-to-equity ratio with an increase in goodwill impairments. In 2020, a year in which we observed a sharp increase in goodwill impairments, there is no sign of the same link since the market-to-book ratio increased. This increase is due to a higher fall in equity (denominator) due to the pandemic than in market capitalisation

(numerator) which declined slightly (markets quickly regained confidence after a fall in March 2020 thanks to the reaction of central banks and governments).

Table 3 shows the share of issuers recognising impairment losses on goodwill, respectively for those whose market capitalisation is below equity and for those whose market capitalisation exceeds equity. We observe that this share is higher each year for issuers whose market capitalisation is below equity: 18% on average all over the period while this share is on average 14% for those whose market capitalisation exceeds equity. However, the difference is not very marked and does not reveal a clear link between goodwill impairment and the market-capitalisation-to-equity ratio.

TABLE 3 SHARE OF ISSUERS RECOGNIZING IMPAIRMENT LOSSES ON GOODWILL, RESPECTIVELY FOR THOSE WHOSE MARKET CAPITALIZATION IS BELOW OR EXCEEDS EQUITY (2016 – 2020)

	2016	2017	2018	2019	2020
Companies with market-to-book ratio<1	155	113	177	156	167
of which recording GW impairment that year	28	20	27	27	33
In %	18%	18%	15%	17%	20%
Companies with market-to-book ratio>1	406	448	384	405	394
of which recording GW impairment that year	56	61	52	52	72
In %	14%	14%	14%	13%	18%

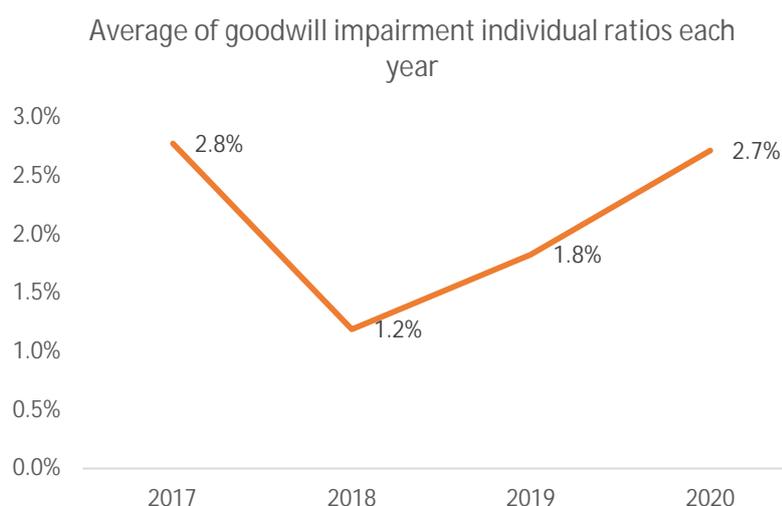
Source: ERICA 2020 dataset.

3.3. Intensity of goodwill impairment

The intensity of goodwill impairments assesses to what extent impairments are appropriate.

As noted above (see Chart 6), impairment losses peaked in 2018 and 2020, years in which market capitalisation fell. Below, we refer to intensity of impairments as the ratio of goodwill impairment losses in N over the stock of goodwill in N-1. The curve in the following chart, calculated as the simple average of individual ratios, illustrates the trend in the ratio. This ratio ranged from approximately 1% to almost 3%.

CHART 7 AVERAGE OF GOODWILL IMPAIRMENT RATIOS (2017 – 2020)



Source: ERICA 2020 dataset.

While the ratio above is interesting to look at in trend, its distribution enables a better analysis of the trend. The table below shows that, in each year, the majority of companies reporting goodwill do not recognise any goodwill impairment. Among those companies that do so, the largest share displays a ratio up to 2% each year. Two-thirds of companies recognising goodwill impairment have a ratio up to 5% except in 2020 where only 44% of companies recognising goodwill impairment display a ratio up to 5%. Around 10% of companies recognising goodwill impairment show a ratio above 50% each year except in 2018 when this share is lower.

TABLE 4 DISTRIBUTION OF THE GOODWILL IMPAIRMENT RATIO (2017 – 2020)

Ratio impairment/ prior year goodwill	2017	2018	2019	2020
No impairment	479	481	481	454
Between 0 % and 2 %	42	34	34	32
Between 2 % and 5 %	9	19	16	15
Between 5 % and 10 %	12	9	3	21
Between 10 % and 50 %	8	14	15	30
Greater than 50 %	10	3	7	8
Number of groups recognising goodwill	560	560	556	560

Source: ERICA 2020 dataset.

