

A close-up photograph of a person's hands using a traditional red abacus. The abacus has multiple rows of red beads on wooden rods. The person's fingers are positioned over the beads, suggesting they are in the process of calculating. The background is a blurred grey fabric, likely a shirt or jacket.

Impairment analysis of listed Italian companies

January 2024



Building a better
working world

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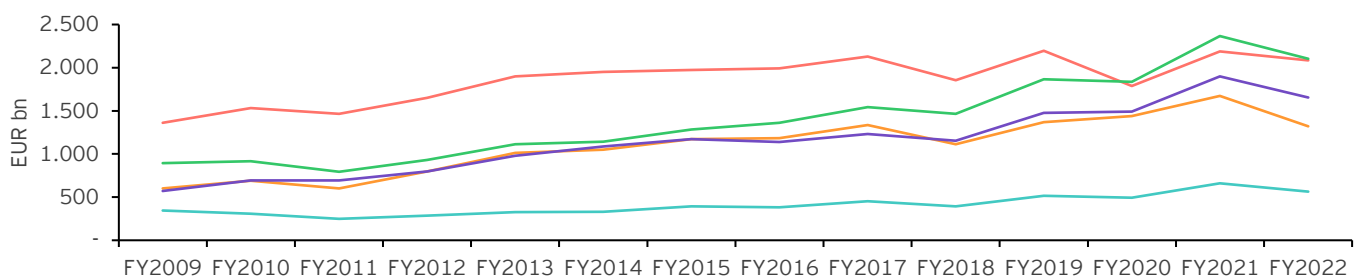
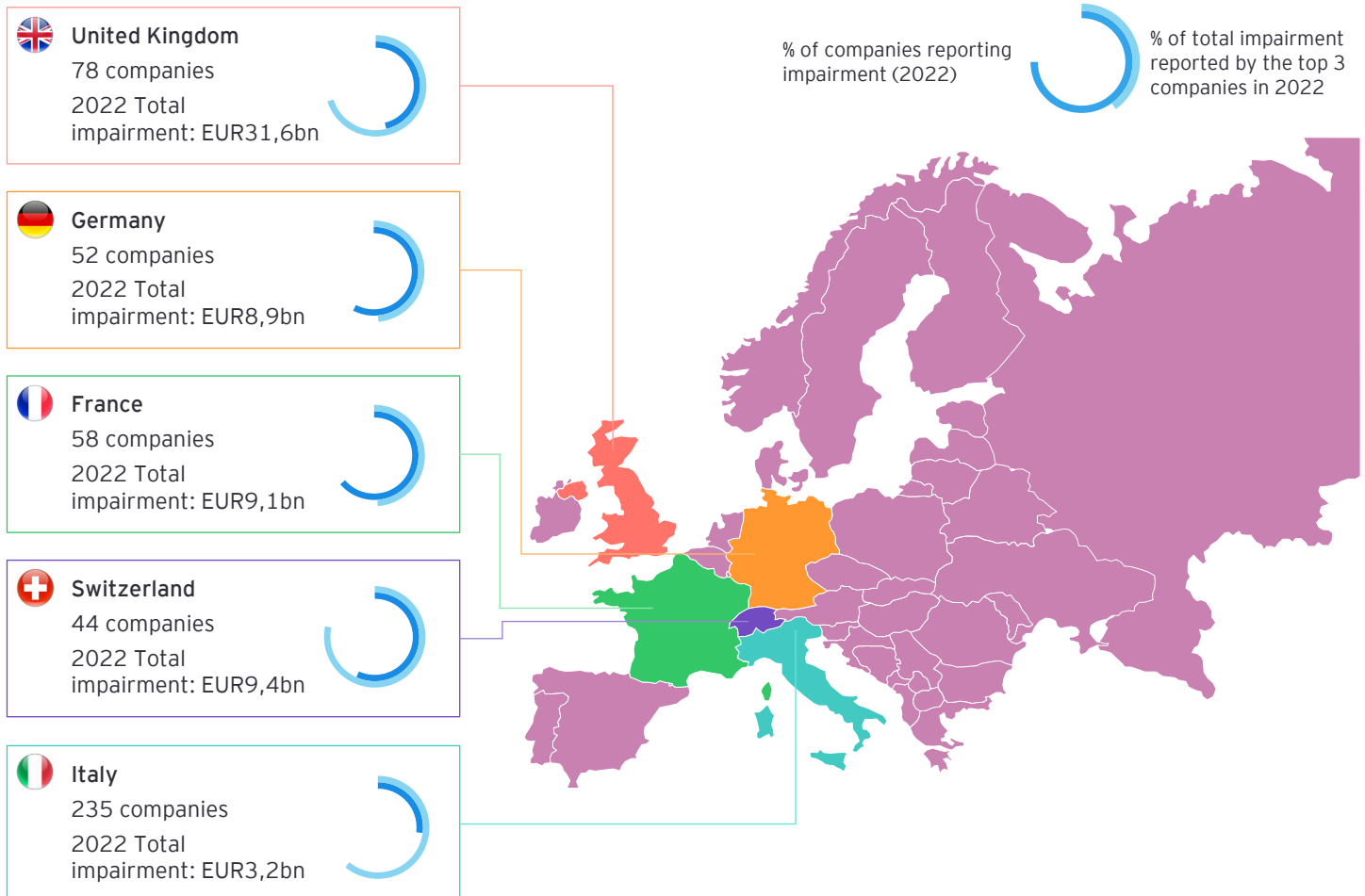


01.

Executive summary

Executive summary

Impairment analysis for top 5 countries



— Italian companies market cap — United Kingdom companies market cap — France companies market cap
— Germany companies market cap — Switzerland companies market cap

- ▶ Italian companies include FTSE AIM and FTSE MIB companies
- ▶ Other countries companies include MSCI Europe companies

Executive summary

FTSE MIB impairment analysis for top 5 sectors

(based on average of 10 years total impairment, 2013-2022)

FTSE MIB	Year	Energy	Financial services	TMT	DIP	Infrastructure	Others	Total
n° of companies	2022	8	13	3	6	1	9	40
Total impairment (EUR bn)	2022	1,9	0,6	0,1	0,3	0,0	0,2	3,1
	5 yrs Average	3,9	0,9	1,4	0,4	0,2	0,2	7,1
	10 yrs Average	4,3	2,0	0,9	0,3	0,4	0,3	8,2
% of companies reporting impairment	2022	100,0%	76,9%	33,3%	83,3%	100,0%	66,7%	77,5%
	5 yrs Average	97,5%	58,5%	53,3%	66,7%	100,0%	60,0%	68,5%
	10 yrs Average	88,8%	56,9%	63,3%	71,7%	90,0%	51,1%	65,5%
Market capitalization (EUR bn)	2022	140,9	151,2	43,6	60,9	2,2	129,7	528,6
	5 yrs Average	154,3	145,6	42,0	47,9	2,8	100,9	493,4
	10 yrs Average	140,3	135,3	34,2	45,2	3,7	63,6	422,2
Market-to-book ratio	2022	1,1x	0,7x	1,2x	1,6x	1,1x	1,4x	1,0x
	5 yrs Average	1,4x	0,7x	1,2x	1,6x	1,8x	1,9x	1,1x
	10 yrs Average	1,2x	0,7x	1,1x	1,7x	1,4x	1,5x	1,0x

- ▶ In 2022, Energy sector reported highest total impairment with EUR 1,9bn followed by Financial services sector with EUR 0,6bn
 - ▶ As per 5 years average total impairment, Energy sector reported highest impairment with EUR 3,9bn followed by TMT sector (EUR 1,4bn)
 - ▶ As per 10 years average total impairment, Energy sector reported highest impairment with EUR 4,3bn followed by Financial services sector (EUR 2,0bn)
- ▶ In 2022, % of companies reporting impairment was 77,5% for FTSE MIB, while all Energy and infrastructure sectors companies reported impairment
 - ▶ Over the last 5/10 years, a strong majority of companies in Energy and Infrastructure sector recorded impairments
- ▶ In 2022, DIP sector reported the highest market-to-book-ratio – equal to 1,6x – whereas Energy and TMT sectors reported 1,1x and 1,2x, respectively. The lowest market-to-book ratio in 2022 belongs to the Financial Service industry (0,7x)
 - ▶ As per 5 years average market-to-book-ratio, Infrastructure and DIP sectors reported highest ratio – respectively 1,8x and 1,6x – followed by Energy sector with a ratio equal 1,4x. The DIP sector shows the highest 10 years average ratio (1,7x) followed by Infrastructure sector with a ratio of 1,4x.
 - ▶ ‘Others’ are excluded from the above analysis

Executive summary

MSCI Europe impairment analysis for top 5 sectors
(based on average of 10 years total impairment, 2013-2022)

MSCI Europe	Year	Energy	Financial services	TMT	RCP	DIP	Others	Total
n° of companies	2022	40	74	37	63	75	128	417
Total impairment (EUR bn)	2022	32,8	5,8	4,6	7,1	8,1	27,8	86,1
	5 yrs Average	27,5	10,6	5,3	7,5	7,7	19,1	77,6
	10 yrs Average	30,6	10,1	6,3	6,4	5,9	13,7	73
% of companies reporting impairment	2022	75,0%	55,4%	48,6%	61,9%	60,0%	51,6%	57,3%
	5 yrs Average	71,5%	54,6%	49,7%	57,5%	56,3%	48,0%	54,5%
	10 yrs Average	72,3%	53,8%	51,4%	54,8%	55,6%	42,3%	52,3%
Market capitalization (EUR bn)	2022	1.469,5	1.747,7	922,1	2.573,3	1.432,3	3.002,8	11.147,6
	5 yrs Average	1.290,6	1.687,2	919,2	2.354,3	1.556,1	1.737,6	10.544,8
	10 yrs Average	1.176,2	1.665,1	824,2	1.969,1	1.239,8	1.506,7	9.330,5
Market-to-book ratio	2022	1,4x	0,9x	1,8x	3,3x	2,1x	1,7x	1,6x
	5 yrs Average	1,4x	0,8x	2,1x	3,4x	2,3x	2,0x	1,7x
	10 yrs Average	1,3x	0,9x	2,0x	3,4x	2,3x	2,1x	1,7x

- ▶ In 2022, Energy sector reported the highest total impairment with EUR 32,8bn followed by DIP sector with EUR 8,1bn
 - ▶ As per 5 and 10 years average total impairment, Energy sector reported the highest impairment (EUR 27,5bn and EUR 30,6bn respectively), Financial Service sector has been the second higher
- ▶ In 2022, % of companies reporting impairment was 57,3% for MSCI Europe, while the highest % of companies reporting impairment was recorded by the Energy sector (75,0%)
- ▶ In 2022, RCP sector reported the highest market-to-book-ratio (equal to 3,3x), whereas, DIP and TMT sectors reported 2,1x and 1,8x
- ▶ As per 5 and 10 years average market-to-book-ratio, RCP sector reported the highest values (3,4x for both averages), followed by DIP sector (2,3x and 2,3x respectively)
- ▶ 'Others' are excluded from the above analysis



02.

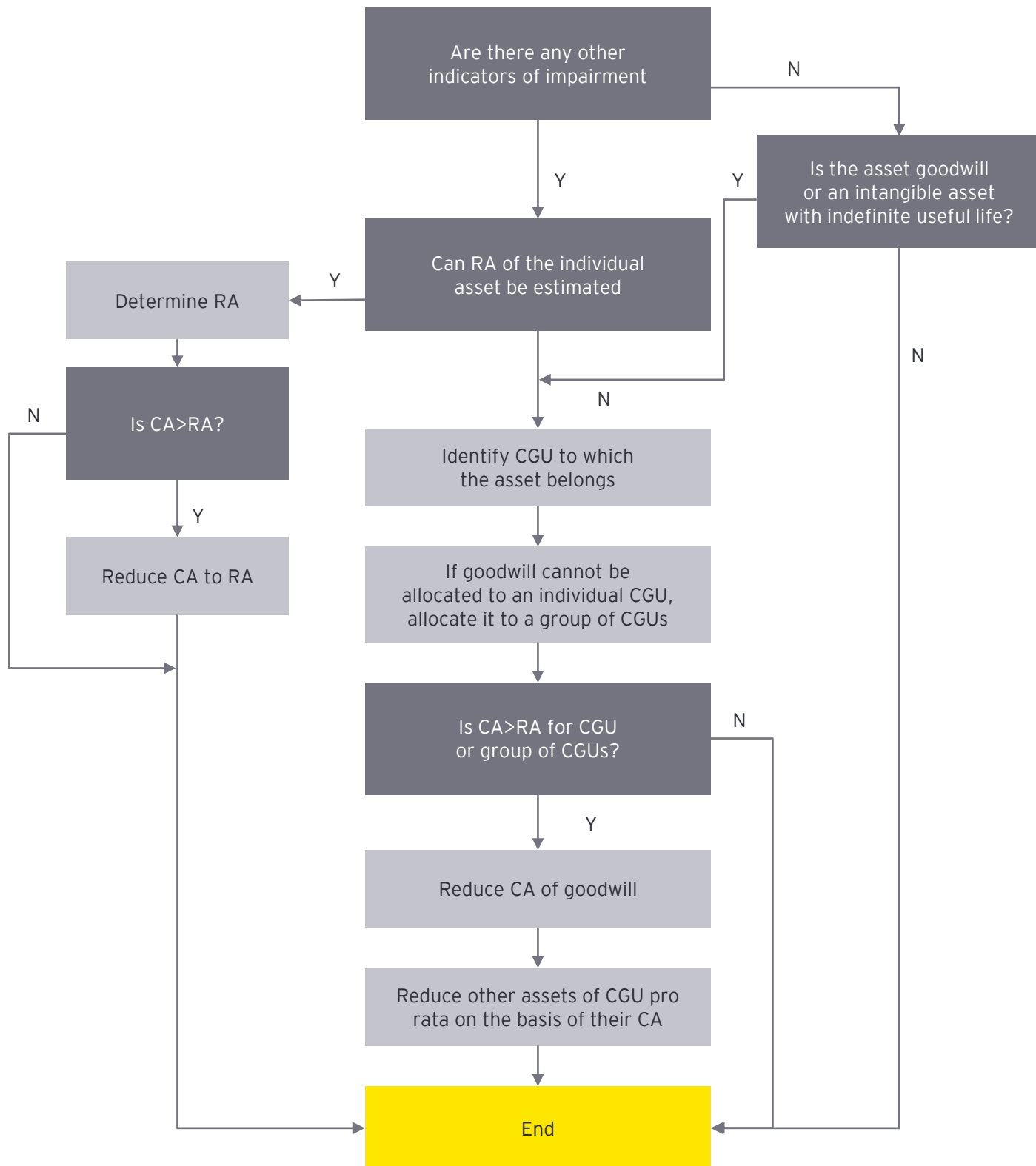
Introduction

Impairment testing (IAS – 36)

- ▶ IAS 36 specifies that the assets are to be carried at no more than their Recoverable Amount (RA). The companies test for impairment for its assets
- ▶ IAS 36 requires an entity to assess, at each reporting date if an asset may be impaired
- ▶ To measure impairment, assets Carrying Amount (CA) is compared with recoverable amount
- ▶ Recoverable amount is calculated as higher of its 'Fair Value Less Costs to Sell' and its 'Value In Use' (VIU)
- ▶ FAIR Value Less Costs to Sell (FVLCS) is the amount obtainable from the sale of the asset in an arm's length transaction between knowledgeable and willing parties, less the costs of disposal
- ▶ Fair value can also be calculated using Discounted cash flow methodology
- ▶ VIU is the present value of the future cash flows expected to be derived from an asset or a cash generating unit (CGU)
- ▶ VIU can be calculated either by a comparable assets approach or expected cash flow approach. However, IAS 36 indicates that the expected cash flow approach is, in some situations, a more effective measurement tool than the traditional approach (comparable assets)
- ▶ Reasonable and supportable assumptions are to be considered to calculate future cash flow. An entity is required to consider both external sources (such as market interest rates, significant adverse changes in the technological, market, economic or legal environment in which the entity operates, market capitalisation being lower than net assets) and internal sources (such as internal restructurings, evidence of obsolescence or physical damage)
- ▶ Future cash flows of the asset are calculated and a discount rate is applied to arrive at the present value of the future cash flows
- ▶ An impairment loss is recognised to the extent the CA of the asset exceeds its RA. For assets carried at historical cost, impairment losses are recognised as an expense immediately in profit or loss
- ▶ Primary difference with US GAAP: The reversal of previously recognised impairment losses is prohibited
- ▶ The key disclosures required:
 - ▶ The amount of impairment recognised and reversed and the events and circumstances that were the cause thereof
 - ▶ The amount of goodwill per CGU or group of CGUs
 - ▶ The valuation method applied: FVLCS or VIU and its approach in determining the appropriate assumptions
 - ▶ The key assumptions applied in the valuation, including the growth and discount rate used
 - ▶ A sensitivity analysis, when a reasonably possible change in a key assumption would result in an impairment, including the 'headroom' in the impairment calculation and the amount by which the assumption would need to change to result in an impairment

Process flow

Determining and accounting for impairment



RA = Recoverable amount; CA = Carrying amount; CGU = Cash generating unit

Valuation methods

DCF remained most widely adopted method for impairment test

Valuation methods used for top 10 companies by impairment value; considered for the period of 2015-2022

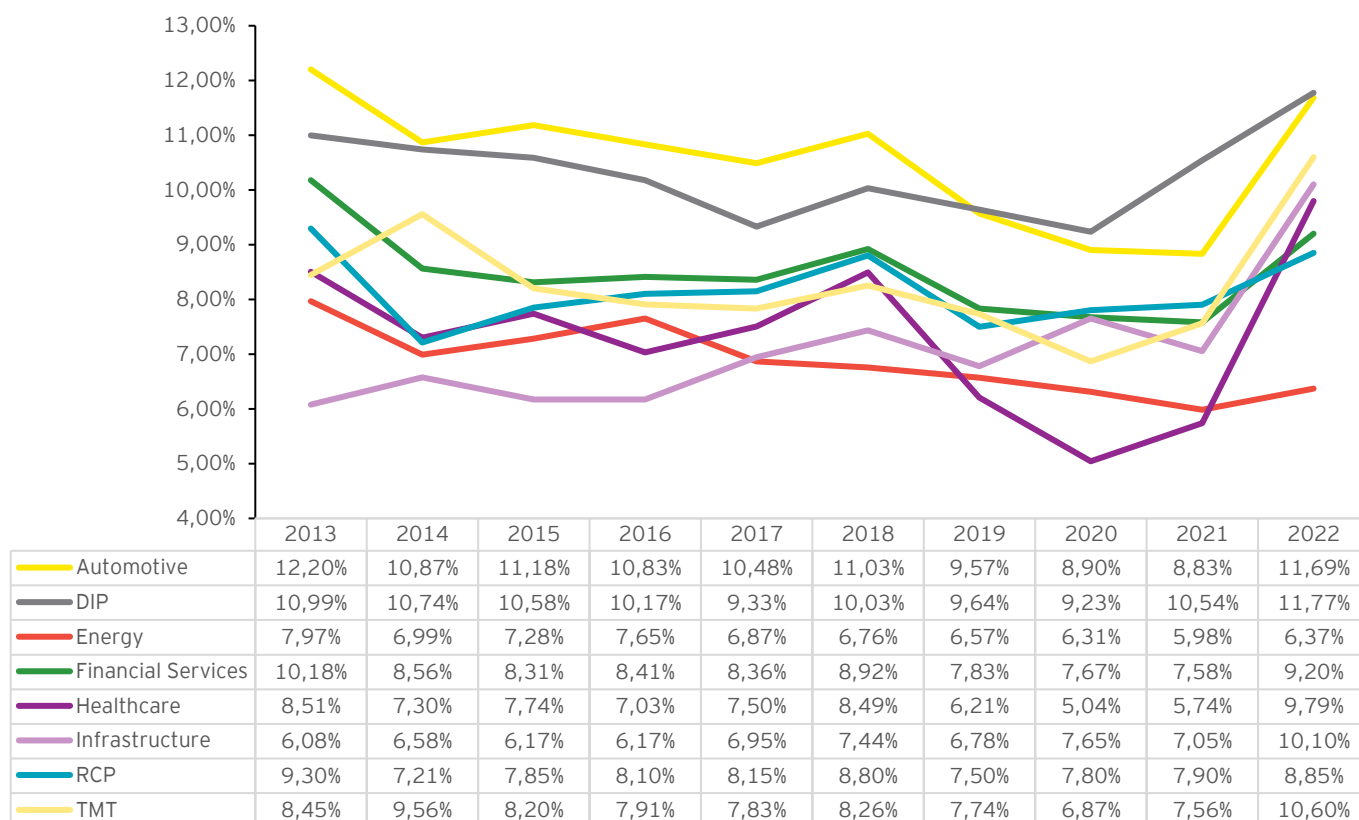
Industry	Company Name	DCF (Discounted Cash Flows)	OPM (Options Pricing Model)	DDM (Dividend Discount Model)	GGM (Gordon Growth Model)	Comparable Approach
DIP	Company A	✓				
	Company B	✓				
Energy	Company C	✓				
	Company D	✓				
Financial Services	Company E	✓		✓		
	Company F	✓		✓		
	Company G	✓		✓		
Infrastructure	Company H	✓				
TMT	Company I	✓				
Automotive	Company J	✓				

- ▶ DCF is the most widely used method for the impairment testing analysed for the top 10 companies by impairment value for the period of 2015-2022.
- ▶ Financial Services industry in addition to DCF used the DDM (Dividend Discount Model) method to ascertain the fair value (FV) of assets during impairment testing.

2013-2022 Industry WACC

Declining WACC for FTSE MIB companies from 2013 to 2022 with an increase in 2022

2013-2022 WACC of FTSE MIB companies as per industry classification

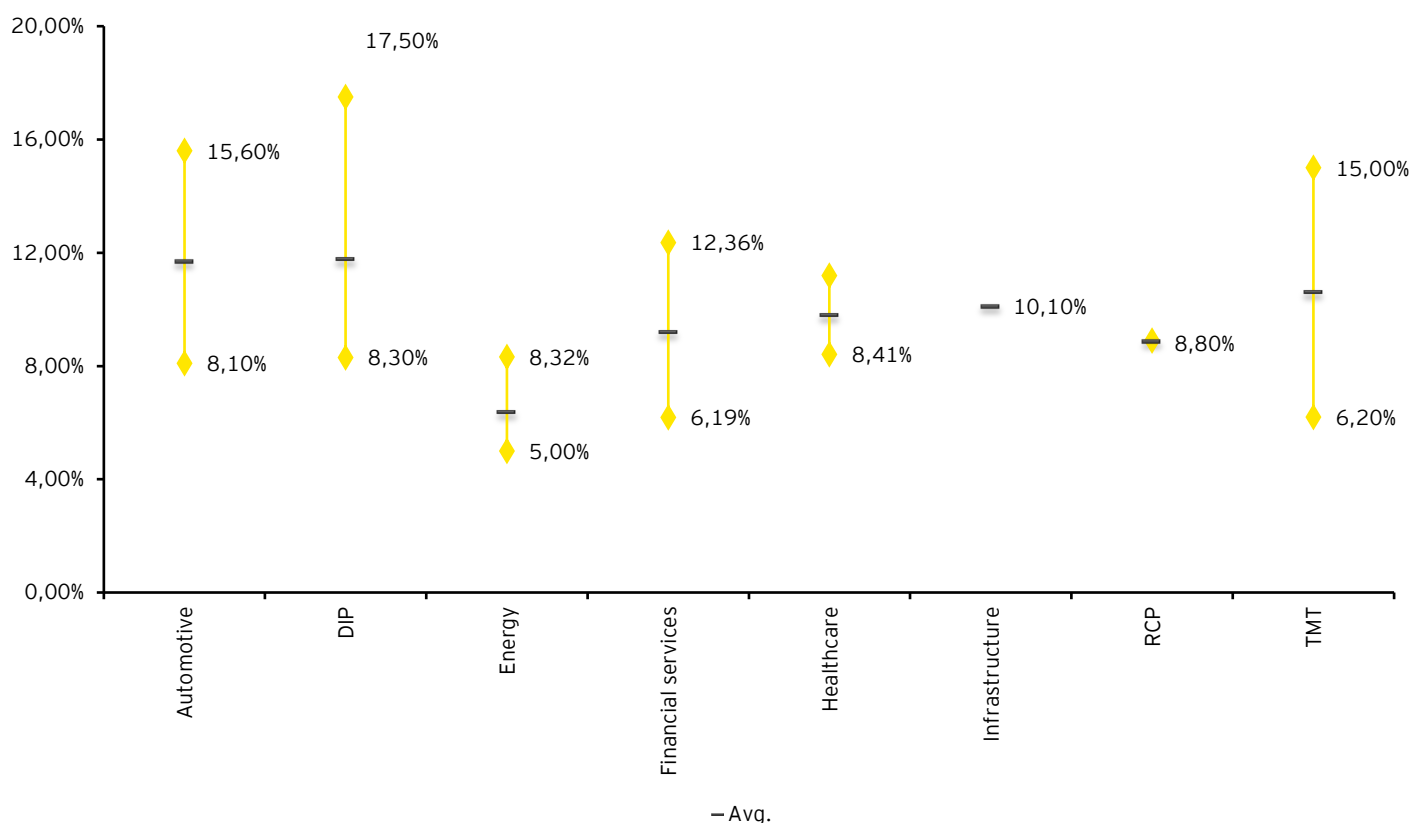


- ▶ Industry WACC shows correlation among industries between 2013 and 2022
- ▶ Over the period 2013-2016, the Infrastructure sector showed the lowest WACCs, while in 2017 and 2018 the minimum was recorded by the Energy sector. Between 2019 and 2021, as a consequence of the pandemic Crisis, the Healthcare sector registered the lower WACC with a minimum average WACC of 5,04% in 2020. In 2022, Energy is the lower WACC sector (average 6,37%)
- ▶ Overall, 2022 WACC was higher compared to that of 2021 for all industries. The increase in WACC is attributable to the geopolitical context derived from the Russian invasion of Ukraine, high inflation and consequent increase of interest rates linked to monetary policies

2022 Industry WACC

DIP companies had highest average WACC followed by Automotive and RCP

2022 WACC* of FTSE MIB companies as per industry classification



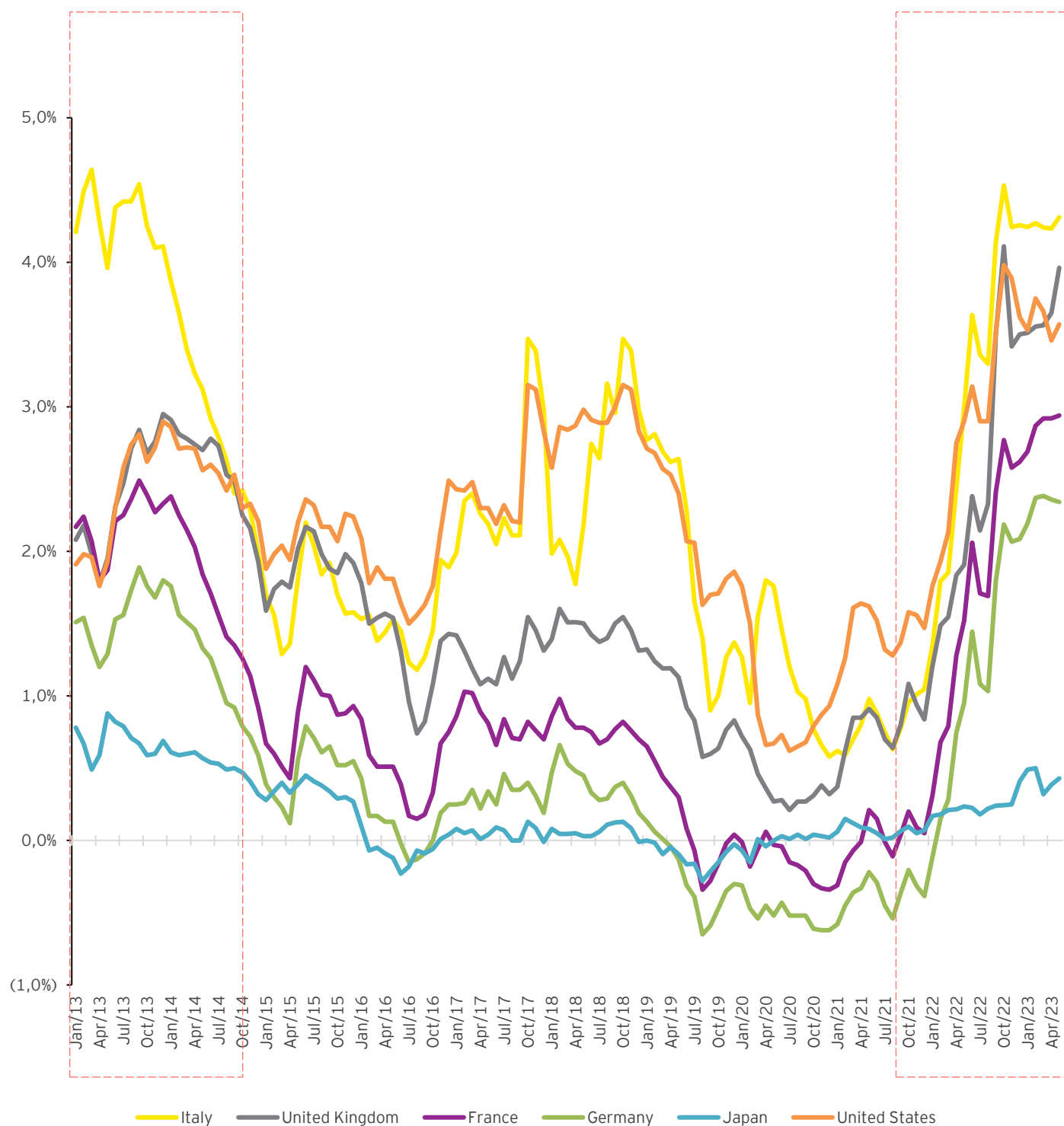
- ▶ In 2022, the DIP industry recorded the highest maximum WACC, (compared to the WACCs analysed for 2021 of FTSE MIB companies) with a value of 17,5% followed by Automotive companies with maximum WACC of 15,6% and 15,0% for TMT
- ▶ Average WACC for DIP industry was the highest (11,8%) followed by Automotive with 11,7% and TMT with 10,6%, whereas Energy industry had the lowest average WACC, equal to 6,4%
- ▶ FTSE MIB average WACC is 9,41%

* Rates can be pre and post taxes. In cases where companies had more than one WACC for different CGUs, an average was made in order to define the WACC for the selected year.

10 years government bonds

Italy's 10 year government bond has the highest interest rate as compared to United Kingdom and Germany

Interest rates of 10 year government bond





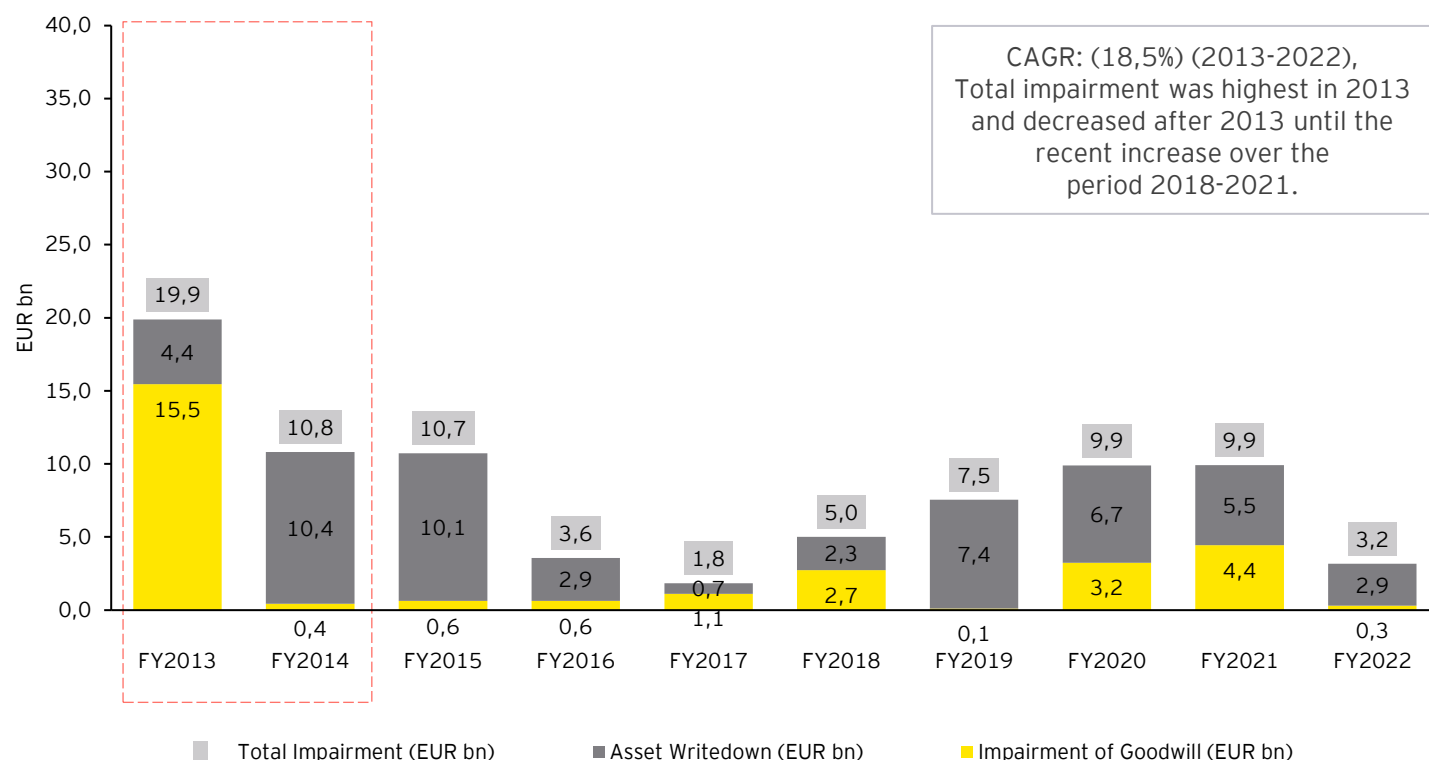
03.

Total impairment

Total impairment

Significant decrease in Total impairment by Italian firms especially financial companies after 2012-2013, and over the period 2020-2021 increase in goodwill impairment

Total impairment of Italian companies*



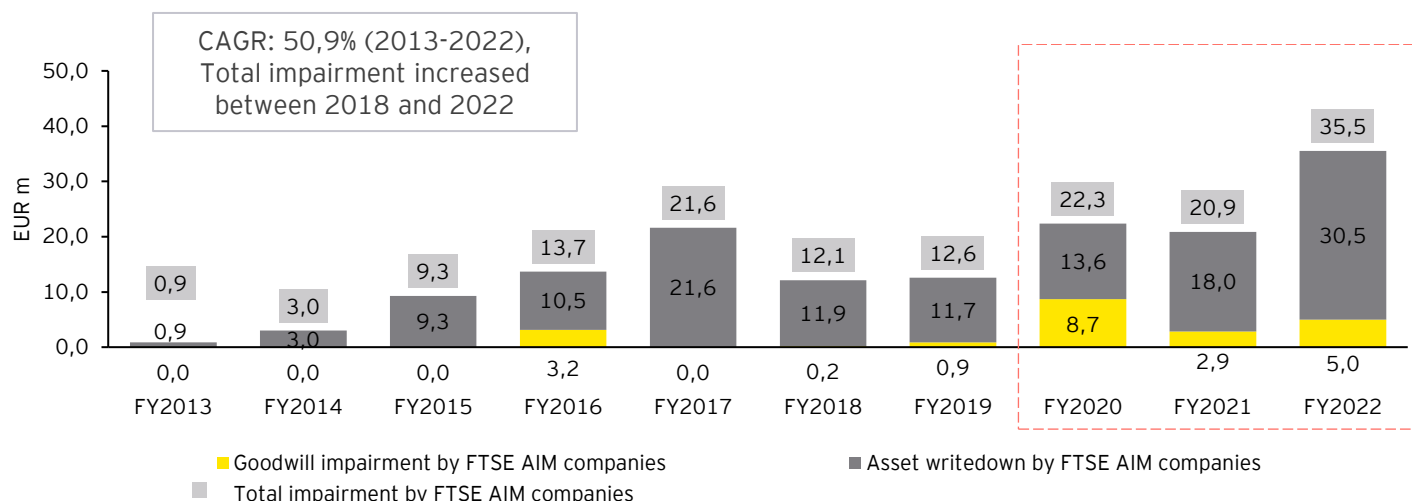
- ▶ Total impairment recorded by Italian companies decreased at a (18,5%) 2013-2022 CAGR, reaching EUR 3,2bn in 2022 from EUR 19,9bn in 2013
 - ▶ The highest goodwill impairment was recorded in 2013 (EUR 15,5bn), and decreased reaching a minimum of EUR 0,1bn in 2019, and raised in 2020 and 2021 by respectively EUR 3,2bn and EUR 4,4bn
 - ▶ The assets write down decreased at CAGR 2013-2022 of (4,8%) reaching EUR 2,9bn in 2022 from EUR 4,4bn in 2013. The highest level recorded was EUR 10,4bn in 2014.
- ▶ Total impairment showed the highest value in 2013, with EUR 19,9bn, due to the impact of the financial crisis on financial services and energy companies
- ▶ Total impairment showed an increasing trend from 2017 to 2021, and a decrease in 2022 despite the macroeconomic environment affected by the Russian invasion of Ukraine and the increase of interest rates linked to monetary policies

* Italian companies include FTSE AIM and FTSE MIB companies

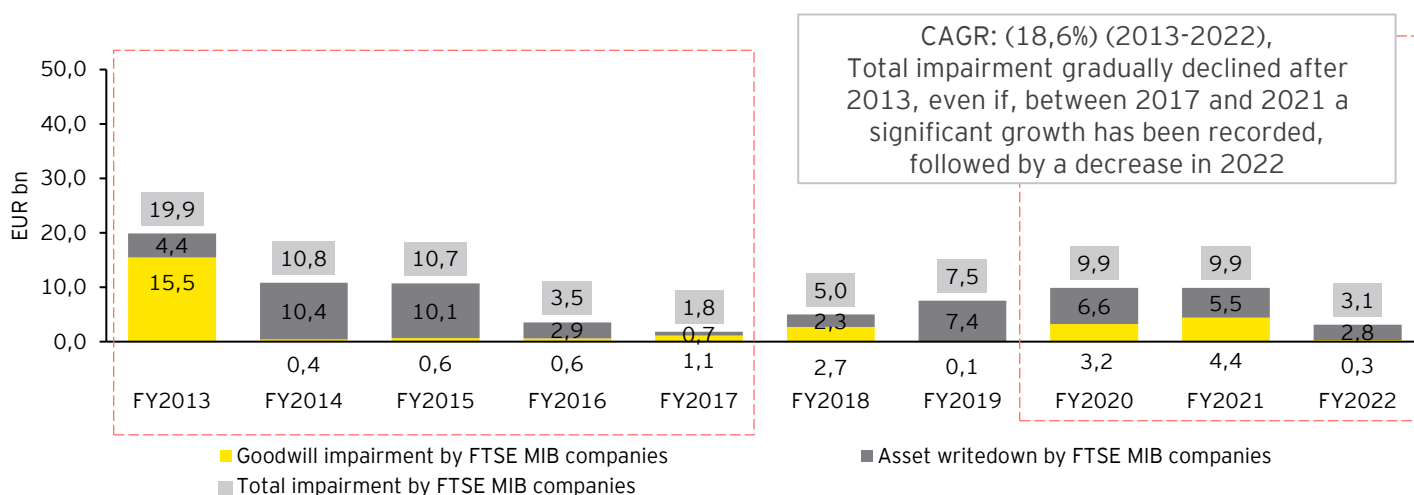
Total impairment

Owing to their relative size, FTSE MIB listed companies reported significantly higher impairment than FTSE AIM listed companies

Total impairment of FTSE AIM companies (EUR m)



Total impairment of FTSE MIB companies (EUR bn)

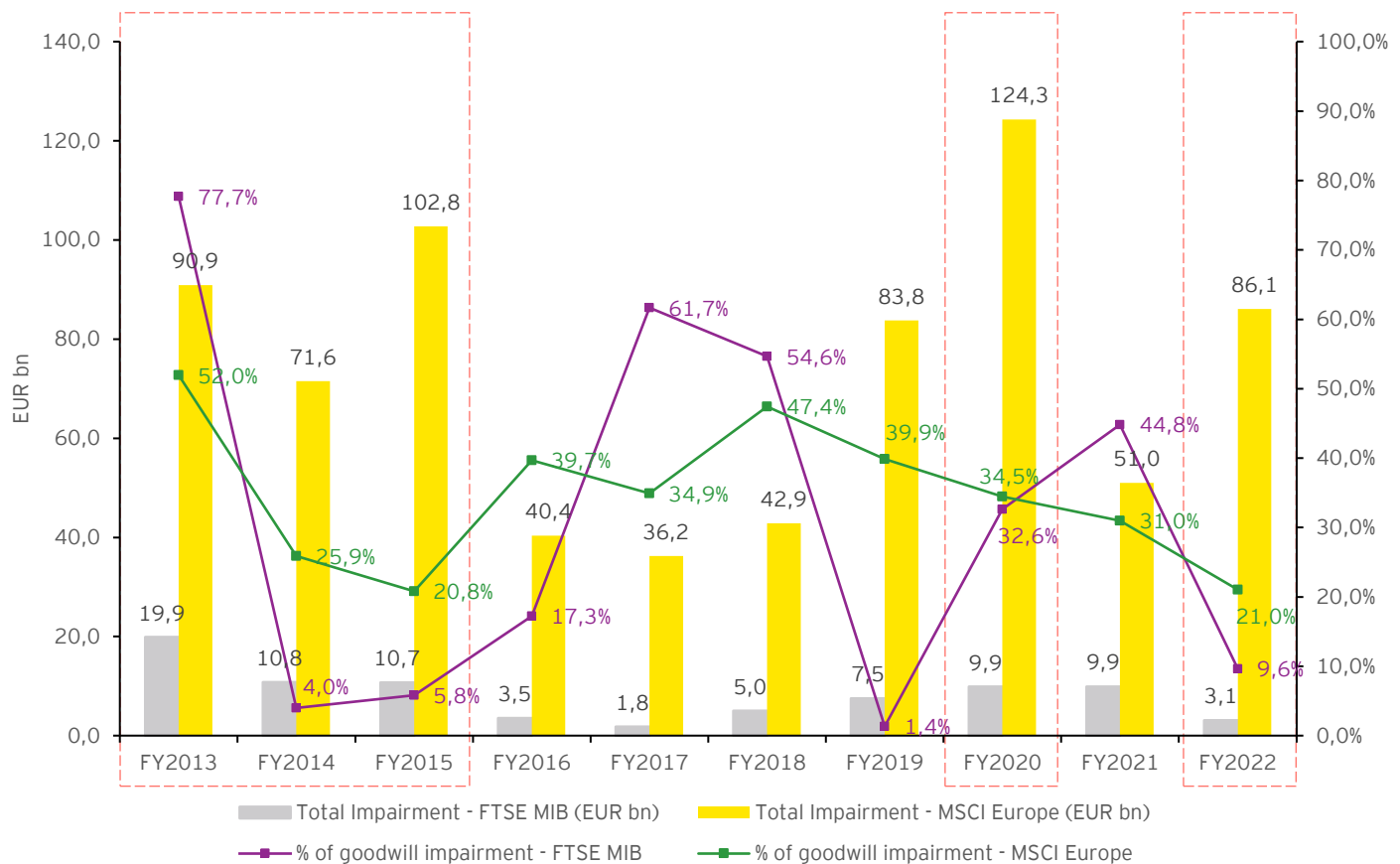


- ▶ Total impairment of FTSE MIB decreased at a CAGR of (18,6%) over the period 2013-2022, while FTSE AIM showed an increasing trend with a 50,9% CAGR during the same period
 - ▶ Total impairment of FTSE AIM companies increased between 2013 and 2017, reaching a peak of EUR 21,6m in 2017. In 2018 and 2019 total impairment decreased at EUR 12,6m and grew again in 2020 and 2021 due to Covid-19 crisis and in 2022 for Ukraine war and the increase of interest rates linked to monetary policies
 - ▶ Total impairment of FTSE MIB companies was highest in 2013 (EUR 19,9bn) and decreased gradually until 2017, afterwards it started increasing yearly reaching an amount of EUR 9,9bn in 2021. In 2022 both Goodwill impairment and Asset write-down impairment decreased.

Total impairment

MSCI Europe registered highest impairment in 2020

Total impairment of FTSE MIB vs. MSCI Europe companies



- ▶ Total impairment for MSCI Europe companies decreased at a 2013-2022 CAGR of (0,6%) and in the same way decreased for FTSE MIB companies at a CAGR (18,6%) during 2013-2022 period
- ▶ For MSCI Europe companies, total impairment reached a peak in 2020 (EUR 124,3bn) due to Covid-19 crisis, followed by the value registered in 2015 (EUR 102,8bn). After a slowdown in 2021, the Total impairment value reach EUR 86,1bn in 2022, as a consequence of the Russian invasion of Ukraine and the correlated effect on the geopolitical environment.
- ▶ The % of goodwill impairment for MSCI Europe companies decreased from 52,0% in 2013 to 20,8% in 2015 and then increased reaching 47,4% in 2018. Afterward the % decreased yearly to the 21,0% of 2022.
- ▶ The % of goodwill impairment for FTSE MIB companies decreased from 77,7% in 2013 to 4,0% in 2014. After an increase registered between 2015 and 2018 it registered the minimum of 1,4% in 2019. In 2022 the % is 9,6%.



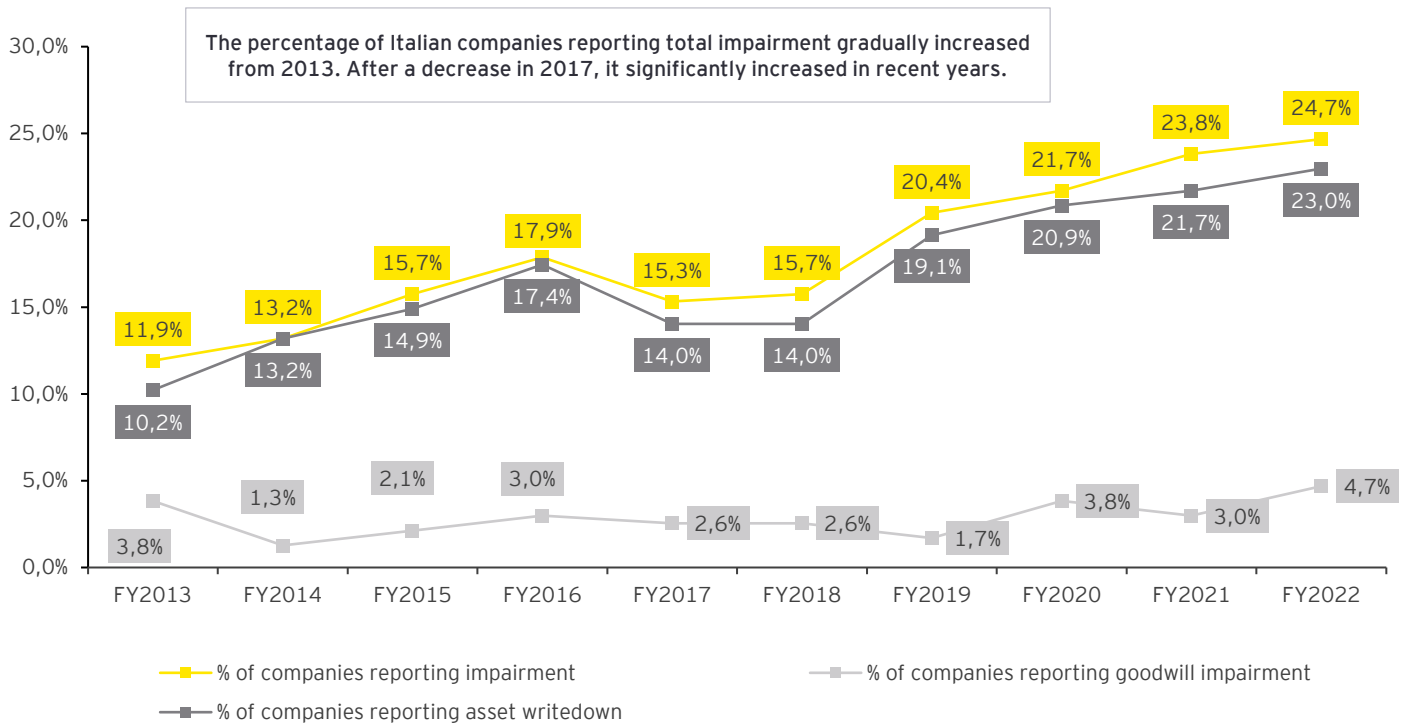
04.