3.4. Timing of impairments: positive or negative pre-tax results at the time of impairment

Looking at the results before impairment losses are positive or negative makes it possible to assess how companies are implementing IAS 36 on Impairment of assets. Goodwill impairments should be recognised in a prospective approach when adverse factors/scenarios have not still happened.

As in an EFRAG¹¹ study published in 2016, we analyse whether companies recognise impairment losses mainly when they have negative results before impairment losses. The following table shows that the majority of the companies reporting impairment had a positive pre-tax result before impairment. It seems that companies use a prospective approach for goodwill impairment calculations. We note, in 2020, a big increase in the number of companies recording impairment losses and, at the same time, a higher increase in the share of companies recording impairment losses with negative results before impairment.

TABLE 5 % OF COMPANIES REPORTING IMPAIRMENT THAT RECORD PER-TAX LOSSES BEFORE IMPAIRMENT (2016 – 2020)

	2016	2017	2018	2019	2020
Number of companies reporting GW impairment losses	88	85	81	82	110
Number of companies with negative results before impairment	12	9	16	16	35
In %	14 %	11 %	20 %	20 %	32 %

Source: ERICA 2020 dataset.

¹¹ “What do we really know about goodwill impairment? A quantitative study”

4. CONCLUSION

In conclusion, it appears that the economic context in which the company is operating is reflected in the general trend in goodwill, with an average annual growth of nearly 3.4% in our sample before the COVID-19 pandemic, a drop of 3.4% in 2020, before rising again by 6 % in the 2021 consolidated accounts. Also, the study shows that the change in goodwill amounts recorded over the period 2016-2020 does not show any difference from the market's perception of the economic environment.

Considering the short time horizon of analysis and in this context of crisis linked to COVID-19, it will be interesting to analyse in more depth developments in consolidated accounts closed in 2021 which, according to the earliest data, have been reversed. Despite the pandemic, 2021 was a record year in which many company acquisitions were completed. While a catch-up effect of deals that did not take place in 2020 was observed during the first half of 2021, the momentum did not stop for the rest of the year. All in all, a record number of mergers and acquisitions was recorded over the year: 63,000 deals (+24%) for a total of \$5.9 trillion (+64%) on a global scale¹². Among these deals, 130 transactions involved a company with a value exceeding \$5 billion¹³.

Several factors contribute to explain this performance. For the year 2021, the macroeconomic environment was generally favourable for takeover operations, with interest rates remaining low and liquidity high, despite the continuing pandemic. Government measures to support the economy, and in particular access to liquidity for companies, in fact reassured the markets, which have not withdrawn from corporate financing. Moreover, the continued low interest rate environment for companies makes debt attractive and increases their borrowing capacity. For specialised stakeholders (financial investors, SPACs¹⁴), low interest rates encourage a search for yield and contribute to the rising number of transactions they carry out. Thus, for example, SPACs record an increase of 174% on 2020¹⁵. Also, pandemic-related uncertainty which is gradually fading, together with this crisis context, have also contributed to:

- redefining the strategic interests of companies and accelerating their transformation.
- suddenly accelerating underlying trends such as the increasing digitisation of trade exchanges

In the light of this observation, it seems appropriate to ask to what extent the rise in inflation and in interest rates in 2022 will ultimately influence the future acquisition opportunities of companies and the amount of goodwill recorded in their annual accounts. Furthermore, the change in depreciation in the tests thrown up by COVID-19, inflation or more recently the substantial rise in the price of energy will be just as useful information to estimate to what extent the annual depreciation tests are sufficient to estimate the fair value of goodwill in times of crisis or, at the very least, during downturns in the economy.

¹² [State of the M&A Market | Bain & Company.](#)

¹³ [Le marché des fusions-acquisitions a atteint des sommets en 2021 et la dynamique devrait se poursuivre en 2022 \(pwc.fr\).](#)

¹⁴ Special-purpose acquisition company.