Reporting of impairment

% of Companies reporting impairment

Companies reporting total impairment (asset write down and goodwill impairment) increased between 2021 and 2022

Percentage of Italian companies* reporting impairment



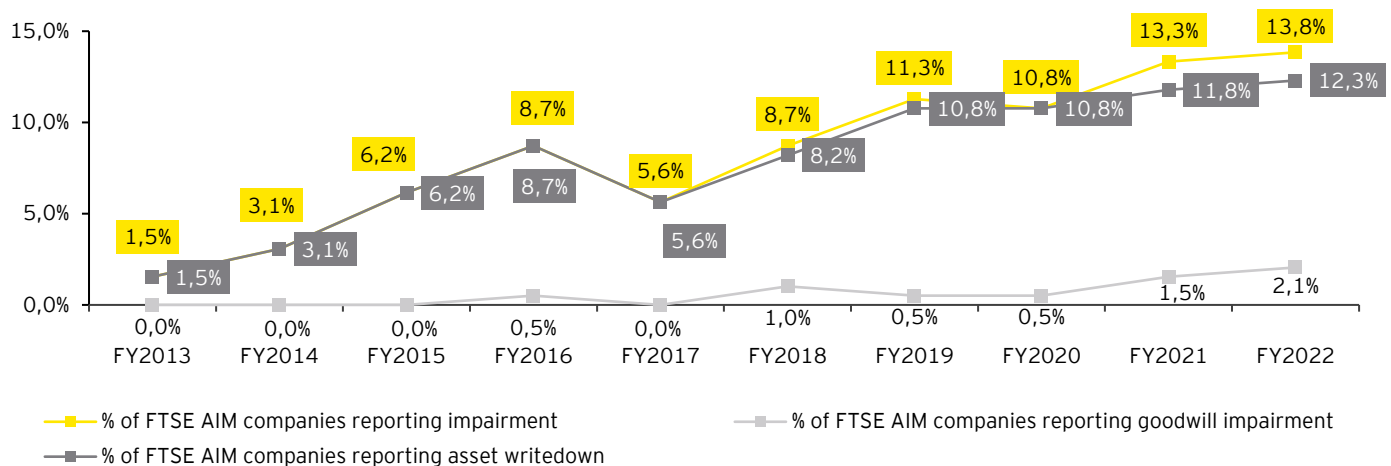
- ▶ The percentage of Italian companies reporting total impairment increased from 11,9% in 2013 to 24,7% in 2022, primarily due to increase in reporting of asset write-down by the Italian companies from 2018
 - ▶ The percentage of companies reporting goodwill impairment increased from 3,8% in 2013 to 4,7% in 2022, with minimum value reached in 2014 (1,3%) and maximum value in 2022 (4,7%)
 - ▶ The percentage of companies reporting asset write-down increased from a minimum of 10,2% in 2013 to the maximum of 23,0% in 2022
- ▶ Over the past 10 years, on average, only 2,9% of the companies reported goodwill impairment, as compared to an average of 16,9% for asset write-down over the same period (2013-2022)
 - ▶ In 2013, companies reporting impairment of goodwill and asset write-down were 3,8% and 10,2%, respectively
 - ▶ In 2022, companies reporting impairment of goodwill and asset write-down were 4,7% and 23,0%, respectively

* Italian companies include FTSE AIM and FTSE MIB companies

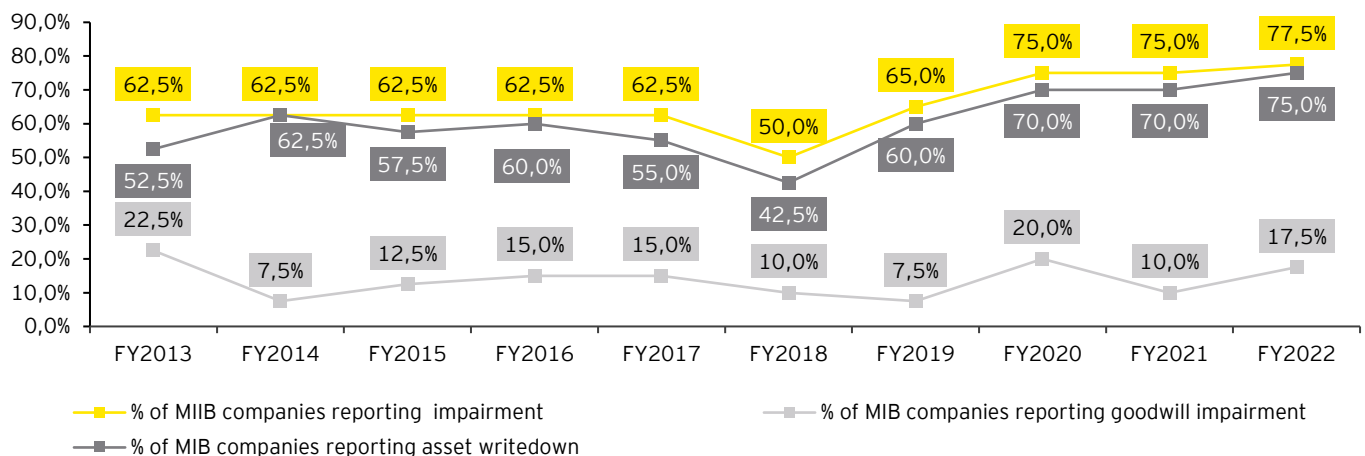
% of Companies reporting impairment

In 2022 alone, 77,5% of FTSE MIB listed companies and 13,8% of FTSE AIM listed companies recorded total impairment

Percentage of FTSE AIM companies reporting impairment



Percentage of FTSE MIB companies reporting impairment

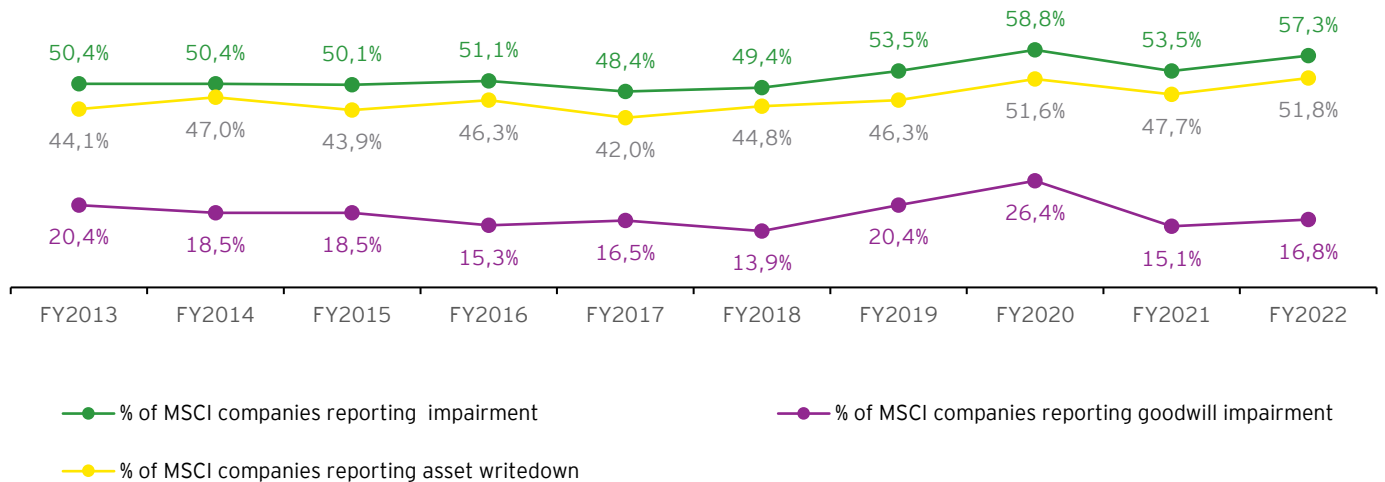


- ▶ In 2022, reporting of total impairment increased for FTSE MIB and decreased for FTSE AIM companies
 - ▶ 77,5% of FTSE MIB companies reported total impairment in 2022 vs. 75,0% in 2021
 - ▶ 13,8% of FTSE AIM companies reported total impairment in 2022 vs. 13,3% in 2021
- ▶ Reporting of goodwill impairment was comparatively lower than asset write-down across companies over the past 10 years (2013-2022)
 - ▶ FTSE AIM companies reported an average of 0,6% for goodwill impairment against 7,9% for asset write-down
 - ▶ FTSE MIB companies reported an average of 13,8% for goodwill impairment against 60,5% for asset write-down
- ▶ No goodwill was impaired by FTSE AIM companies during 2013-2015 and even in 2017, the figures are negligible as these companies are too small and inactive in M&A space

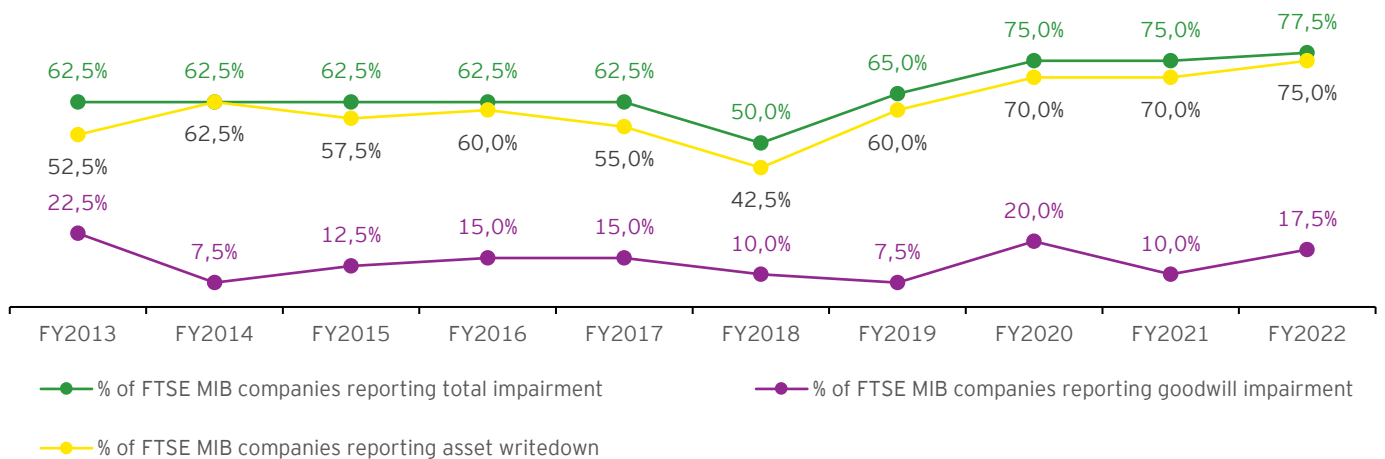
% of Companies reporting impairment

MSCI Europe companies increased impairment reporting but there are around half of the companies not reporting impairment

Percentage of MSCI Europe companies reporting impairment



Percentage of FTSE MIB companies reporting impairment



- ▶ For MSCI Europe, 210 companies did not report impairment in 2013 as compared to 239 companies in 2022
 - ▶ In 2022, 57,3% of MSCI Europe companies and 77,5% of FTSE MIB companies reported impairment
- ▶ Reporting of goodwill impairment was comparatively lower than asset write-down
 - ▶ For MSCI Europe, 16,8% of companies reported goodwill impairment vs. 17,5% of FTSE MIB companies in 2022
- ▶ On average, 52,3% of MSCI Europe companies reported a total impairment, against 65,5% of FTSE MIB companies between 2013 and 2022
 - ▶ For same period, on average, % of companies reporting goodwill impairment was 18,2% for MSCI Europe and 13,8% for FTSE MIB, while % of companies reporting asset write-down was 46,5% and 60,5% respectively



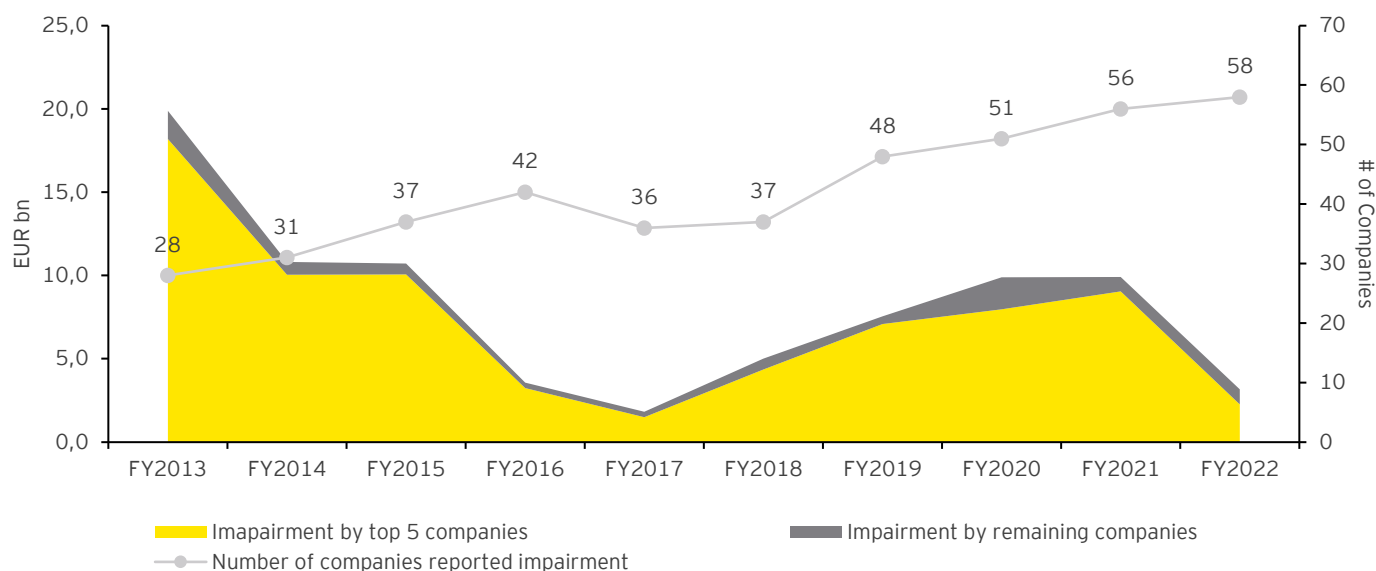
05.

Concentration of impairment

Concentration of impairment

Total impairment was highly concentrated among top 5 companies

Concentration of impairment for Italian companies*



	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total companies	235	235	235	235	235	235	235	235	235	235
Companies that reported impairment	28	31	37	42	36	37	48	51	56	58
% of companies reported impairment	11,9%	13,2%	15,7%	17,9%	15,3%	15,7%	20,4%	21,7%	23,8%	24,7%
% of impairment recognized by top 5 companies	91,4%	92,9%	93,9%	90,9%	82,1%	87,1%	93,9%	80,6%	91,3%	71,4%

Impairment was highly concentrated in the top 5 companies between 2013 and 2022

- ▶ Since 2013, the concentration of impairment in the top 5 companies decreased, reaching a minimum in 2022
- ▶ From 2012 to 2022, on average, 87,6% of the impairment was reported by the top 5 companies

* Italian companies include FTSE AIM and FTSE MIB companies

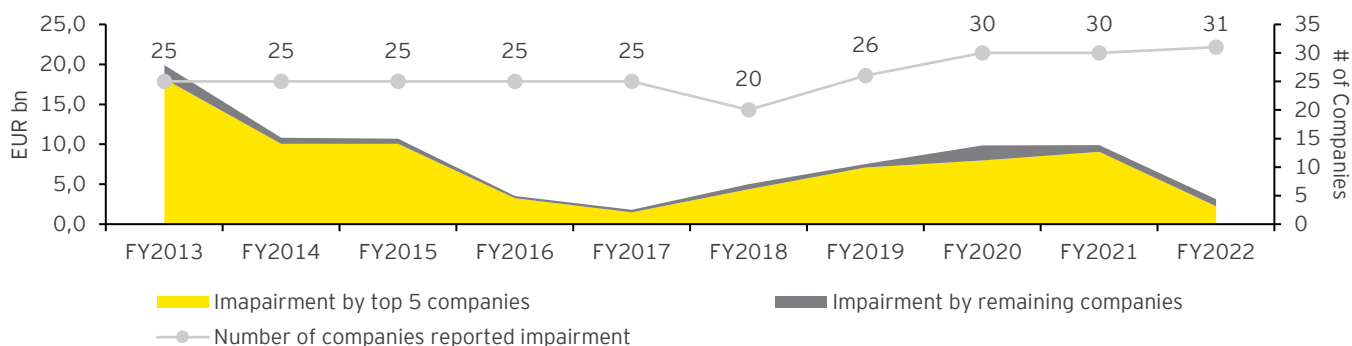
Concentration of impairment

In 2022 67,0% and 72,2% of total impairment was reported by top 5 companies in FTSE AIM and FTSE MIB, respectively

Concentration of impairment of FTSE AIM companies

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total companies	195	195	195	195	195	195	195	195	195	195
Companies that reported impairment	3	6	12	17	11	17	22	21	26	27
% of companies reported impairment	1,5%	3,1%	6,2%	8,7%	5,6%	8,7%	11,3%	10,8%	13,3%	13,8%
% of impairment recognized by top 5 companies (by value)	100,0%	98,7%	82,2%	93,2%	97,7%	89,4%	65,1%	92,3%	78,3%	67,0%

Concentration of impairment of FTSE MIB companies



	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total companies	40	40	40	40	40	40	40	40	40	40
Companies that reported impairment	25	25	25	25	25	20	26	30	30	31
% of companies reported impairment	62,5%	62,5%	62,5%	62,5%	62,5%	50,0%	65,0%	75,0%	75,0%	77,5%
% of impairment recognized by top 5 companies (by value)	91,4%	92,9%	94,0%	91,2%	83,1%	87,3%	94,1%	80,8%	91,5%	72,2%

- ▶ Total impairment was highly concentrated in the top 5 companies for both FTSE AIM and FTSE MIB companies
 - ▶ FTSE AIM: impairment recognized by top 5 companies was 100% in 2013, and as more companies reported total impairment over the years, concentration decreased, reaching 67,0% in 2022
 - ▶ FTSE MIB: the concentration of impairment by top 5 companies decreased until 2017 and then increased in 2019 and 2021, dropped significantly in 2022

Concentration of impairment

% of impairment recognized by top 5 companies decreased for FTSE MIB and MSCI Europe companies between 2013 and 2022

Concentration of impairment of MSCI Europe companies

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total companies	417	417	417	417	417	417	417	417	417	417
Companies that reported impairment	210	210	209	213	202	206	223	245	223	239
% of companies reported impairment	50,4%	50,4%	50,1%	51,1%	48,4%	49,4%	53,5%	58,8%	53,5%	57,3%
% of impairment recognized by top 5 companies	47,2%	41,7%	33,1%	34,4%	38,0%	42,6%	32,4%	33,0%	33,6%	36,6%
% of impairment recognized by top 10 companies	64,8%	60,5%	58,4%	51,2%	53,0%	57,2%	50,7%	47,4%	50,3%	49,4%

Concentration of impairment of FTSE MIB companies

	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Total companies	40	40	40	40	40	40	40	40	40	40
Companies that reported impairment	25	25	25	25	25	20	26	30	30	31
% of companies reported impairment	62,5%	62,5%	62,5%	62,5%	62,5%	50,0%	65,0%	75,0%	75,0%	77,5%
% of impairment recognized by top 5 companies	91,4%	92,9%	94,0%	91,2%	83,1%	87,3%	94,1%	80,8%	91,5%	72,2%
% of impairment recognized by top 10 companies	99,2%	98,0%	98,7%	97,1%	92,4%	96,4%	98,0%	95,8%	96,5%	86,5%

- ▶ Total impairment was concentrated in the top 10 companies for MSCI Europe
 - ▶ MSCI Europe: impairment recorded by top 5 companies decreased from 47,2% in 2013 to 36,6% in 2022, partially due to the change in the n° of companies reporting impairment
 - ▶ FTSE MIB: impairment recorded by top 5 companies decreased from 91,4% in 2013 to 72,2% in 2022
- ▶ Total impairment concentrated in the top 10 companies decreased for both MSCI Europe and FTSE MIB companies from 2021 to 2022



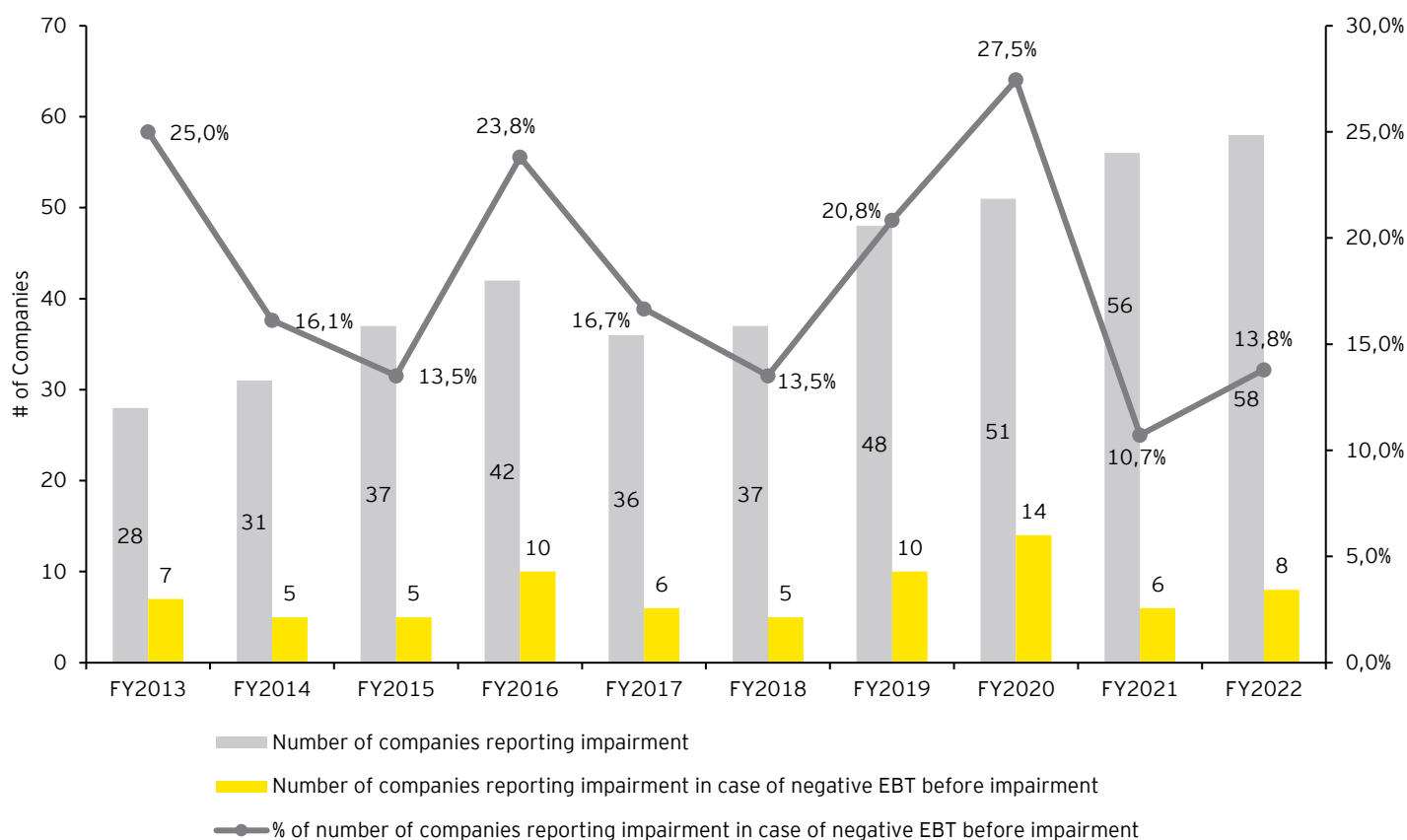
06.

Timing of impairment

Timing of impairment

Majority of organization recorded impairment only if operational and financial performance was positive

Timing of impairment for Italian companies*



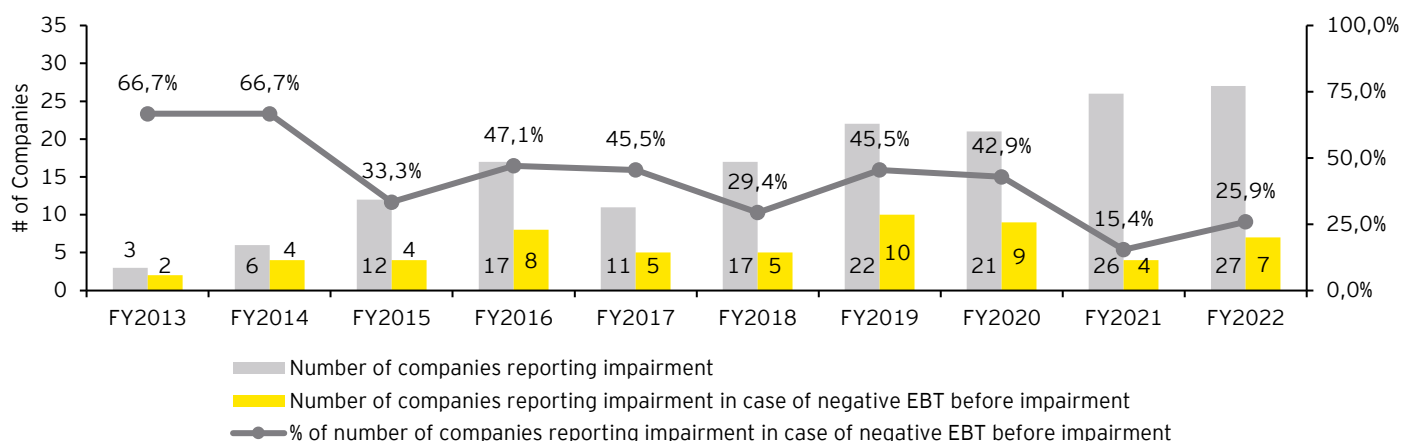
- ▶ The above chart indicates the companies recognizing impairment when they reported negative EBT before impairment
 - ▶ From 2013 to 2022, on average, 18,0% of the Italian companies reported impairment
 - ▶ The chart shows that the majority of the companies reported impairment when they recorded positive EBT before impairment
- ▶ Number of companies reporting impairment in case of negative EBT (before impairment) over the last 10 years period (2013-2022) was on average 8, with a peak of 14 companies in 2020 and a minimum in 2018, 2014 and 2015 with 5 company
- ▶ % of number of companies reporting impairment in case of negative EBT (before impairment) over the last 10 years period (2013-2022) was on average 18,1%. The highest figure was reached in 2020 (27,5%) and the lowest in 2021 (10,7%)

* Italian companies include FTSE AIM and FTSE MIB companies

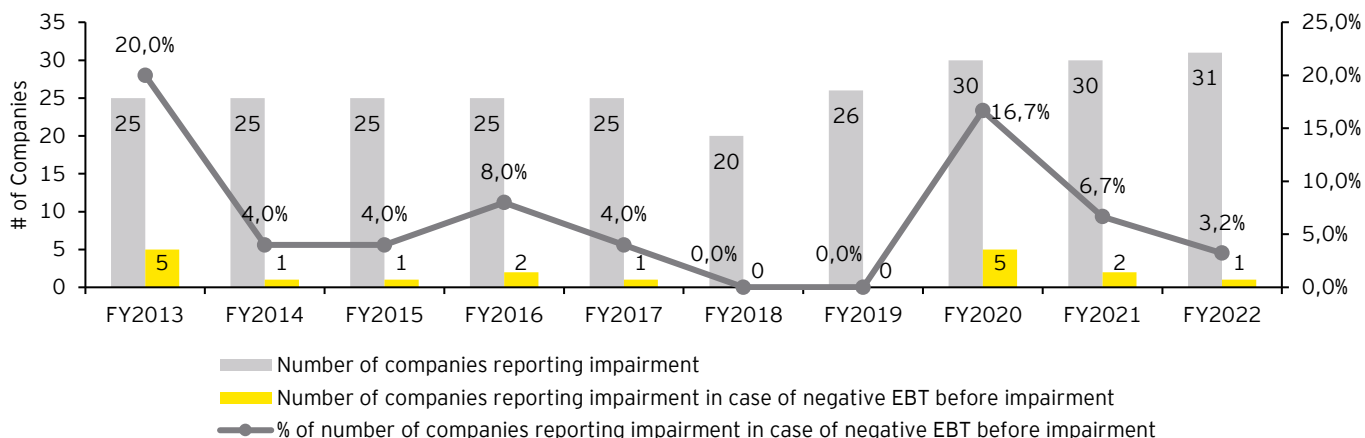
Timing of impairment

Majority of the FTSE MIB listed companies timed impairment to coincide with positive EBT

Timing of impairment (FTSE AIM)



Timing of impairment (FTSE MIB)

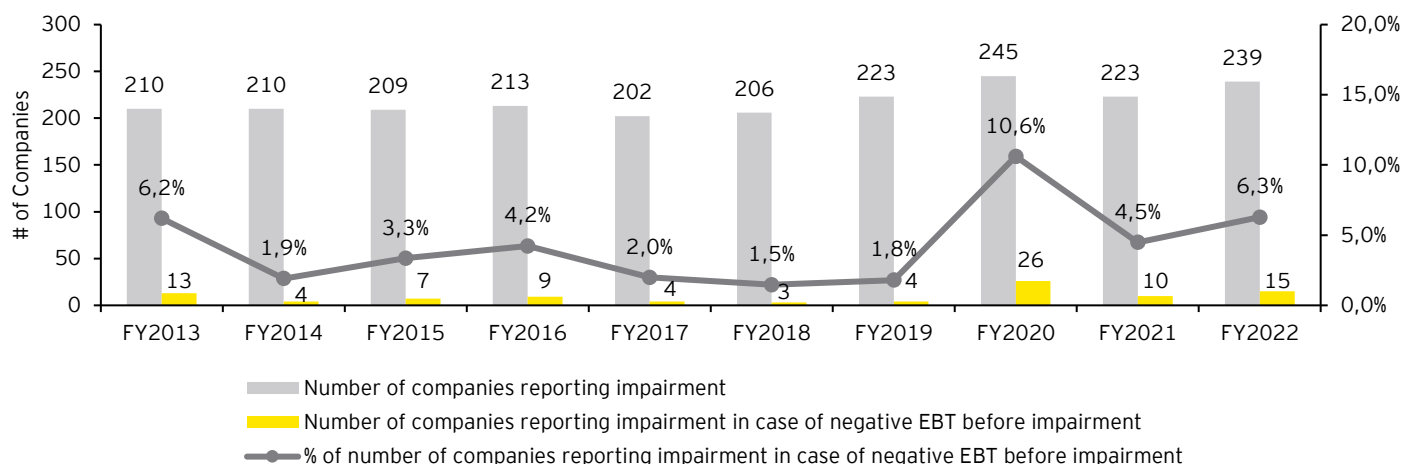


- ▶ Number of FTSE AIM companies reporting impairment in case of negative EBT before impairment increased from 2 in 2013 to 7 in 2022
 - ▶ On average, 41,8% of the companies reported impairment in case of negative EBT before impairment over the last 10 years period (2013-2022)
- ▶ Number of FTSE MIB companies reporting impairment in case of negative EBT before impairment decreased from 5 in 2013 to 1 in 2022
 - ▶ On average, 6,3% of the companies reported impairment in case of negative EBT before impairment over the last 10 years period (2013-2022)

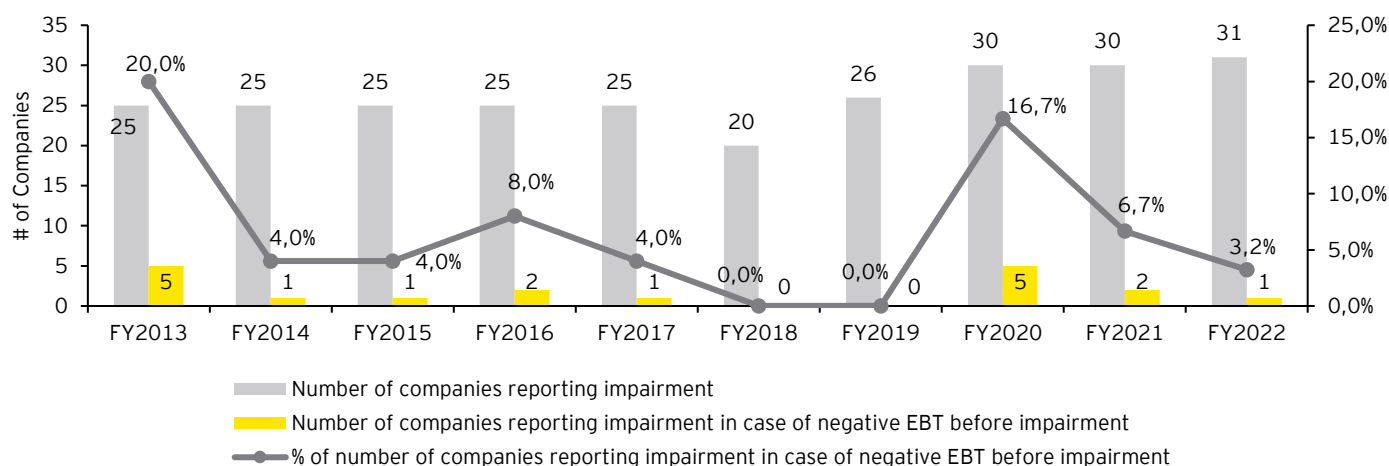
Timing of impairment

Majority of the MSCI Europe and FTSE MIB companies timed impairment to coincide with positive EBT

Timing of impairment (MSCI Europe)



Timing of impairment (FTSE MIB)



- ▶ The number of MSCI Europe companies reporting impairments in the case of negative EBT before impairment increased significantly in 2020, and in 2022 the value decreased to 15
 - ▶ Both the number of companies and the % of companies reporting impairment in case of negative EBT before impairment reached a peak in 2020 (26 and 10,6% respectively)
- ▶ Number of FTSE MIB companies reporting impairment in case of negative EBT before impairment declined after 2013, until 2020 when 16,7% of the companies reported impairment with negative EBT before impairment and in 2021 and 2022 the value decreased again



07.

Intensity of impairment

Intensity of impairment

Majority of companies reported Impairment between EUR 0-5m

Distribution of Italian companies* by the amount of impairment reported

# of Companies	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
No impairment	207	204	198	193	199	198	187	184	179	177
0m-5m	11	11	18	24	14	19	28	26	30	33
5m-10m	2	3	2	5	5	4	4	6	6	3
10m-20m	2	3	5	0	6	1	3	4	2	1
20m-50m	3	4	4	6	6	2	5	2	7	10
50m-100m	0	2	1	2	3	5	3	3	4	4
100m-200m	3	4	1	0	0	2	2	2	2	5
200m-500m	1	2	4	3	1	2	1	2	2	0
>500m	6	2	2	2	1	2	2	6	3	2
Total Impaired	28	31	37	42	36	37	48	51	56	58
Total	235	235	235	235	235	235	235	235	235	235

- ▶ Highest number of companies reported impairment between EUR 0-5m
 - ▶ In 2022, 24,7% of total companies reported an impairment
 - ▶ On average, 18,0% of the companies reported impairment during 2013-2022, with a peak of 24,7% in 2022 and a minimum of 11,9% in 2013
- ▶ In 2013 and 2020 a sizeable number of companies reported an impairment greater than EUR 500m
- ▶ Number of companies reporting no impairment was significantly high with an average 82,0% over the period 2013-2022, with a peak of 88,1% in 2013 and a minimum of 75,3% in 2022

* Italian companies include FTSE AIM and FTSE MIB companies

Intensity of impairment

Majority of AIM and MIB listed companies reported impairment between EUR 0-5m

Distribution of FTSE AIM companies by the amount of impairment

# of Companies	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
No impairment	192	189	183	178	184	178	173	174	169	168
0m-5m	3	6	12	16	9	16	22	20	25	26
5m-10m	0	0	0	1	2	1	0	1	1	1
>10m	0	0	0	0	0	0	0	0	0	0
Total Impaired	3	6	12	17	11	17	22	21	26	27
Total	195	195	195	195	195	195	195	195	195	195

Distribution of FTSE MIB companies by the amount of impairment

# of Companies	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
No impairment	15	15	15	15	15	20	14	10	10	9
0m-5m	8	5	6	8	5	3	6	6	5	7
5m-10m	2	3	2	4	3	3	4	5	5	2
10m-20m	2	3	5	0	6	1	3	4	2	1
20m-50m	3	4	4	6	6	2	5	2	7	10
50m-100m	0	2	1	2	3	5	3	3	4	4
100m-200m	3	4	1	0	0	2	2	2	2	5
200m-500m	1	2	4	3	1	2	1	2	2	0
>500m	6	2	2	2	1	2	2	6	3	2
Total Impaired	25	25	25	25	25	20	26	30	30	31
Total	40	40	40	40	40	40	40	40	40	40

- ▶ In 2022 The highest n° of companies reported impairment between EUR 0m-5m in FTSE AIM and between EUR 20m-50m in FTSE MIB
- ▶ FTSE AIM: No company reported impairment higher than EUR 10m from 2013 to 2022
- ▶ FTSE MIB: The number of companies reporting impairment increased from 2013 to 2022, while the impairment level category are variable with a particularity of 10 companies reporting impairment from 20m to 50m
- ▶ The companies reporting impairment higher than EUR 200m decreased from 5 of 2021 to 2 of 2022.

Intensity of impairment

MSCI Europe companies reporting impairment >EUR 500m
from 31 companies in 2013 to 35 companies in 2022

Distribution of MSCI Europe companies by the amount of impairment

# of Companies	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
No impairment	207	207	208	204	215	211	194	172	194	178
0m-5m	54	48	40	48	54	47	44	31	38	38
5m-10m	13	15	21	22	20	21	24	18	24	19
10m-20m	23	20	25	23	20	26	15	21	24	27
20m-50m	23	40	32	40	35	37	37	32	35	36
50m-100m	23	25	24	18	22	17	36	31	29	25
100m-200m	28	19	14	26	16	23	17	27	26	30
200m-500m	15	16	13	15	15	12	14	31	23	29
500m-1,000m	14	10	22	9	12	14	13	25	10	12
>1,000m	17	17	18	12	8	9	23	29	14	23
Total Impaired	210	210	209	213	202	206	223	245	223	239
Total	417	417	417	417	417	417	417	417	417	417

Distribution of FTSE MIB companies by the amount of impairment

# of Companies	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
No impairment	15	15	15	15	15	20	14	10	10	9
0m-5m	8	5	6	8	5	3	6	6	5	7
5m-10m	2	3	2	4	3	3	4	5	5	2
10m-20m	2	3	5	0	6	1	3	4	2	1
20m-50m	3	4	4	6	6	2	5	2	7	10
50m-100m	0	2	1	2	3	5	3	3	4	4
100m-200m	3	4	1	0	0	2	2	2	2	5
200m-500m	1	2	4	3	1	2	1	2	2	0
>500m	6	2	2	2	1	2	2	6	3	2
Total Impaired	25	25	25	25	25	20	26	30	30	31
Total	40	40	40	40	40	40	40	40	40	40

- ▶ Maximum n° of companies reported impairment between EUR 0-5m in both MSCI Europe and FTSE MIB for the majority of the period
- ▶ Anyway, for FTSEMIB, the maximum n° of companies reported impairment was in 2022 between EUR 20m-50m



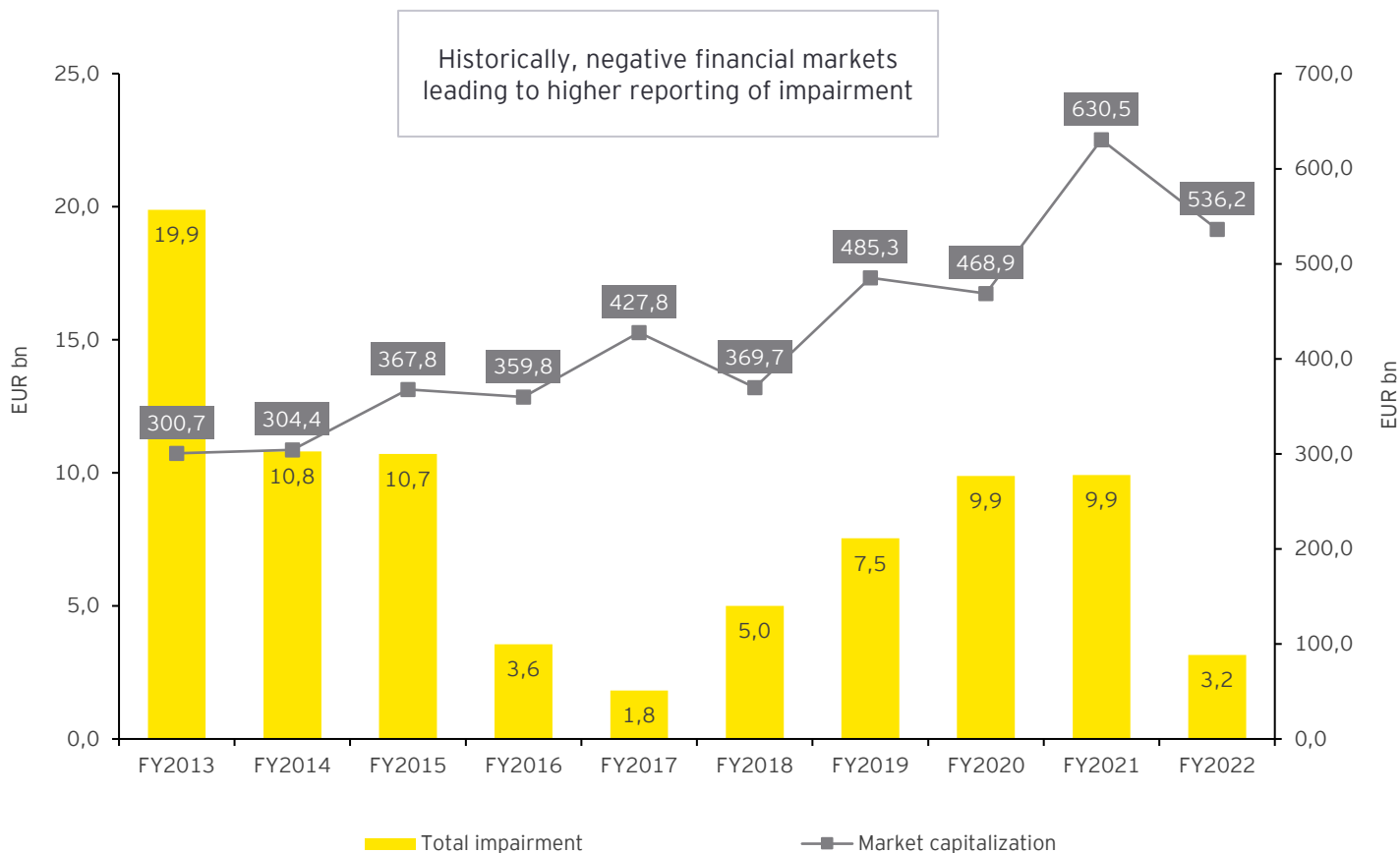
08.

Impairment vs. Market cap.

Impairment vs. Market cap.

The total impairment tends to be higher when financial markets are negative and lower when they are positive

Italian companies* evolution of impairment vs. market cap.



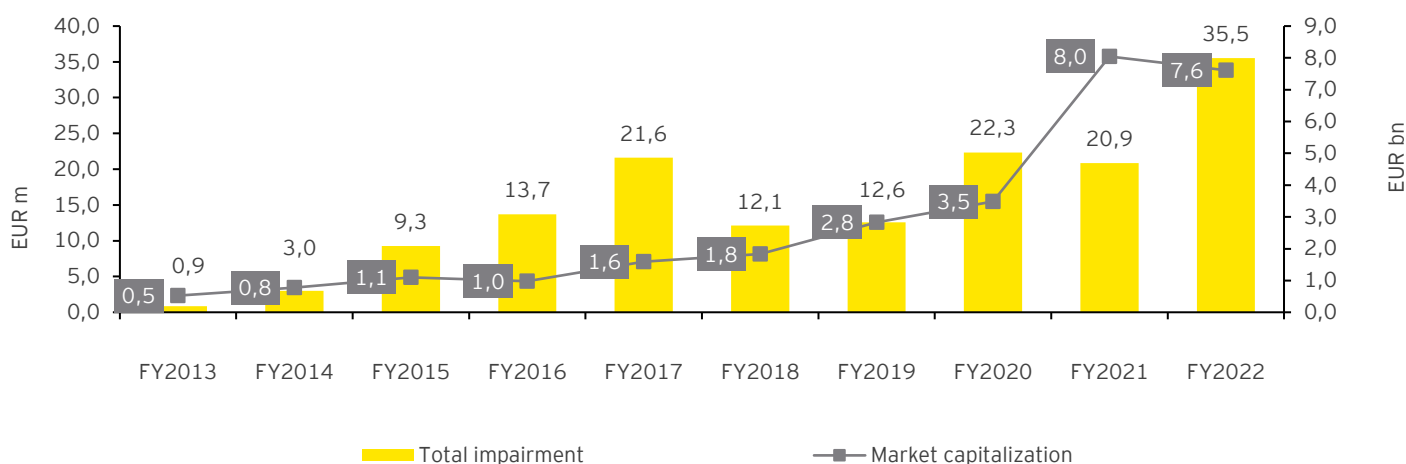
- ▶ After 2013, the total impairment decreased gradually as the financial markets improved, while from 2018 onwards it started to increase again until 2021, while in 2022 it decreased
- ▶ In 2022, companies reported a total impairment of EUR 3,2bn with a market cap of EUR 536,2bn
- ▶ Market capital grew at a CAGR of 6,6% over the past 10 years to reach EUR 536,2bn in 2022 from EUR 300,7bn in 2013
- ▶ Generally, total impairment and market capitalization seem to be inversely related during the period 2014-2018, anyway the 2013, 2019, 2021, values do not follow this trend because both Total impairment and Market capitalization increased due to a 'one off' specific situation not related to covid that impacted the amount of impairments
- ▶ 2022 shows a decrease in impairment and market capitalization

* Italian companies include FTSE AIM and FTSE MIB companies

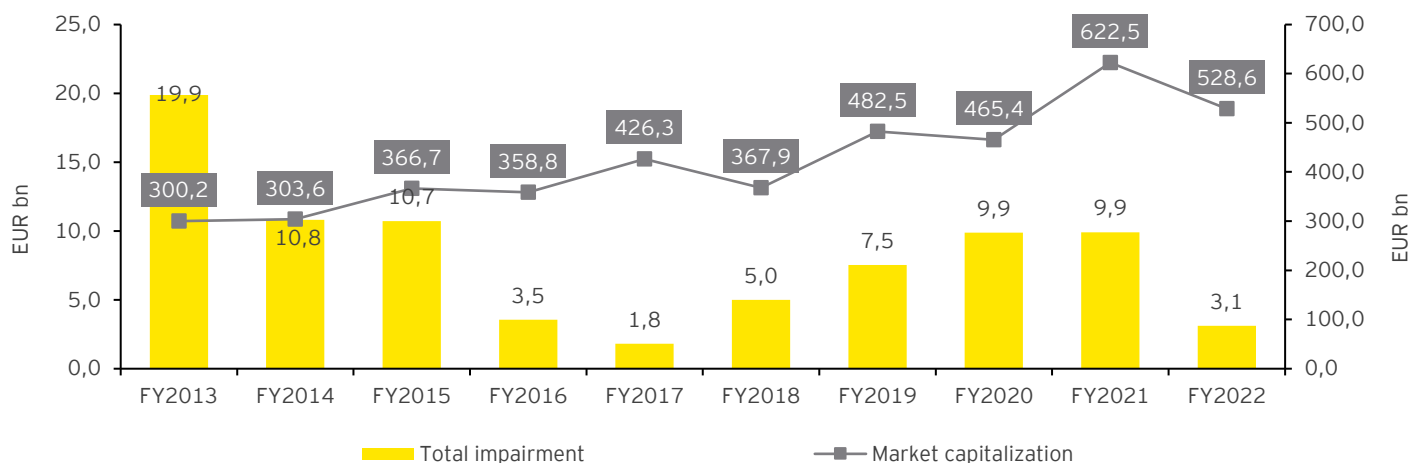
Impairment vs. Market cap.