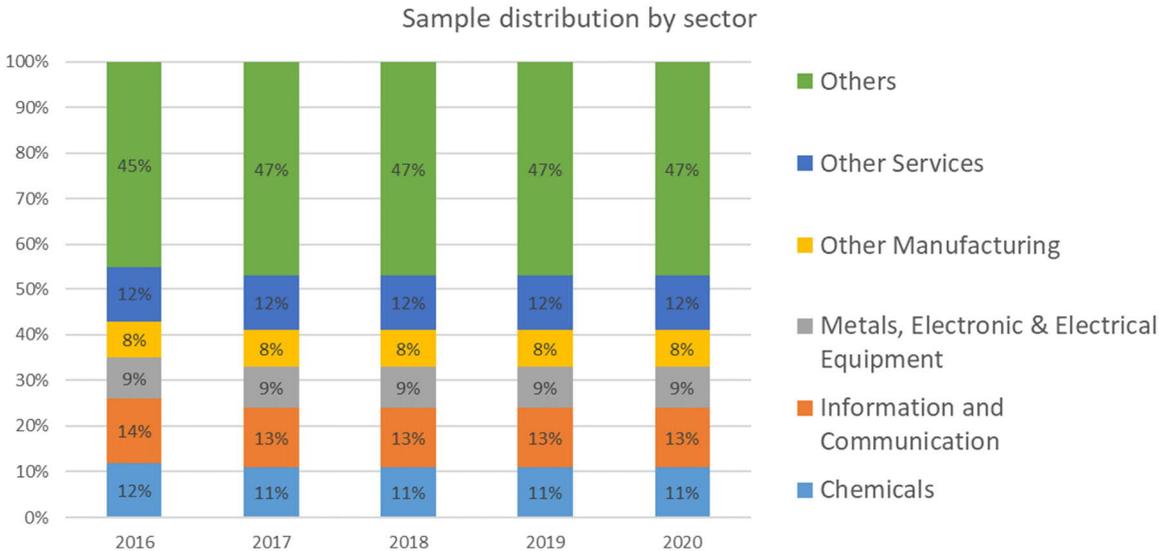
¹⁵ [State of the M&A Market | Bain & Company.](#)

APPENDIX 1

- Distribution of companies by sector in the fixed sample**

The distribution of groups within the 2016-2020 sample is fairly balanced. Groups are almost evenly split between small, medium, and large. No sector concentrates more than 14% of the groups. The Information and Communication, Chemicals and Other Services sectors are the main groups with slightly more than 10% each, followed by the Metals, Electronic & Electrical Equipment and Other Manufacturing sectors with slightly less than 10% each. The other sectors each account for between 4% and 7% of the groups in the sample.

CHART 8 SAMPLE DISTRIBUTION BY SECTOR (2016 – 2020)

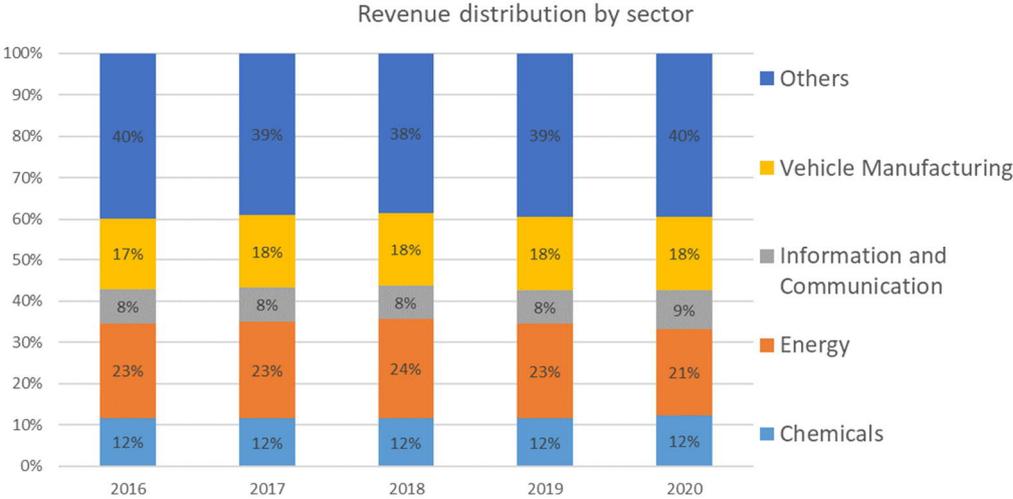


Source: ERICA 2020 dataset.