FTSE MIB companies had different trends in terms of both Total impairment and Market capitalization

Evolution of impairment vs. market capitalization (FTSE AIM)



Evolution of impairment vs. market capitalization (FTSE MIB)

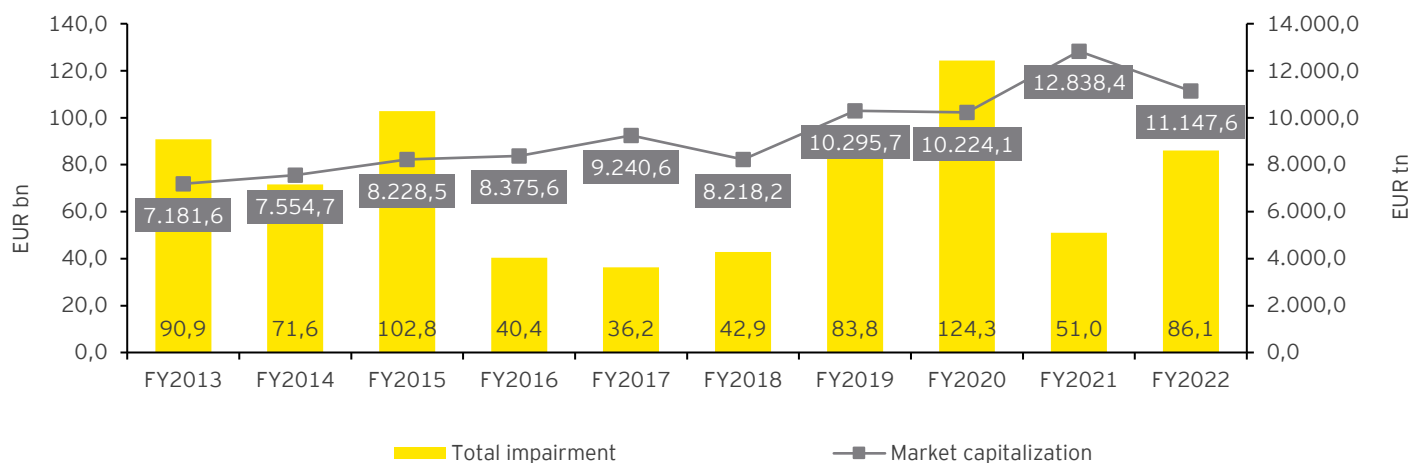


- ▶ FTSE MIB companies: total impairment tends to be higher when the market capitalization of the companies is lower; this indicates that the companies tend to report higher impairments when the financial markets are negative and lower when financial markets are positive. Anyway, the 2019, 2021 and 2022 values do not follow this trend because both Total impairment and Market capitalization increased
- ▶ As FTSE AIM companies are very small as compared to FTSE MIB companies, there was no such correlation between market capitalization and the reported total impairment

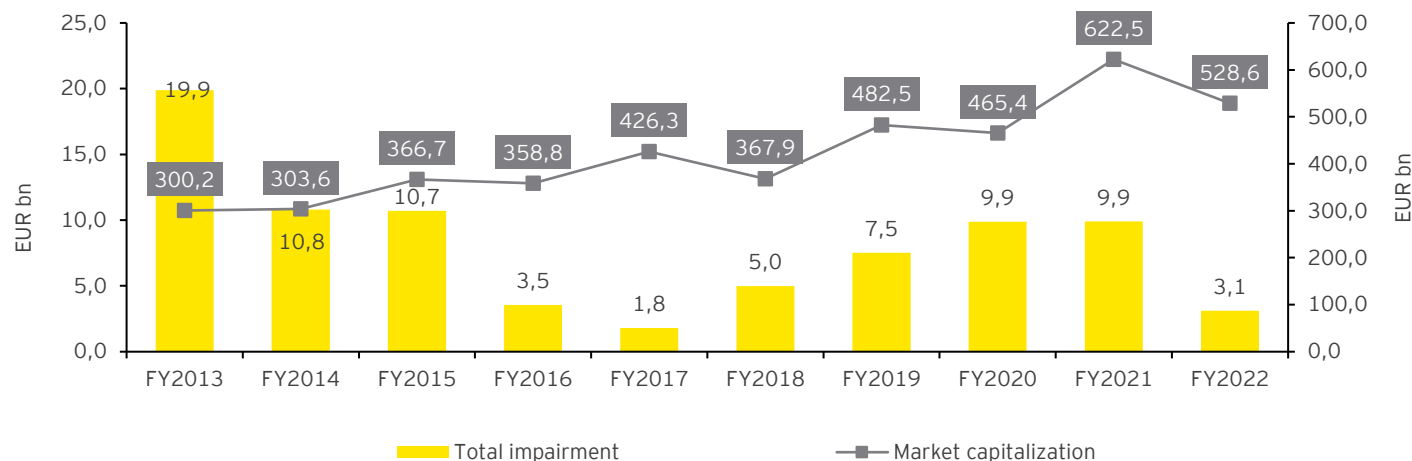
Impairment vs. Market cap.

In 2020, MSCI EUROPE companies' total impairment recorded its peak, for FTSE MIB it happened in 2013

Evolution of impairment vs. market capitalization (MSCI Europe)



Evolution of impairment vs. market capitalization (FTSE MIB)



- ▶ MSCI Europe companies:
 - ▶ The market capitalization increased at a CAGR of 5,0% during 2013-2022 period, reaching a peak in 2021 of 12.838bn
 - ▶ In terms of total impairment, MSCI Europe companies recorded a total impairment peaks of EUR 124,3bn in 2020
- ▶ FTSE MIB companies: Market capitalization increased at a CAGR of 6,5% during 2013-2022, with a maximum in 2021 (EUR 622,5bn)



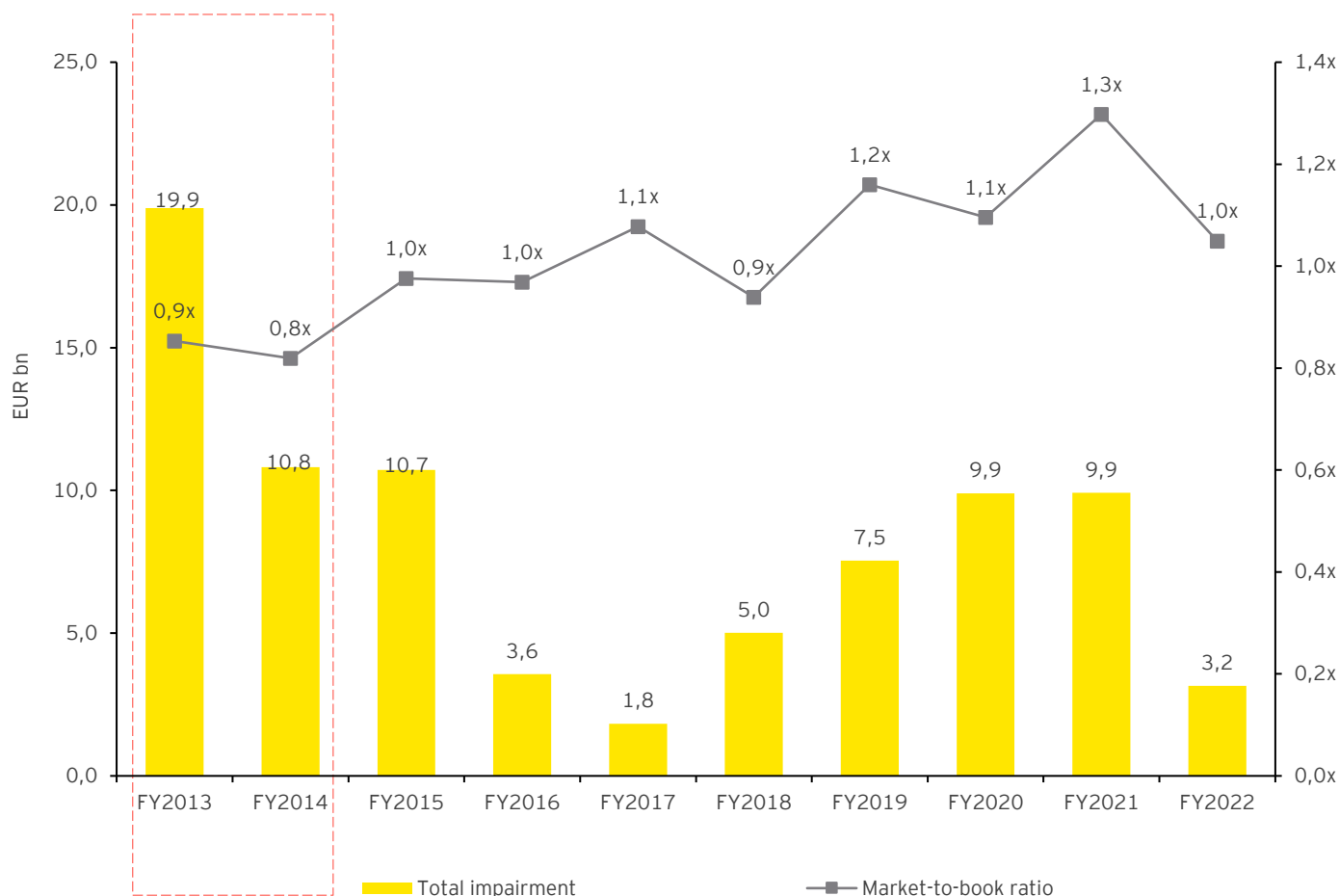
09.

Market-to-book ratio vs. Impairment

Market-to-book ratio vs. Impairment

In 2014 market to book ratio was lowest, in 2021 was the highest

Market-to-book ratio vs. total impairment for Italian companies*



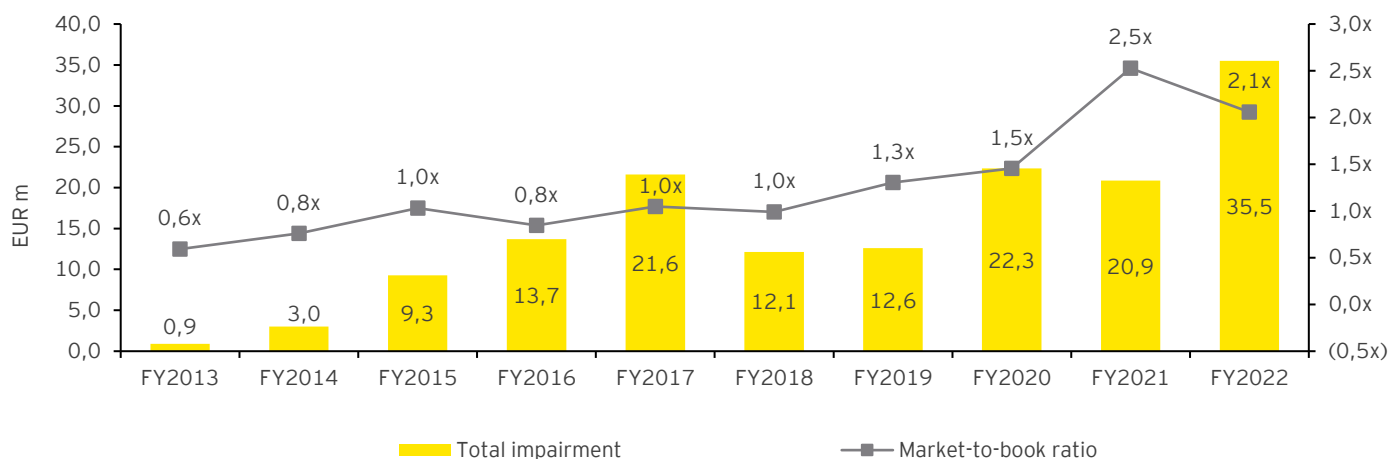
- ▶ In 2013 and 2014 the market-to-book ratio was at the lowest levels of last 10 years (0.9x and 0.8x) as compared to the highest total impairment levels (EUR 19.9bn) in 2013, primarily due to decrease in market capitalization in following years
 - ▶ As financial markets recovered, the ratio improved and total impairment started declining
- ▶ In 2021, the market-to-book value ratio reached a peak (1.3x)
- ▶ From 2013 to 2022, Net assets increased at a CAGR of 4.2%
 - ▶ Total impairment decreased at a CAGR of (18.5%) during the same period
 - ▶ Average Market to book ratio was 1.0x over the last 10 years (2013-2022)

* Italian companies include FTSE AIM and FTSE MIB companies

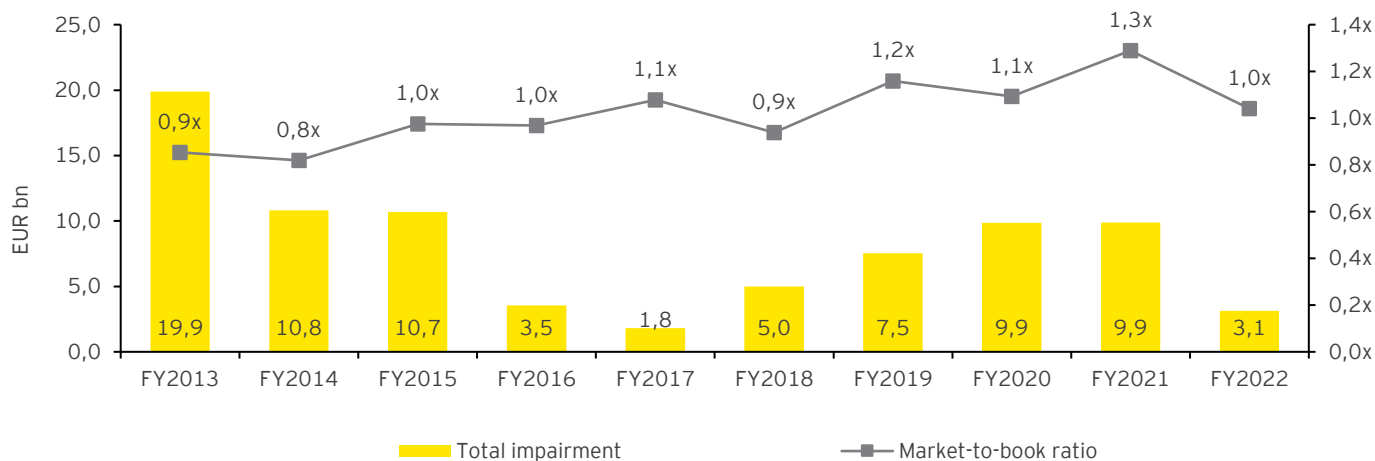
Market-to-book ratio vs. Impairment

FTSE MIB companies tended, until 2020, to report highest total impairment when market-to-book ratio was at the lowest levels

Market-to-book ratio vs. total impairment (FTSE AIM)



Market-to-book ratio vs. total impairment (FTSE MIB)

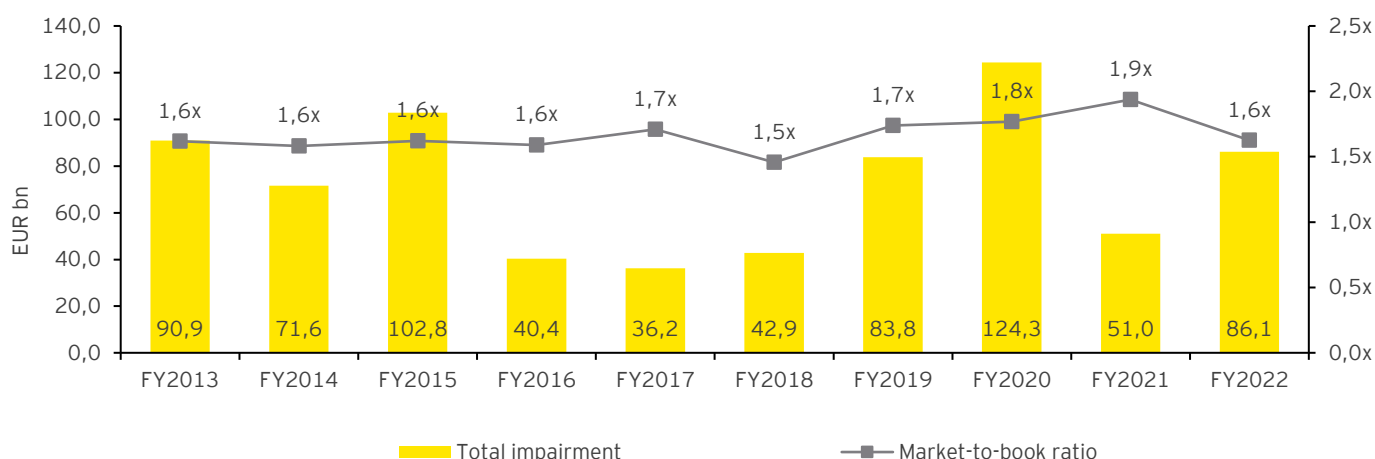


- ▶ Market-to-book ratio of FTSE MIB increased from 0,9x in 2013 to 1,0x in 2022, for FTSE AIM companies it was 0,6x in 2013 and 2,1x in 2022
- ▶ Net assets increased at a CAGR of 17,2% for FTSE AIM and of 4,2% for FTSE MIB companies
- ▶ For FTSE AIM, Market-to-book ratio increased yearly until 2021, with a total impairment peak of EUR 20,9m and a market-to-book ratio peak of 2,5x. In 2022 while impairment increased to EUR 35,5m, the market-to-book ratio decreased to 2,1x

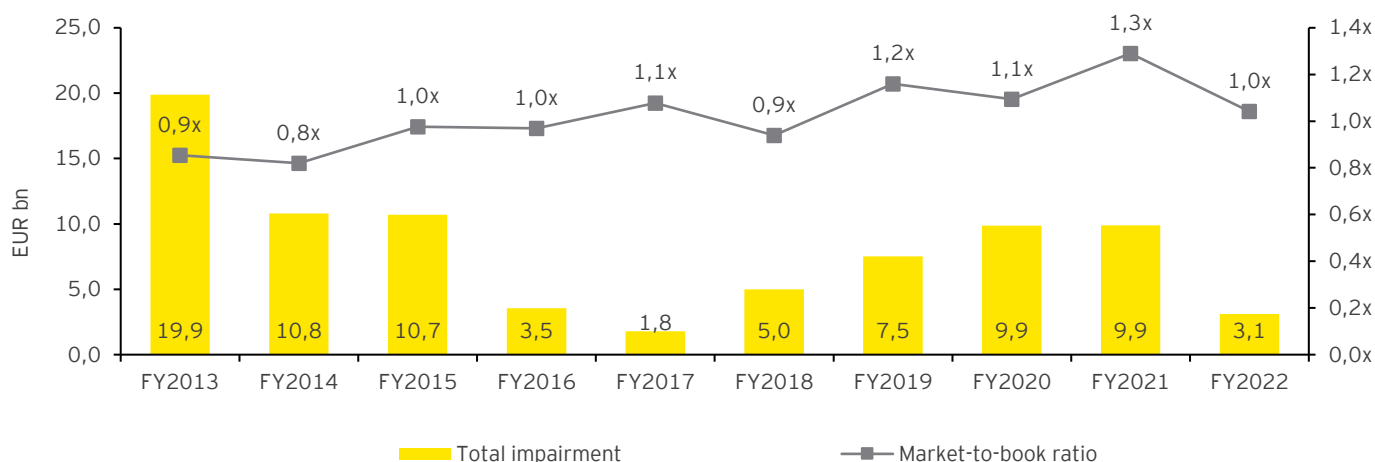
Market-to-book ratio vs. Impairment

No relation can be seen between market-to-book ratio and total impairment reported by MSCI Europe companies

Market-to-book ratio vs. total impairment (MSCI Europe)



Market-to-book ratio vs. total impairment (FTSE MIB)



- ▶ Market-to-book ratio has been largely constant for both MSCI Europe and FTSE MIB
 - ▶ For MSCI Europe companies, it has constant (1,6x) from 2013 to 2022, while for FTSE MIB companies, it increased from 0,9x in 2013 to 1,0x in 2022
- ▶ MSCI Europe: No relation can be found between market-to-book ratio and total impairment reported
 - ▶ The market-to-book ratio reached a minimum in 2018 (1,5x), whereas total impairment reached a peak in 2020 (EUR 124,3bn)
- ▶ FTSE MIB: In 2014, Market-to-book ratio was lowest being 0,8x, with total impairment reaching a maximum of EUR 19,9bn in 2013



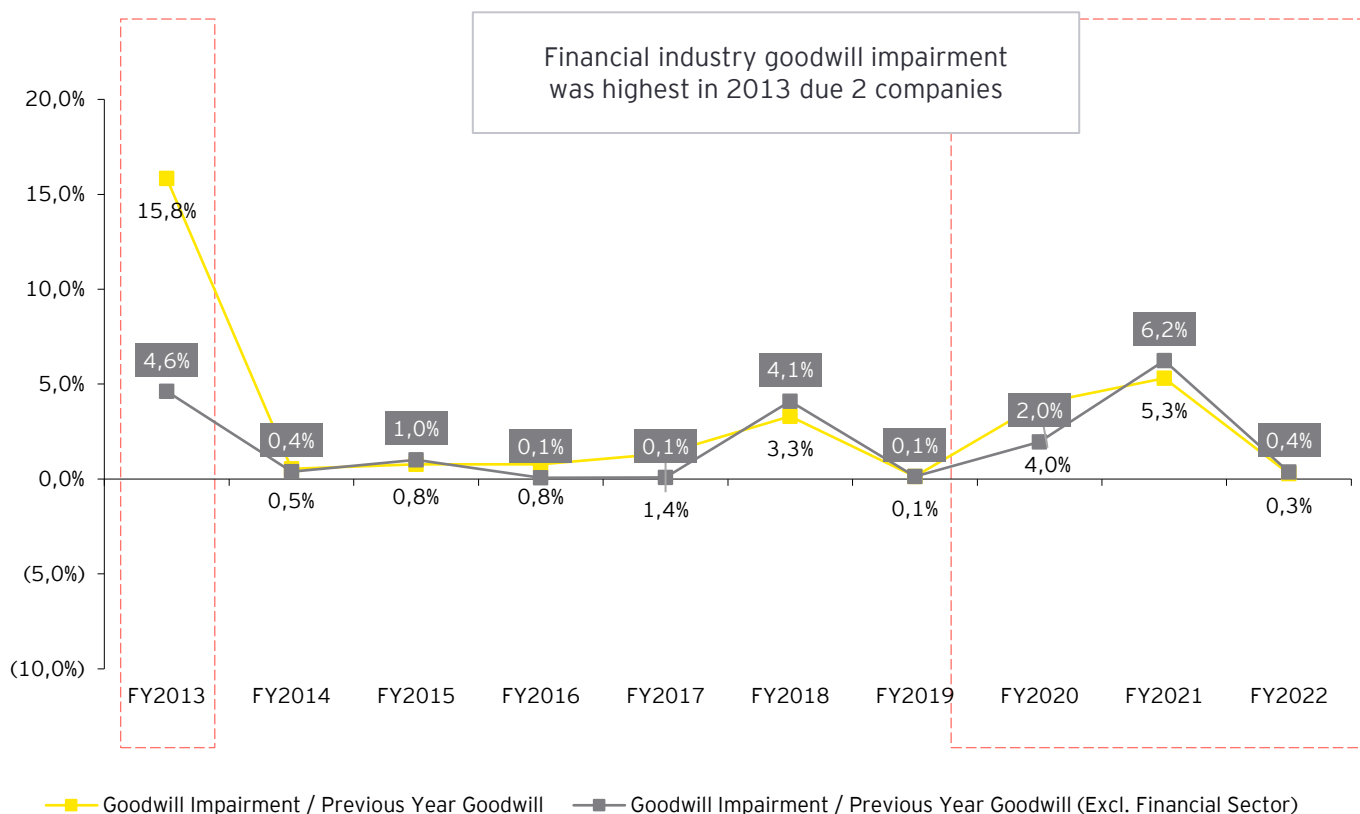
10.

Goodwill impairment

Goodwill impairment over prior year goodwill

Significant % of goodwill impaired by financial services companies during 2013, 2018 and 2021

Goodwill impairment over prior year goodwill for Italian companies*



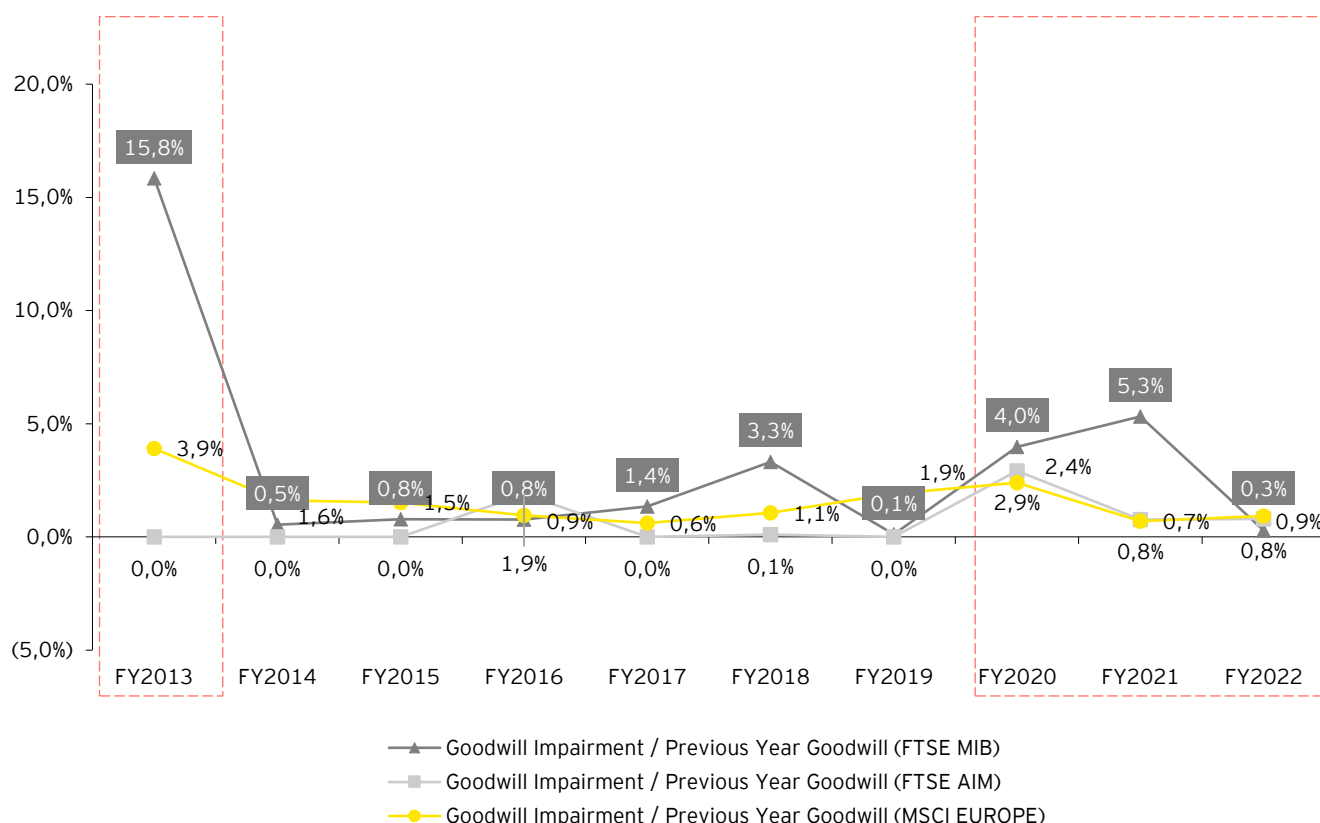
- ▶ Goodwill impairment/prior year goodwill ratio, refers to the intensity of impairment as the ratio of impairment charged in a period over the opening balance of goodwill
- ▶ Goodwill impairment/prior year goodwill ratio decreased from 15,8% in 2013 to 0,3% in 2022, with highest figures reached in 2013 and the lowest in 2019, before Covid-19 crisis
- ▶ Companies recognized goodwill impairment/ prior goodwill ratio on an average of 3,2% during 2013-2022 period, however excluding 2013 then the average drops at 1,8%
- ▶ Goodwill impairment/prior year goodwill (Excl. Financial Sector) decreased from 4,6% in 2013 to 0,4% in 2022, with highest figures showed on 2021
- ▶ Companies recognized goodwill impairment/ prior goodwill (Excl. Financial Sector) ratio on an average of 1,9% during 2013-2022 period, however, excluding 2013 then the average drops at 1,6%
- ▶ In 2013, goodwill impairment was highest primarily due to impairment in financial sector companies

* Italian companies include FTSE AIM and FTSE MIB companies

Goodwill impairment over prior year goodwill

During 2013 and 2018 period, goodwill impairment was high for both FTSE MIB and MSCI Europe companies

Goodwill impairment over prior year goodwill



- ▶ Goodwill impairment/Previous Year Goodwill ratio, refers to the intensity of impairments as the ratio of impairment charged in a period over the opening balance of goodwill
- ▶ FTSE AIM: These are small cap listed companies, the companies hardly reported any goodwill impairment, even if in 2016 and 2020 values significantly increased
- ▶ FTSE MIB: Companies recognized goodwill impairment/previous goodwill ratio on an average of 3,2% during 2013-2022 period, however if we exclude 2013 then the average drops at 1,8%
- ▶ MSCI Europe: Goodwill impairment/previous year goodwill ratio changed from 3,9% in 2013 to 0,9% in 2022, with highest ratio in 2013
 - ▶ Companies recognized goodwill impairment/previous goodwill ratio on an average of 1,6% between 2013 and 2022, however if we exclude 2013 then average decreases at only 1,3%



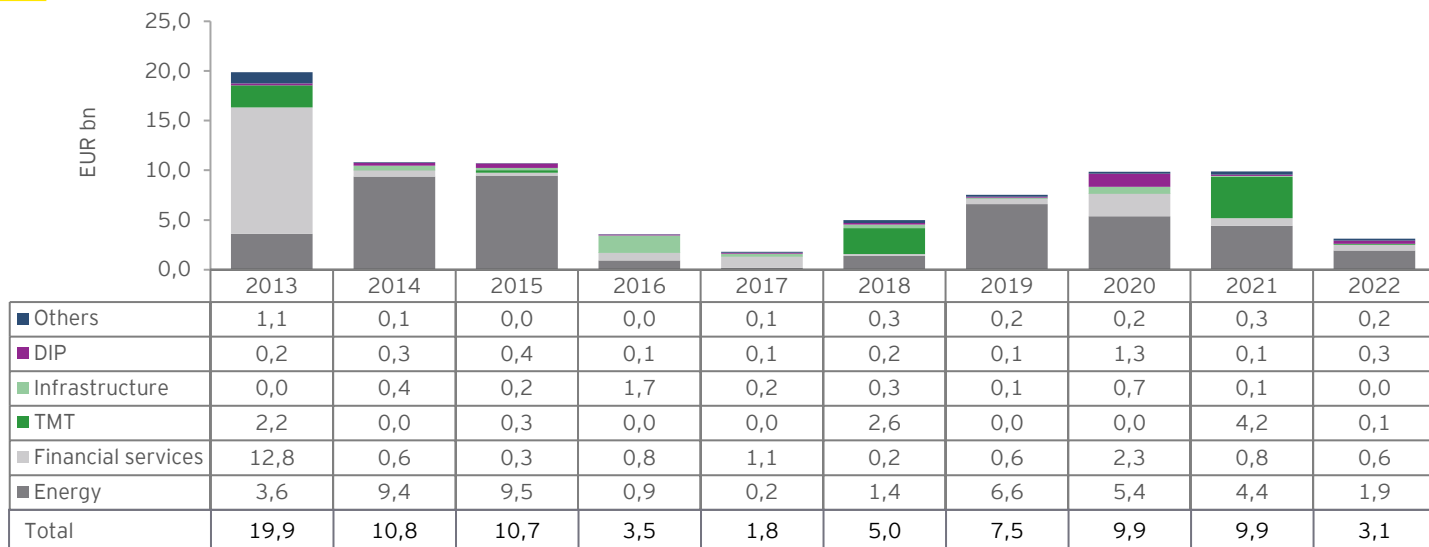
11.

FTSE MIB impairment by sector

FTSE MIB impairment by sector

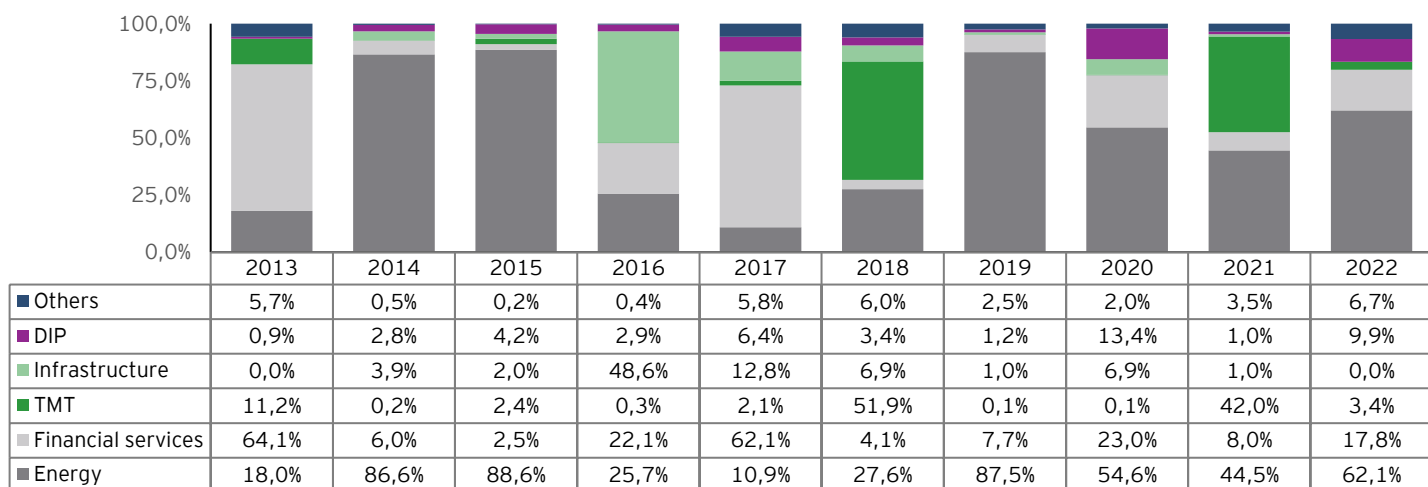
79,9% of total impairment reported by Financial services, and Energy sectors in 2022

Total impairment by sector



- ▶ Financial services sector reported its highest impairment in 2013 due to the financial debt crisis, whereas Energy sector reported its highest impairment in 2014-2015 period due to decline in oil prices and TMT in 2018 and 2021 due to Covid-19 crisis
- ▶ In 2022, 79,9% of total impairment is reported by Financial services and Energy sectors
 - ▶ Financial services sector provided the highest contribution in terms of total impairment in 2013
 - ▶ Energy sector contributed highest % of total impairment, except for 2015 and 2019
 - ▶ Total impairment of TMT sector strongly increased in 2021

Total impairment composition by sector



* FTSE MIB companies by sector have been covered as FTSE AIM companies reported negligible impairment

FTSE MIB impairment by sector

% of companies reporting impairment generally increased during the period 2013 to 2022 in in most industries

% of companies reporting impairment by sector

% of companies reporting impairment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Automotive	25,0%	25,0%	25,0%	0,0%	50,0%	25,0%	75,0%	75,0%	75,0%	75,0%
DIP	83,3%	83,3%	83,3%	66,7%	66,7%	50,0%	50,0%	83,3%	66,7%	83,3%
Energy	75,0%	75,0%	87,5%	75,0%	87,5%	87,5%	100,0%	100,0%	100,0%	100,0%
Financial services	61,5%	53,8%	46,2%	61,5%	53,8%	30,8%	53,8%	61,5%	69,2%	76,9%
Healthcare	66,7%	66,7%	33,3%	66,7%	66,7%	33,3%	66,7%	66,7%	66,7%	66,7%
Infrastructure	0,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
RCP	50,0%	50,0%	50,0%	50,0%	50,0%	50,0%	50,0%	50,0%	50,0%	50,0%
TMT	66,7%	66,7%	100,0%	100,0%	33,3%	66,7%	33,3%	66,7%	66,7%	33,3%
Total	62,5%	62,5%	62,5%	62,5%	62,5%	50,0%	65,0%	75,0%	75,0%	77,5%

% of companies reporting impairment from 2013 to 2022 remained stable for almost all sectors

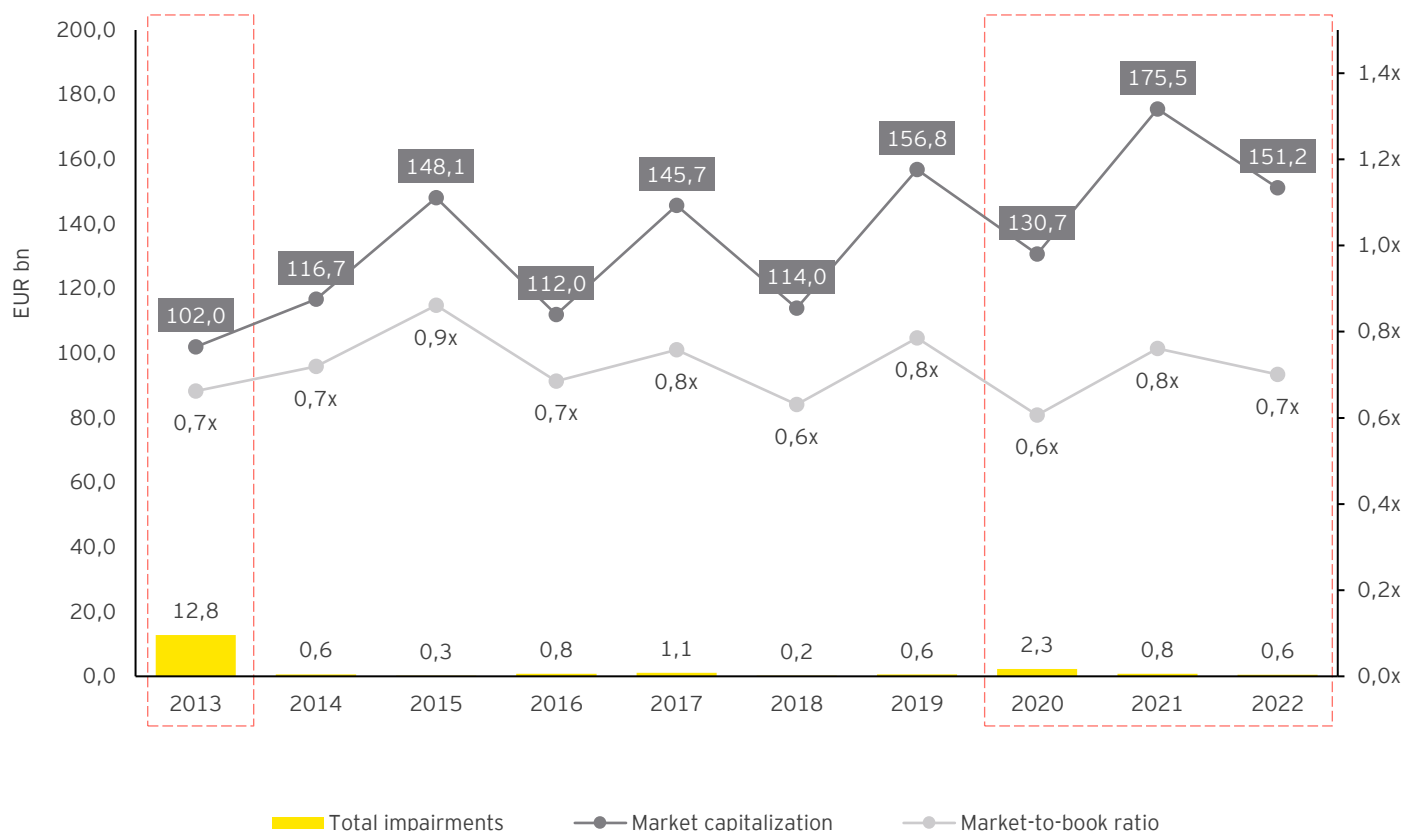
- ▶ % of Automotive companies reporting impairment increased from 25,0% in 2013 to 75,0% to 2022. Only in 2016 no Automotive companies reported impairment;
- ▶ % of DIP companies reporting impairment both in 2013 and 2022 is 83,3%. During the analysis period it reached a negative peak of 50,0%;
- ▶ % of Energy companies reporting impairment increased from 75,0% in 2013 to 100,0% in 2022. 100% of the energy companies reported impairment from 2019 onward;
- ▶ % of Financial services companies reporting impairment increased from 61,5% in 2013 to 76,9% in 2022. During the analysis period it reached a negative peak of 30,8%;
- ▶ % of Healthcare companies reporting impairment was mostly equal to 66,7% during the analysed period;
- ▶ % of Infrastructure companies reporting impairment increased from 0,0% in 2013 to 100,0% from 2014 onward. Note: only one Infrastructure company is in the panel;
- ▶ % of RCP companies reporting impairment have been stable (50,0%) from 2013 to 2022;
- ▶ % of TMT companies reporting impairment decreased from 66,7% in 2013 to 33,3% in 2022. During the analysis period it reached a peak of 100,0% during 2015-2016;

* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment

FTSE MIB Financial Services sector

Decrease in impairment over the period after the European debt crisis, consequent increase in 2020 and 2021 related to Covid-19 crisis and consequences of the Russian invasion of Ukraine in 2022.

Financial services sector impairment vs. Market cap. and Market-to-book



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Goodwill impairment	97,6%	30,9%	4,5%	72,9%	94,7%	47,1%	2,9%	87,8%	36,9%	3,5%
Asset writedown	2,4%	69,1%	95,5%	27,1%	5,3%	52,9%	97,1%	12,2%	63,1%	96,5%

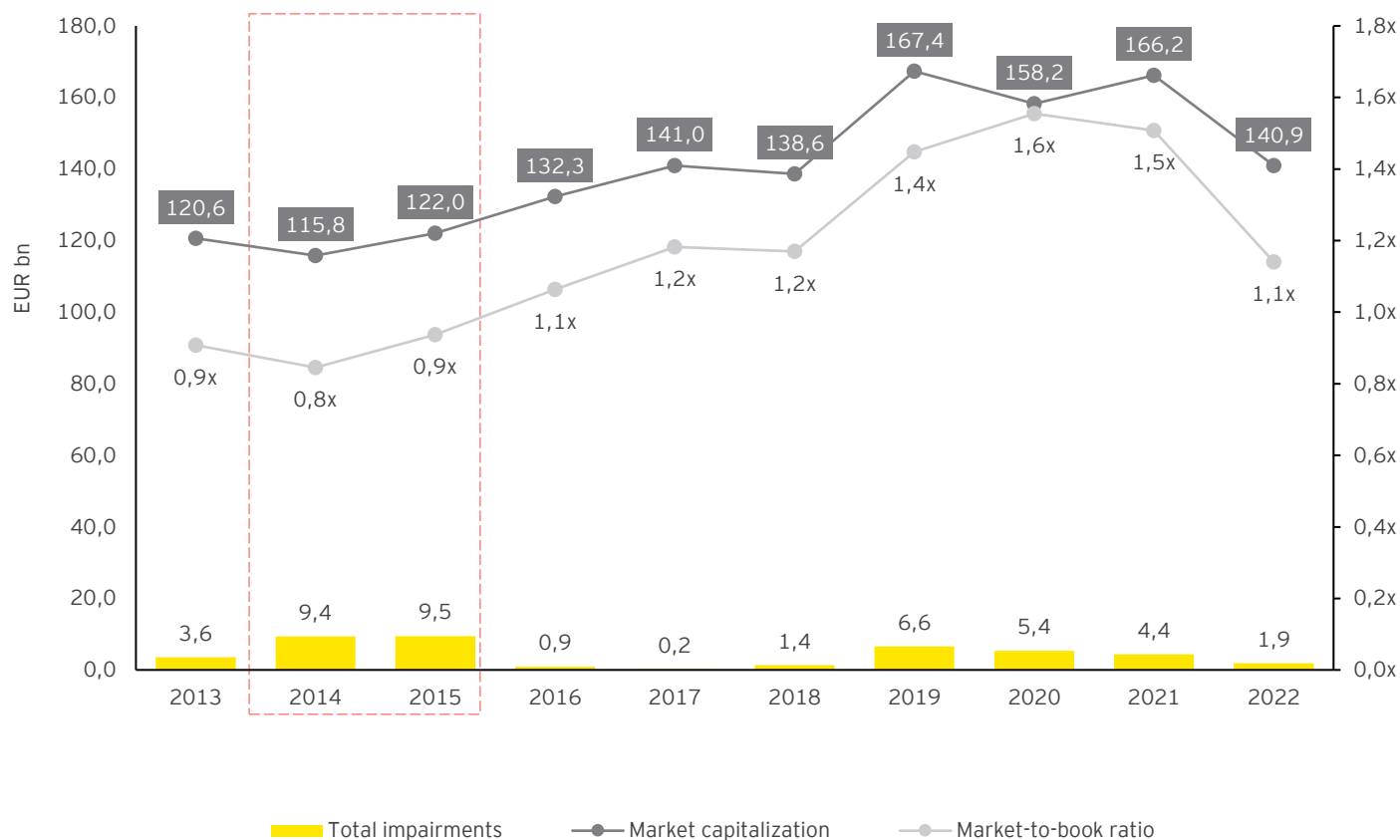
- ▶ Financial services sector was significantly impacted by European debt crisis, resulting in the increase in reporting of total impairment
 - ▶ In 2013, market capitalization (EUR 102,0bn) and market-to-book ratio (0,7x) reached a minimum, while impairment was at its peak on 2013 at EUR 12,8bn
- ▶ Goodwill impairment reported by Financial companies, which decreased after the financial crisis 2011-2013, increased from 2,9% in 2019 to 87,8% in 2020, due to Covid-19 crisis

* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment

FTSE MIB Energy sector

The decline in global oil prices lead to an increase in asset write-down

Energy sector impairment vs. Market cap. and Market-to-book



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Goodwill impairment	20,8%	2,1%	0,0%	3,8%	23,7%	3,2%	1,3%	5,1%	0,5%	7,9%
Asset writedown	79,2%	97,9%	100,0%	96,2%	76,3%	96,8%	98,7%	94,9%	99,5%	92,1%

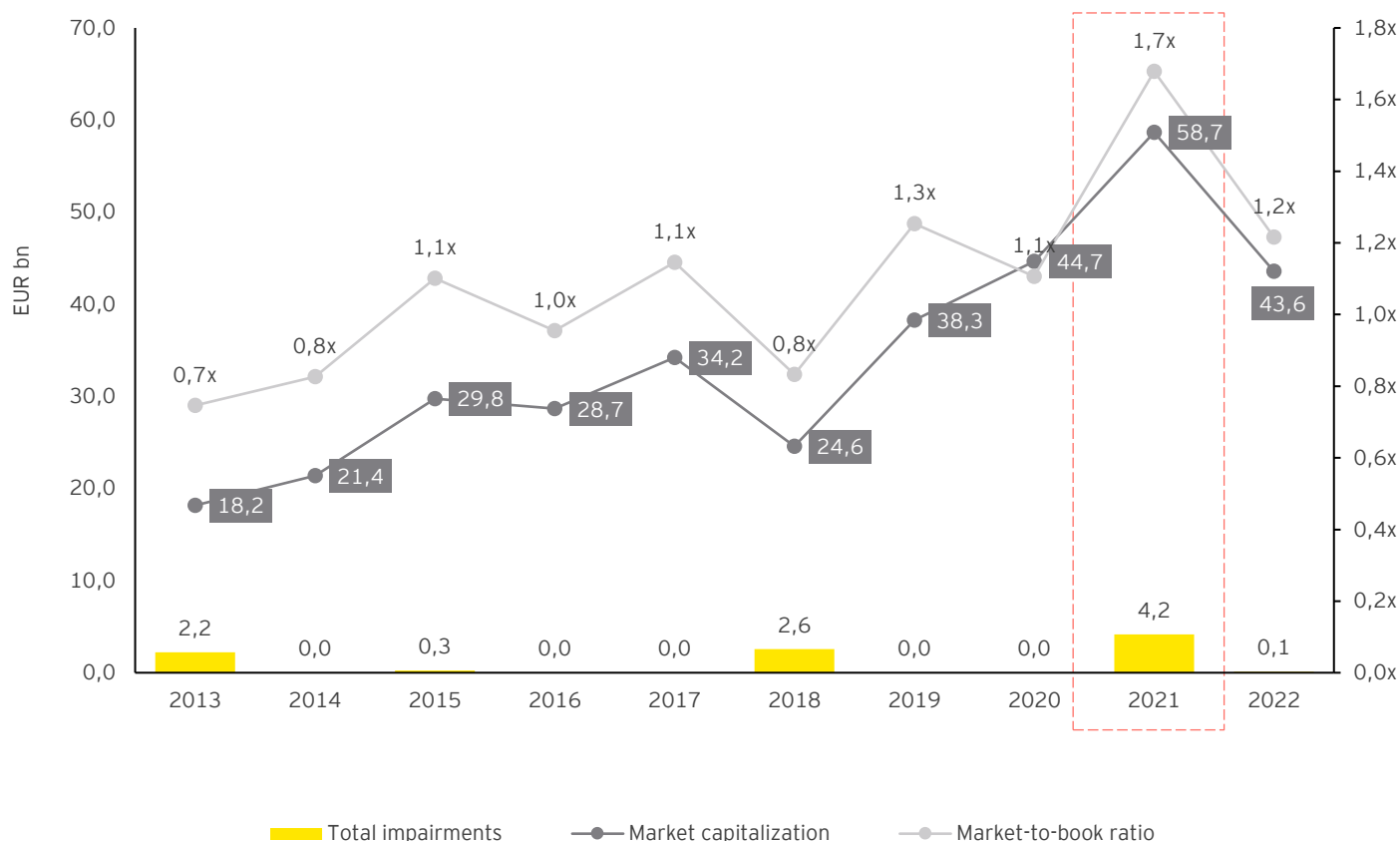
- ▶ Due to the decline in oil prices in 2014, the O&G companies significantly increased their asset write-down
- ▶ In energy sector, goodwill impairment was lower than asset write-down: on average, over the last 10 years, 93,2% of impairment stems from asset write-down
- ▶ In 2015, O&G companies reported the highest total impairment of EUR 9,5bn due to asset write-down of EUR 9,45bn deriving from top three companies
- ▶ Total impairment decreased to EUR 1,9bn in 2022 from EUR 3,6bn in 2013

* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment

FTSE MIB TMT sector

Significant impairment have been registered in 2013, 2018 and 2021, and are mainly related to one company

TMT sector impairment vs. Market cap. and Market-to-book



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Goodwill impairment	99,3%	0,0%	91,7%	0,0%	0,0%	99,9%	0,0%	0,0%	99,2%	0,0%
Asset writedown	0,7%	100,0%	8,3%	100,0%	100,0%	0,1%	100,0%	100,0%	0,8%	100,0%

- ▶ Out of 3 TMT companies, one company has reported impairment throughout the whole period except for 2019 and 2022
- ▶ Market capitalization increased between 2013 and 2021 (except for 2016 and 2018). The market capitalization of 2022 is lower than the 2021, respectively EUR 58,7bn and 43,6bn
- ▶ Market capitalization and Market-to-book ratio declined in 2018. The highest market-to-book ratio have been registered in 2021 (1,7x) so as the Market capitalization.

* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment



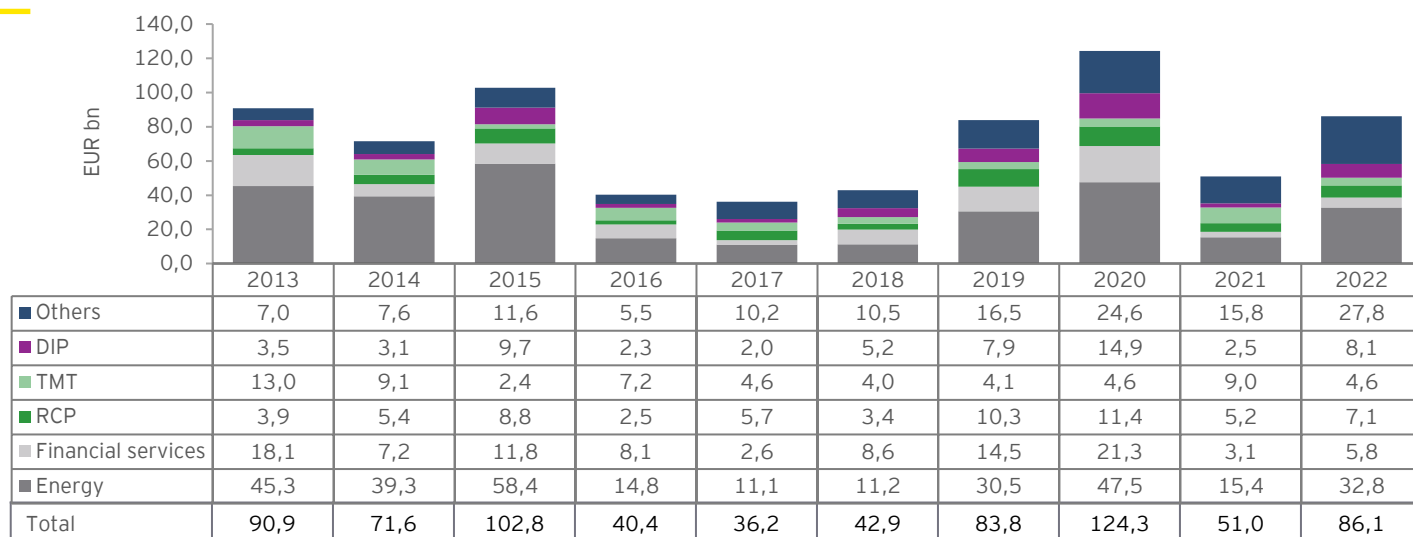
12.

MSCI Europe impairment by sector

MSCI Europe impairment by sector

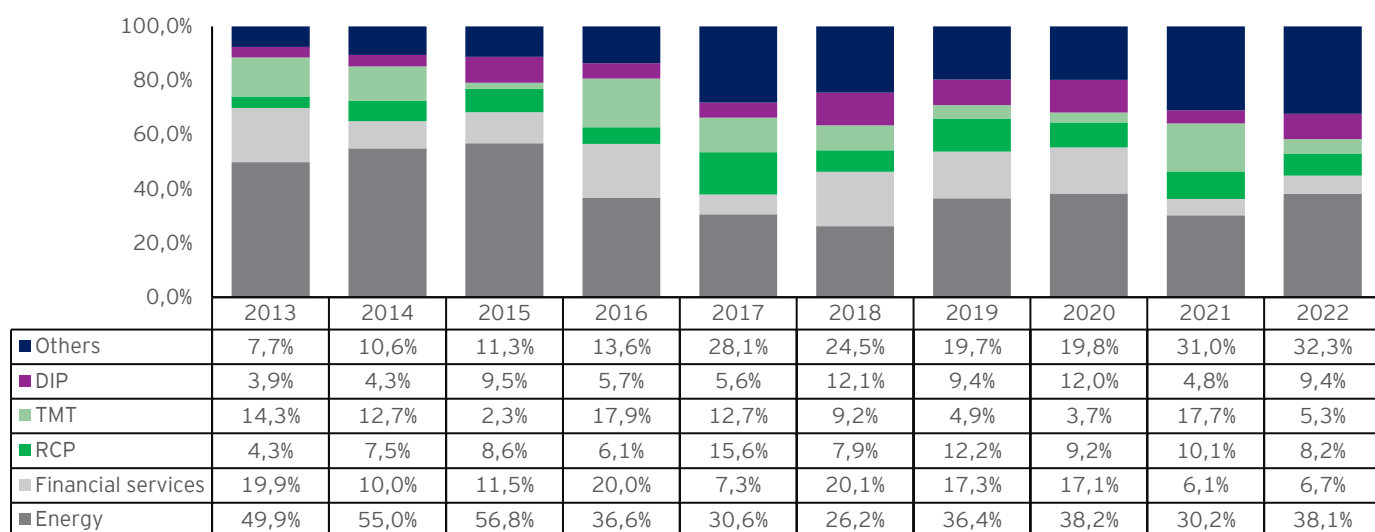
Average 38,1% of total impairment reported by energy

Total impairment by sector



- ▶ Energy sector reported highest impairment followed by Financial services from 2013 to 2020
- ▶ Energy sector reported highest impairment in 2015 due to decline in crude oil prices while Financial services sector reported its highest impairment in 2020 and TMT Sector in 2021, due to the COVID crisis
- ▶ 55,6% of total impairment in 2022 is reported by Energy, DIP, and RCP sectors
 - ▶ Energy sector impairment was 38,1% of total impairment in 2022 with EUR 32,8bn
 - ▶ DIP sector impairment was 9,4% of total impairment in 2022 with EUR 8,1bn
 - ▶ RCP sector impairment was 8,2% of total impairment in 2022 with EUR 7,1bn

Total impairment composition by sector



* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment

MSCI Europe impairment by sector

On average % of companies reporting impairment, except Automotive and TMT, increased during 2013 to 2022 period

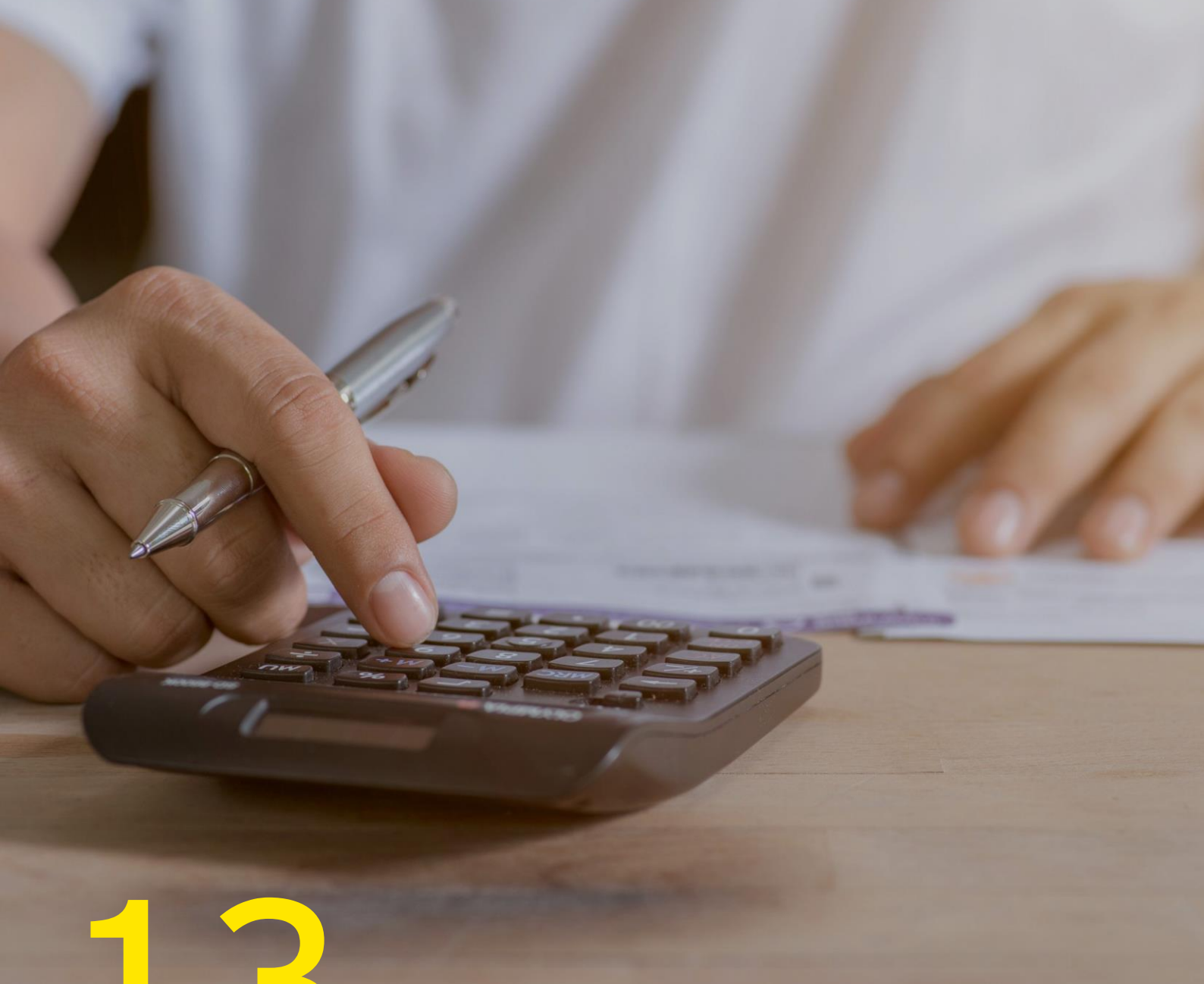
% of companies reporting impairment by sector

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Automotive	54,5%	36,4%	27,3%	27,3%	36,4%	36,4%	27,3%	27,3%	36,4%	27,3%
DIP	52,0%	60,0%	56,0%	54,7%	52,0%	50,7%	53,3%	64,0%	53,3%	60,0%
Energy	72,5%	75,0%	72,5%	70,0%	75,0%	72,5%	75,0%	70,0%	65,0%	75,0%
Financial services	54,1%	54,1%	52,7%	58,1%	45,9%	48,6%	55,4%	56,8%	56,8%	55,4%
Healthcare	42,9%	35,7%	35,7%	45,2%	50,0%	40,5%	45,2%	52,4%	59,5%	64,3%
Infrastructure	36,1%	27,8%	33,3%	36,1%	33,3%	36,1%	50,0%	61,1%	36,1%	44,4%
Professional Services	30,8%	30,8%	35,9%	30,8%	41,0%	43,6%	51,3%	51,3%	53,8%	51,3%
RCP	49,2%	57,1%	55,6%	49,2%	49,2%	50,8%	52,4%	63,5%	58,7%	61,9%
TMT	59,5%	48,6%	54,1%	62,2%	40,5%	54,1%	51,4%	54,1%	40,5%	48,6%

% of companies reporting impairment increased for almost all sectors during 2013 to 2022 period

- ▶ % of Automotive companies reporting impairment decreased from 54,5% in 2013 to 27,3% in 2022;
- ▶ % of DIP companies reporting impairment increased from 52,0% in 2013 to 60,0% in 2022, reaching the peak in 2020 (64,0%);
- ▶ % of Energy companies reporting impairment increased from 72,5% in 2013 to 75,0% in 2022. The negative peak have been registered in 2020 (65,0%);
- ▶ % of Financial services companies reporting impairment increased from 54,1% in 2013 to 55,4% in 2022. During 2017 and 2018 the % decrease respectively to 45,9% and 48,6%, while increasing for the rest of the period;
- ▶ % of Healthcare companies reporting impairment increased from 42,9% in 2013 to 64,3% in 2022, the only decrease have been registered in 2014 and 2015;
- ▶ % of Infrastructure companies reporting impairment increased from 36,1% in 2013 to 44,4% in 2022. The peak was registered in 2020 and was equal to 61,1%;
- ▶ % of Professional services companies reporting impairment increased from 30,8% in 2013 to 51,3% in 2022, with a peak of 53,8% in 2021;
- ▶ % of RCP companies reporting impairment increased from 49,2% in 2013 to 61,9% in 2022, with a peak of 63,5% in 2020;
- ▶ % of TMT companies reporting impairment decreased from 59,5% in 2013 to 48,6% in 2022. The percentage values in the period go throw a minimum of 40,5% in 2017 and 2021 to a maximum in 2016.

* FTSE MIB companies by sector covered as FTSE AIM companies reported negligible impairment



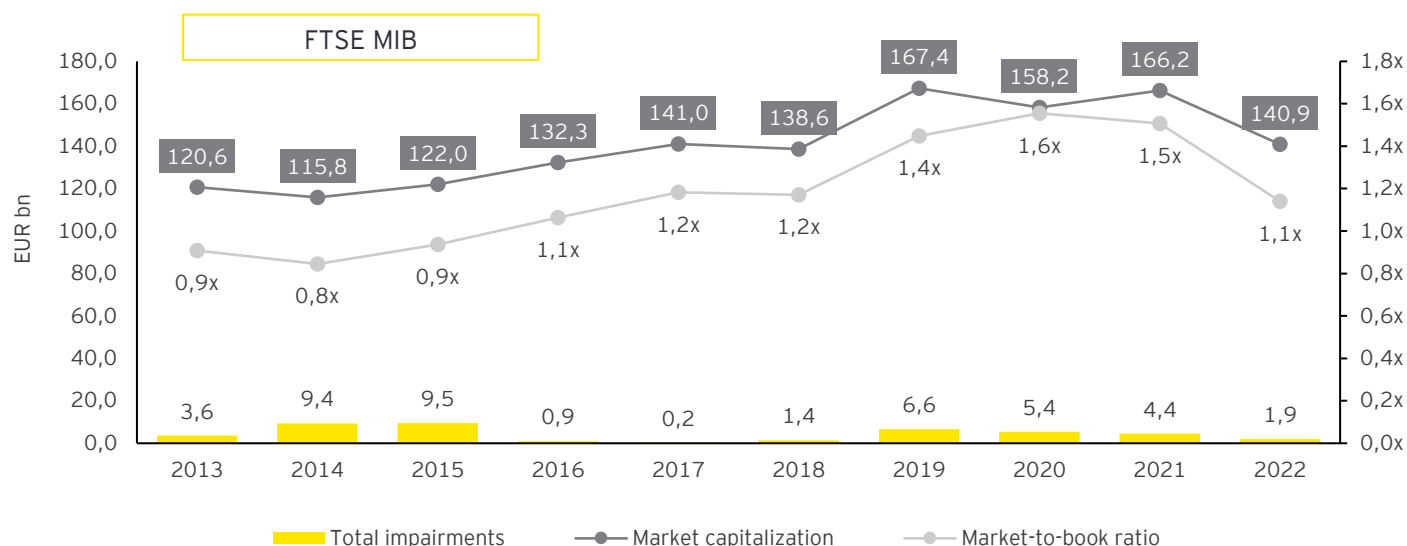
13.

FTSE MIB vs. MSCI Europe by sector

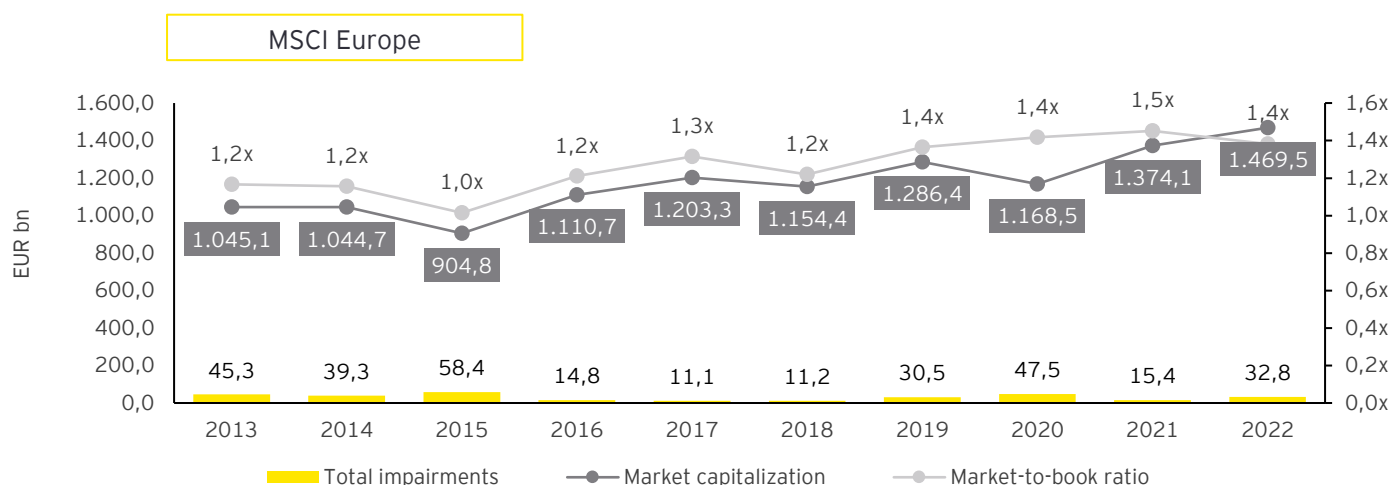
FTSE MIB vs. MSCI Europe (Energy sector)

Decline in oil prices in 2015 increased the asset write-down by major upstream O&G companies

Energy sector impairment vs. Market cap. and Market-to-book



- ▶ In the last 10 years, more than 89,5% of impairment derived from asset write-down for MSCI Europe and 93,2% for FTSE MIB
- ▶ Due to the decline in oil prices in 2014, the O&G companies recorded increasing asset write-down
- ▶ Top 3 FTSE MIB energy companies reported highest total impairment in 2015;
- ▶ In 2022, in MSCI Europe, 69,9% of total impairment was recorded by top 3 companies
- ▶ In 2022, in FTSE MIB, 98,2% of total impairment was recorded by top 3 companies
- ▶ Covid-19 crisis determined a decrease in market cap for both FTSE MIB and MSCI Europe Energy companies in 2020 while determined an increase in 2021 due to the rebound of the economy
- ▶ In 2022 there is a decrease of the three indicators in FTSE MIB while the in MSCI Europe there is an increase in market cap. and impairment and a decrease of market to book ratio

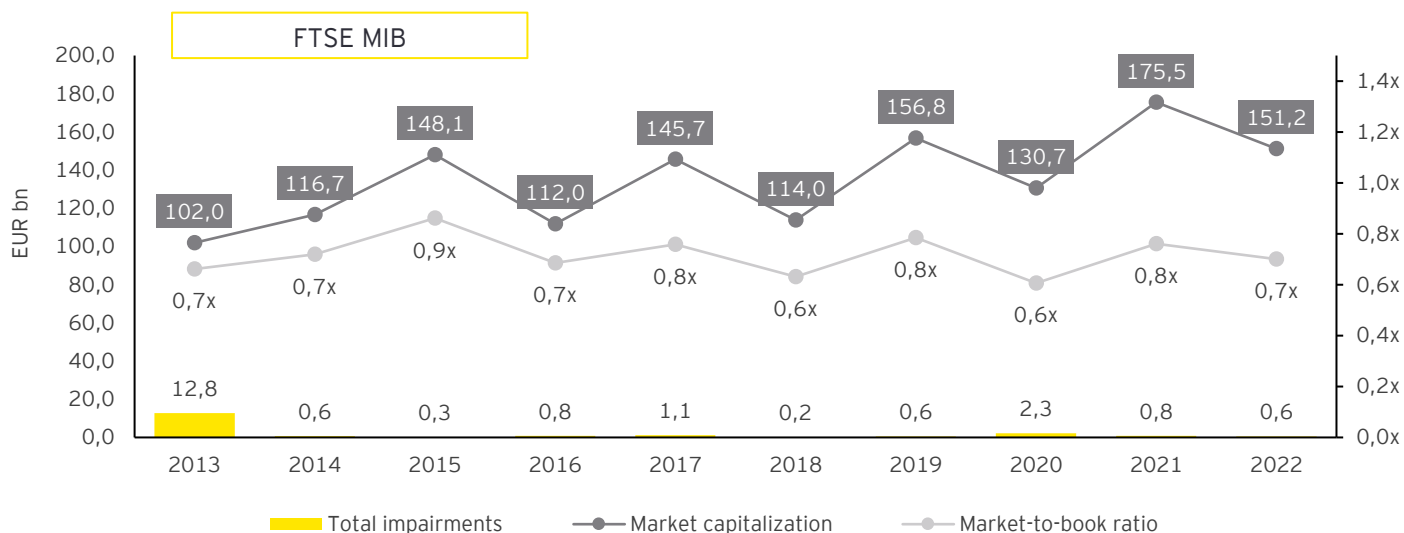


* FTSE MIB companies by sector compared with MSCI Europe as FTSE AIM companies reported negligible impairment

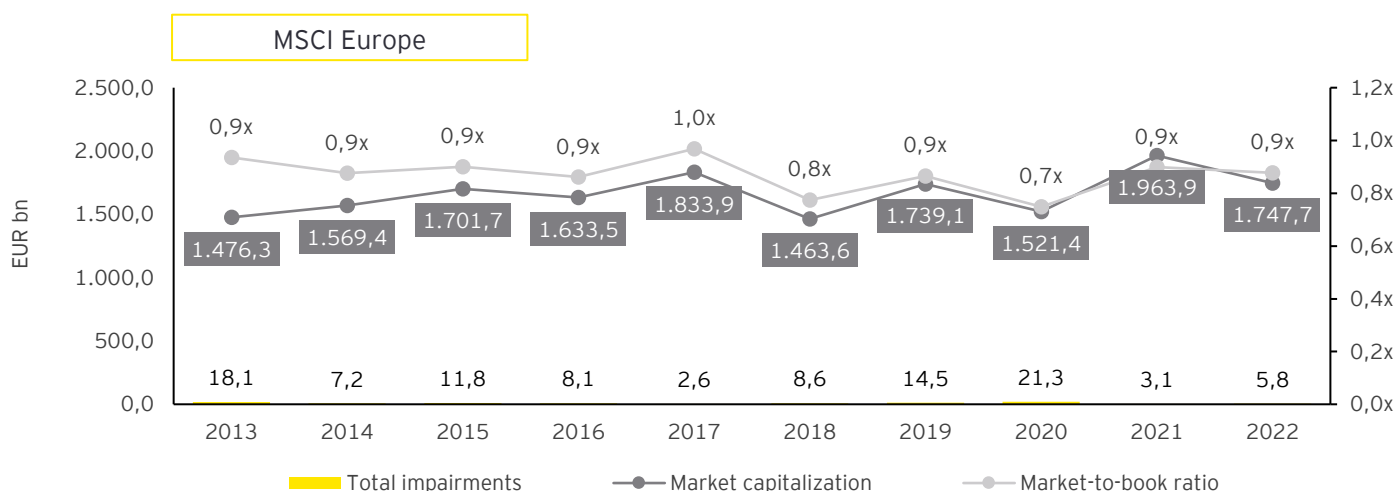
FTSE MIB vs. MSCI Europe (Financial sector)

Impairment was high in 2013 and 2020 due to financial market crisis and Covid-19 crisis

Financial services sector impairment vs. Market cap. and Market-to-book



- ▶ For FTSE MIB, market capitalization and market-to-book ratio increased from a minimum of EUR 102,0bn and 0,7x, respectively in 2013 to EUR 175,5bn and 0,8x, respectively in 2021
- ▶ For MSCI Europe, total impairment was highest in 2020, with EUR 21,3bn
- ▶ Top 3 financial companies reported significant total impairment in 2022:
 - ▶ In MSCI Europe, 61,6% of total impairment was recorded by top 3 companies
 - ▶ In FTSE MIB, 60,9% of total impairment was recorded by top 3 companies
 - ▶ Both for MSCI Europe and FTSE MIB Financial services companies the impact of Covid-19 crisis lead to a decrease in Market capitalization and increase of total impairment in 2020, while determined an increase in 2021 due to the rebound of the economy
 - ▶ In 2022 there is a decrease of the three indicators in FTSE MIB while the in MSCI Europe there is an increase in of impairment and a decrease of market to book ratio and market cap.