- Distribution of revenues by sector in the fixed sample**

The distribution of revenues within the 2016-2020 sample is more highly concentrated than the distribution of groups: 95% of revenues are concentrated in large companies and three sectors concentrate more than half of the sample's revenues. The Energy and Vehicle Manufacturing sectors account for approximately 23% and 18% of the sample's turnover respectively, while the Chemicals and Information and Communication sectors represent approximately 12% and 8% of the sample's turnover respectively. The other sectors each represent between 3% and 6% of the sample's turnover.

CHART 9 REVENUE DISTRIBUTION BY SECTOR (2016 – 2020)

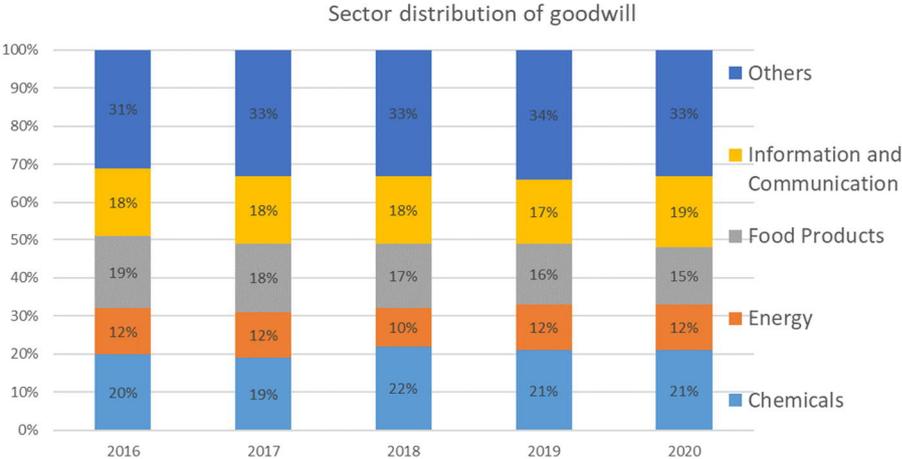


Source: ERICA 2020 dataset.

• **Distribution of goodwill by sector in the fixed sample**

Goodwill is much more concentrated in the sample within a few sectors and a few groups. Furthermore, more than 95% of the goodwill in the sample is recorded in large groups. As the graph below shows, four sectors Chemicals, Information and Communication, Food Products and Energy account for two-thirds of the total goodwill. The other ten sectors represent between 0% and 6% of the goodwill in the sample.

CHART 10 GOODWILL DISTRIBUTION BY SECTOR (2016 – 2020)

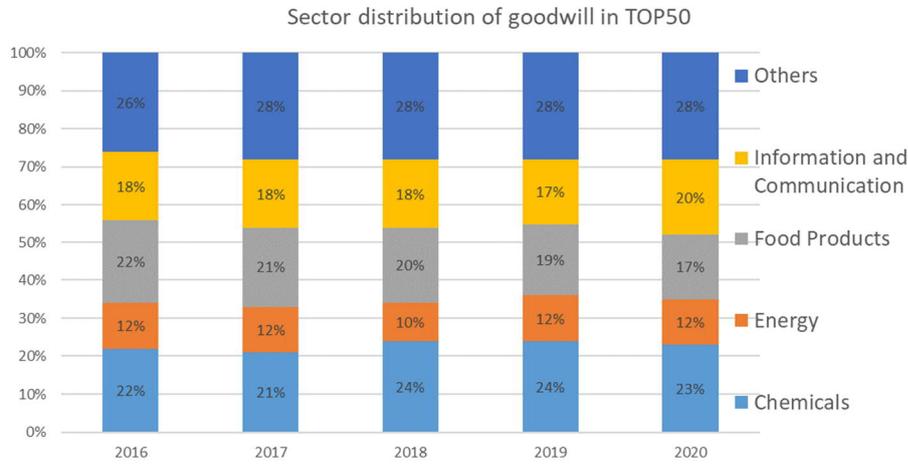


Source: ERICA 2020 dataset.

- **Distribution of goodwill by sector in top 50**

The sectoral distribution of goodwill of the 50 groups with the highest goodwill is similar to that for the fixed sample.

CHART 11 GOODWILL DISTRIBUTION BY SECTOR IN TOP 50 (2016 – 2020)



Source: ERICA 2020 dataset.