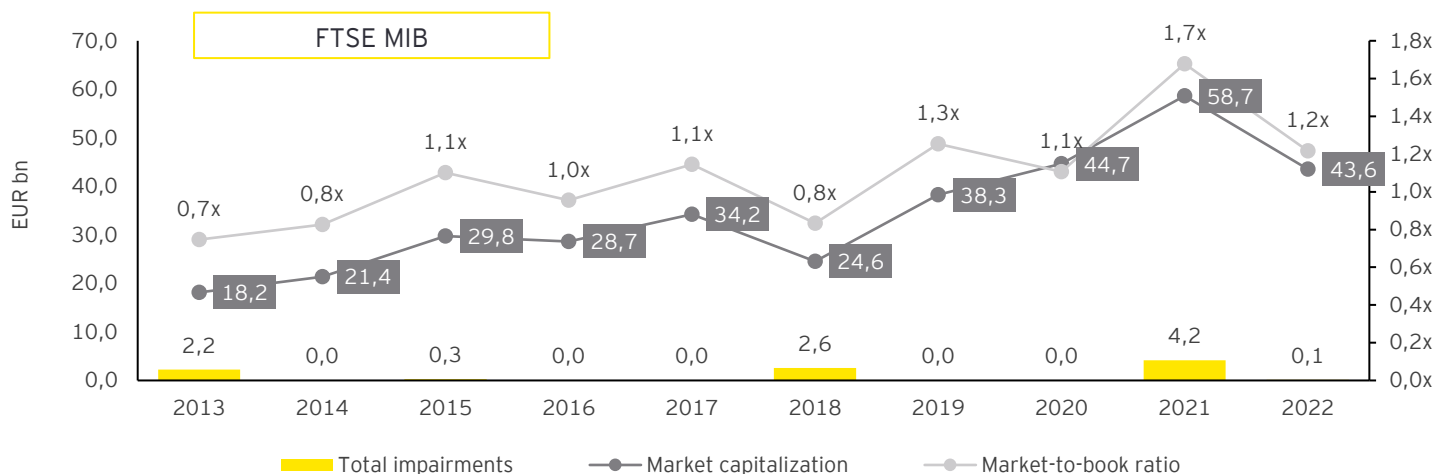


* FTSE MIB companies by sector compared with MSCI Europe as FTSE AIM companies reported negligible impairment

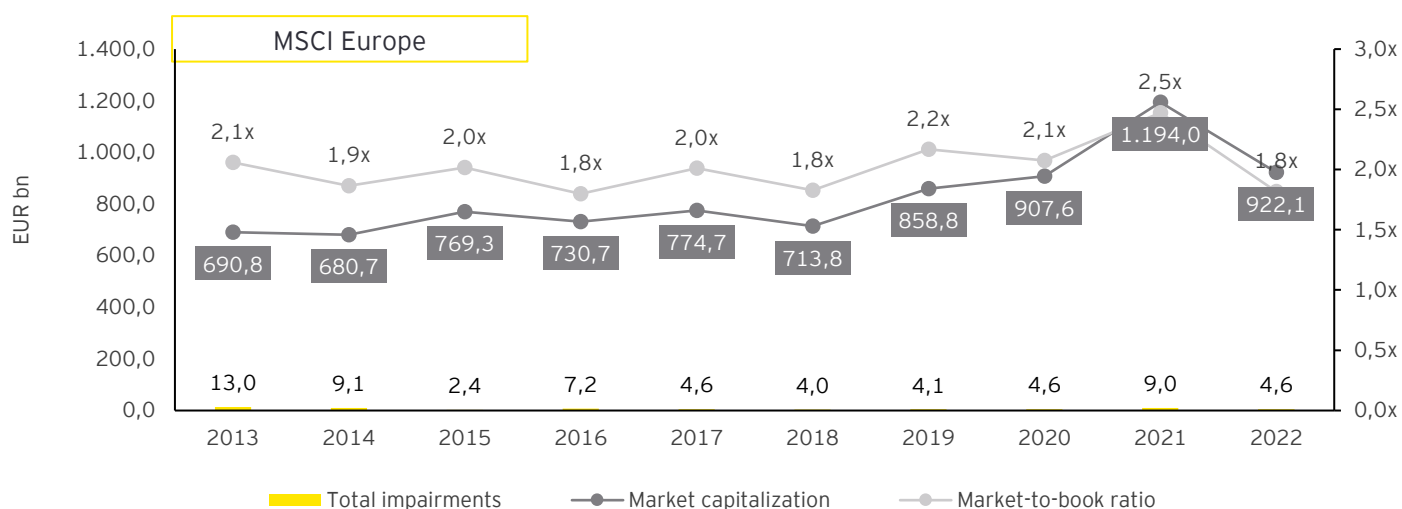
FTSE MIB vs. MSCI Europe (TMT sector)

Major telecom companies reported impairment during the 2013 and 2021

TMT sector impairment vs. Market cap. and Market-to-book



- ▶ One company of FTSE MIB has reported impairment throughout all the period except in 2019 and 2022
- ▶ Due to financial market crisis, the total impairment for FTSE MIB and MSCI Europe was high in 2013 and 2018, and again in 2021 for covid-19 crisis
- ▶ For MSCI Europe, total impairment during 2013-2014 period was amongst highest due to the European debt market crisis and again in 2021 for covid-19 crisis
 - ▶ Total impairment was highest in 2013 being EUR 13,0bn
- ▶ Top 3 financial companies reported highest total impairment in 2022;
 - ▶ In MSCI Europe, 84,9% of total impairment was recorded by top 3 companies
 - ▶ In FTSE MIB, 100,0% of total impairment was recorded by top 3 companies
- ▶ In 2022 there is a decrease of the three indicators in FTSE MIB and in MSCI Europe



* FTSE MIB companies by sector compared with MSCI Europe as FTSE AIM companies reported negligible impairment



14.

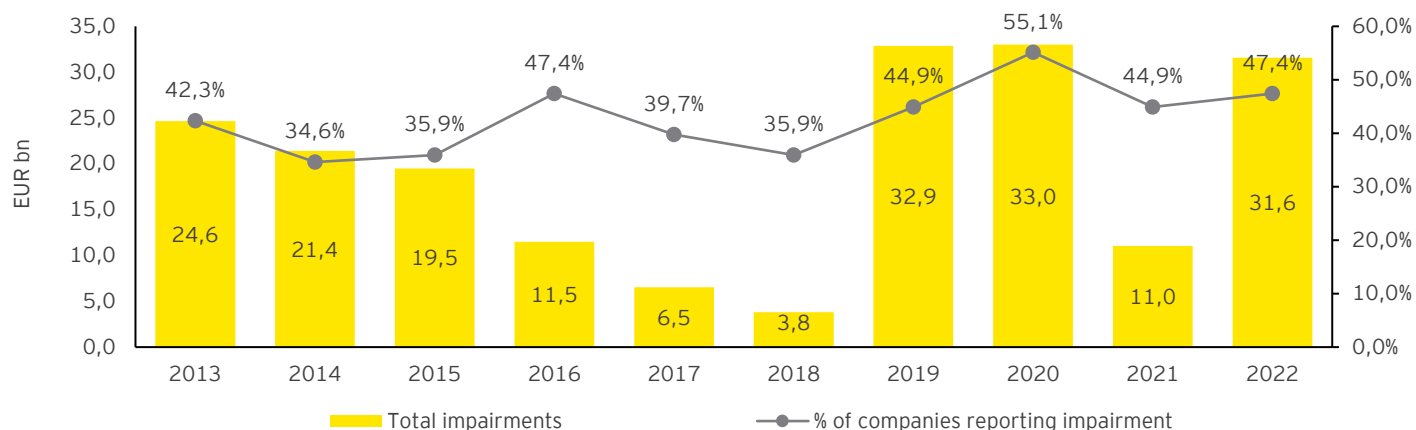
MSCI Europe by country

MSCI Europe by country: United Kingdom

Average of 42,8% n° of UK companies reported impairment during 2013-2022, 47,4% in 2022



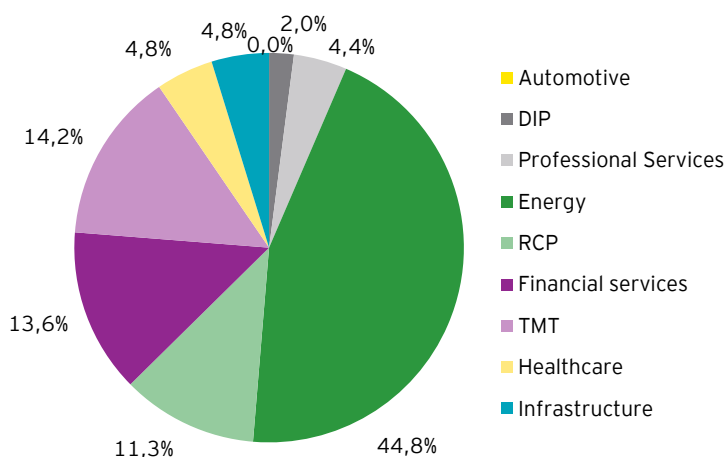
United Kingdom: 78 companies



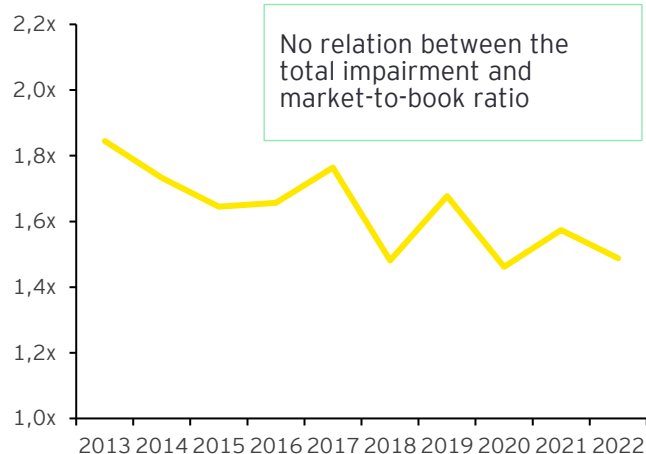
In 2022, top 3 companies based on total impairment reported 69,7% of total impairment of 2022 impairment

59,2% of total impairment reported by the top 3 companies during 2013-2022

2013-2022 total impairment by sector



Market-to-book ratio



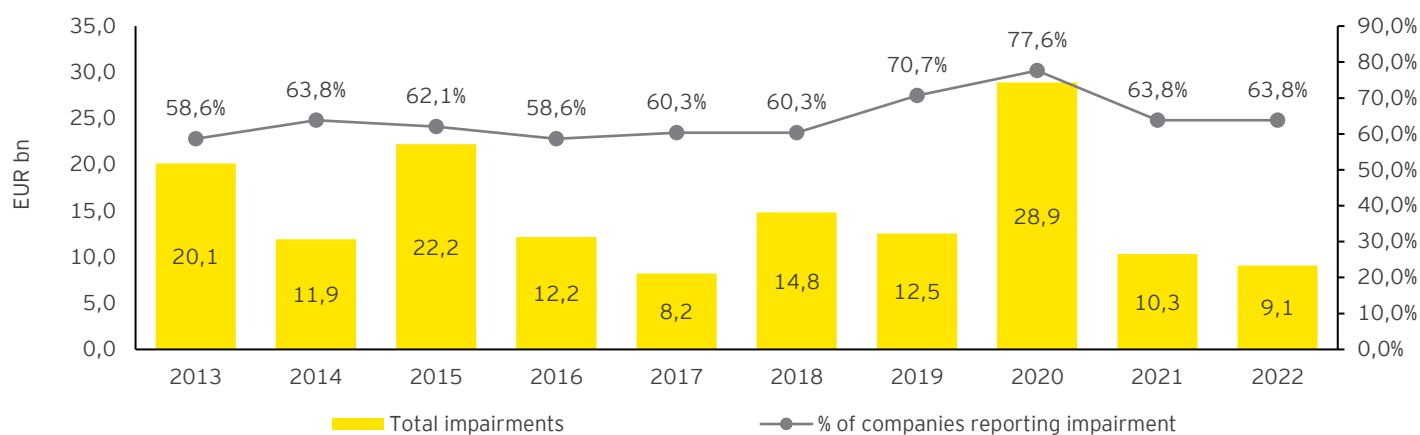
No relation between the total impairment and market-to-book ratio

MSCI Europe by country: France

Average of 64,0% n° of French companies reported impairment during 2013-2022, 63,8% in 2022



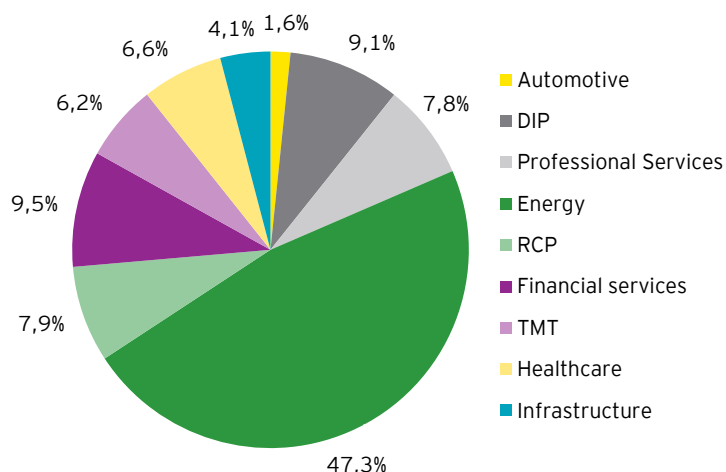
France: 58 companies



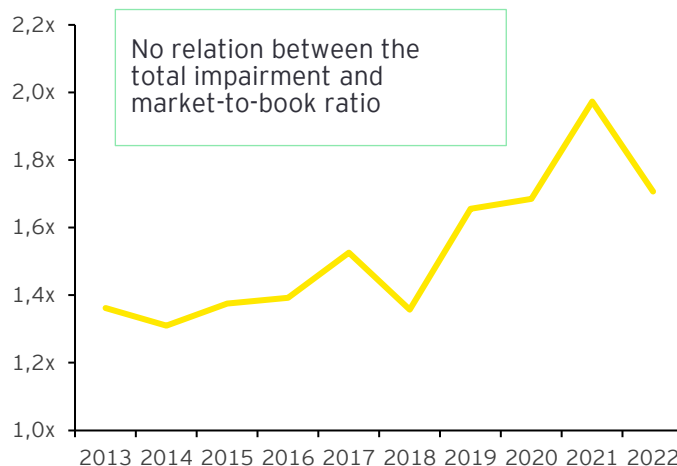
In 2022, top 3 companies based on total impairment reported 48,9% of total impairment of 2022 impairment

63,7% of total impairment reported by the top 3 companies during 2013-2022

2013-2022 total impairment by sector



Market-to-book ratio



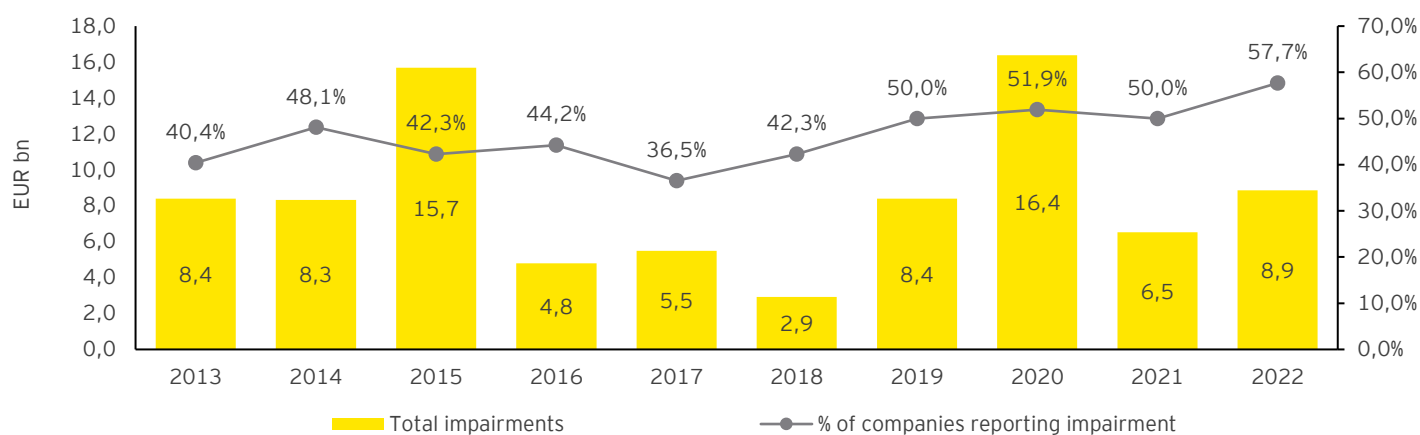
No relation between the total impairment and market-to-book ratio

MSCI Europe by country: Germany

Average of 46,3% n° of German companies reported impairment during 2013-2022, 57,7% in 2022



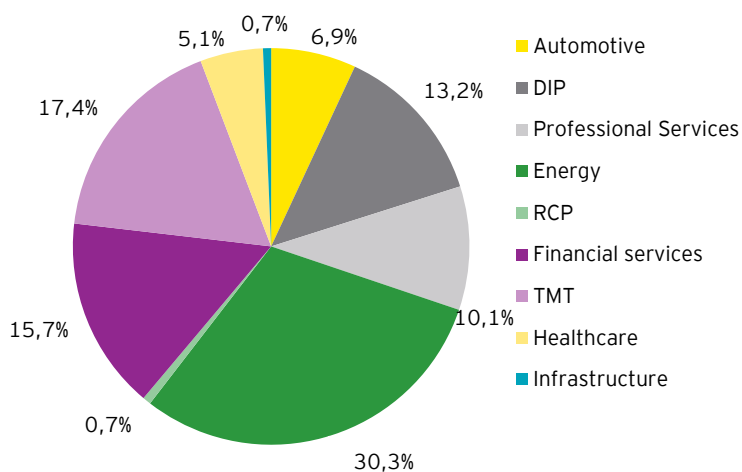
Germany: 52 companies



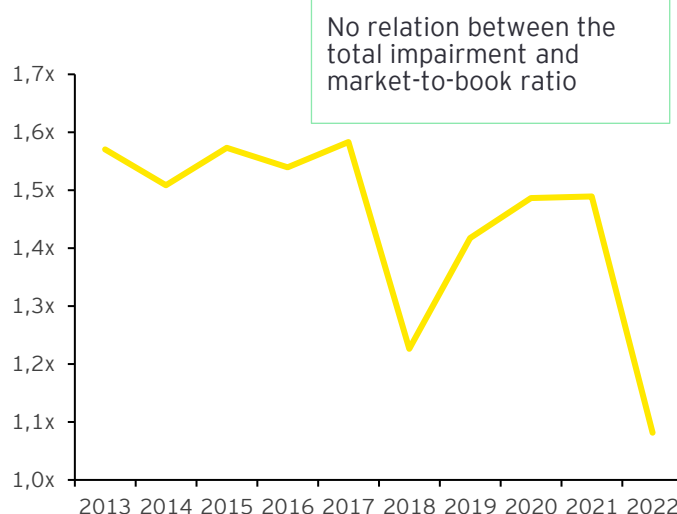
In 2022, top 3 companies based on total impairment reported 48,5% of total impairment of 2022 impairment

71,4% of total impairment reported by the top 3 companies during 2013-2022

2013-2022 total impairment by sector



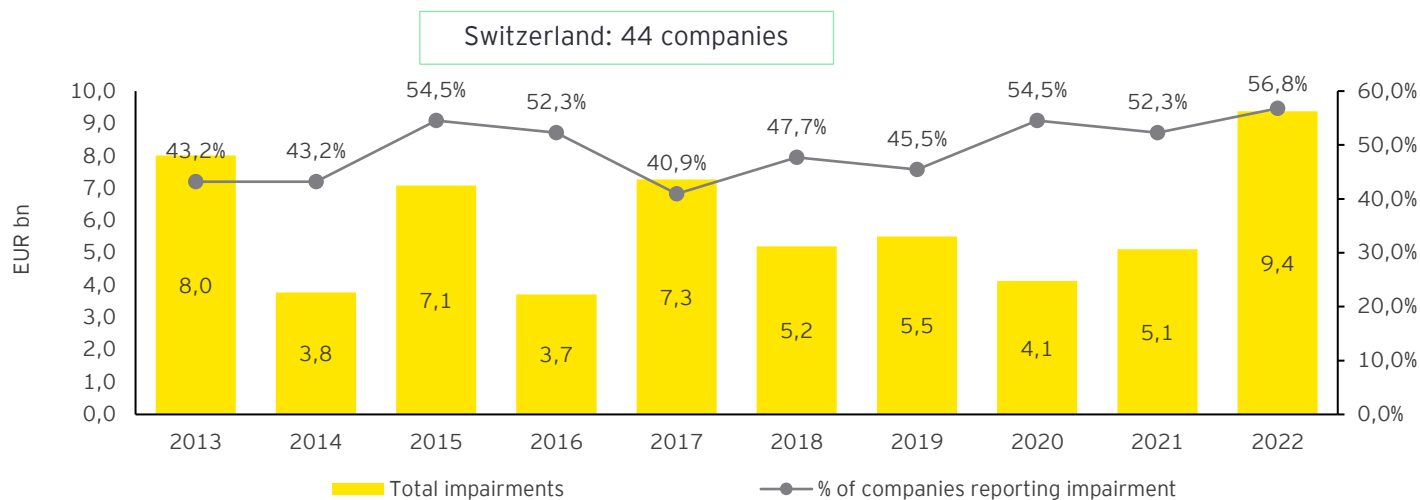
Market-to-book ratio



No relation between the total impairment and market-to-book ratio

MSCI Europe by country: Switzerland

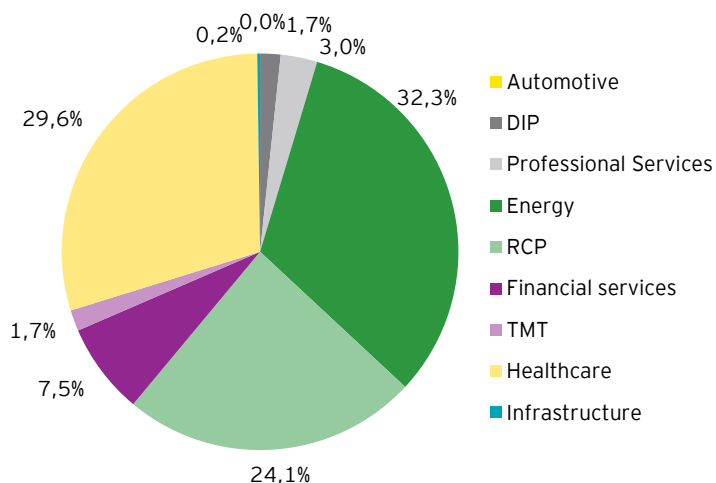
Average of 49,1% n° of Swiss companies reported impairment during 2013-2022, 56,8% in 2022



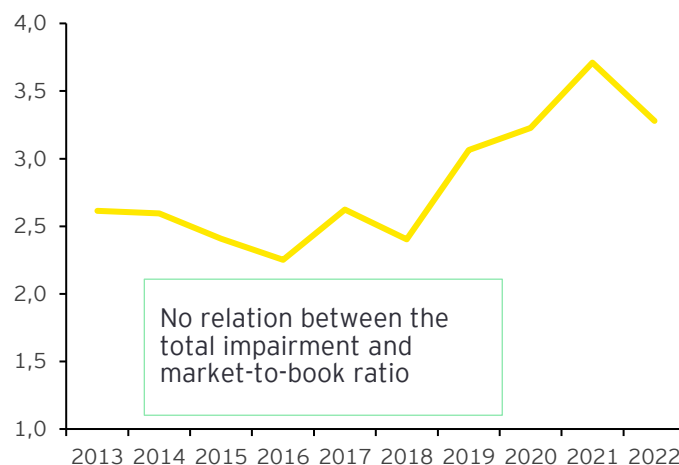
In 2022, top 3 companies based on total impairment reported 78,3% of total impairment of 2022 impairment

84,7% of total impairment reported by the top 3 companies during 2013-2022

2013-2022 total impairment by sector



Market-to-book ratio





15.

Glossary

Glossary

000	Thousands
Avg	Average
CAGR	Compound annual growth rate
CGU	Cash Generating Unit
DIP	Diversified Industrial Products
EUR m	Euro Million
EUR bn	Euro Billion
EBT	Earnings Before Taxes
Excl	Excluded
FY	Financial Year
IAS	International Accounting Standard
Market cap	Market capitalization
Max	Maximum
Min	Minimum
n°	Number
O&G	Oil and Gas
RCP	Retail Consumer Products
TMT	Technology Media and Telecommunications
Total impairment	Impairment of both Assets and Goodwill
vs.	Versus
Yrs	Years
WACC	Weighted Average Cost of Capital
#	Number

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