Financial statements

Consolidated income statement

Thousands of Euros	Notes	2021	2022
Turnover	F9	24,054,439	**25,435,523**
Other operating income	F9	176,919	**184,552**
Operating income		**24,231,358**	**25,620,075**
Raw materials and consumables	F9	(21,644,346)	**(22,875,549)**
Payroll and related benefits	F10	(853,140)	**(906,507)**
Depreciation and impairments	F9	(338,777)	**(328,382)**
Other operating expenses	F9	(517,313)	**(696,621)**
Operating expenses		**(23,353,576)**	**(24,807,059)**
Income (loss) from other financial assets	F12	1,156	**5,651**
RESULT FROM OPERATING ACTIVITIES		**878,938**	**818,667**
Financial income	F11	13,904	**7,279**
Financial expenses	F11	(80,716)	**(101,719)**
Foreign exchange gains and losses	F11	(23,480)	**(27,699)**
Share in result of companies accounted for using the equity method	F17	17,347	**13,473**
PROFIT (LOSS) BEFORE INCOME TAX		**805,993**	**710,001**
Income taxes	F13	(179,044)	**(137,600)**
PROFIT (LOSS) FROM CONTINUING OPERATIONS		**626,949**	**572,401**
Profit (loss) of the period		626,949	**572,401**
of which minority share		7,990	**2,523**
of which Group share		618,959	**569,878**

(EUR)			
Basic earnings per share from continuing operations	F39	2.57	**2.37**
Diluted earnings per share from continuing operations	F39	2.56	**2.37**
Dividend payout per share		0.75	**0.80**

The notes F1 (p. 157) through Parent company separate summarized financial statements (p. 223) are an integral part of these consolidated financial statements.

Consolidated statement of comprehensive income

Thousands of Euros	Notes	2021	2022
Profit (loss) of the period from continuing operations		**626,949**	**572,401**
Items in other comprehensive income that will not be reclassified to P&L			
Changes due to remeasurements of post employment benefit obligations		46,007	**92,628**
Changes in deferred taxes directly recognized in other comprehensive income		(11,838)	**(26,239)**
Items in other comprehensive income that may be subsequently reclassified to P&L			
Changes in financial assets at FV through OCI reserves		43	**8,047**
Changes in cash flow hedge reserves		65,732	**(49,428)**
Changes in deferred taxes directly recognized in other comprehensive income		(19,811)	**11,202**
Changes in currency translation differences		86,663	**18,863**
Other comprehensive income from continuing operations	F23	**166,796**	**55,073**
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		**793,745**	**627,474**
of which Group share		784,177	**627,018**
of which minority share		9,568	**456**

The deferred tax impact on the consolidated statement of comprehensive income is due to changes in the cash flow hedge reserves for € 11.2 million and in the employee benefit reserves for € -26.2 million.

The movements on exchange differences are mainly related to the strengthening of the USD (€ 20.3 million) and BRL (€ 17.2 million) and weaker CNY (-13.2 million) and PLN (-9.2 million) compared to EUR.

The notes F1 (p. 157) through Parent company separate summarized financial statements (p. 223) are an integral part of these consolidated financial statements.

Consolidated balance sheet

Thousands of Euros	Notes	31/12/2021	31/12/2022
Non-current assets		**3,102,769**	**3,394,075**
Intangible assets	F14, F15	339,848	**343,366**
Property, plant and equipment	F16	2,351,133	**2,532,301**
Investments accounted for using the equity method	F17	155,140	**158,943**
Financial assets at fair value through Other Comprehensive Income	F18	14,120	**22,165**
Loans granted	F18	2,608	**2,592**
Trade and other receivables	F20	20,672	**18,712**
Deferred tax assets	F21	219,248	**315,996**
Current assets		**5,942,472**	**6,548,297**
Loans granted	F18	169	**1,273**
Inventories	F19	2,869,071	**3,393,674**
Trade and other receivables	F20	1,832,033	**1,830,540**
Income tax receivables	F21	46,762	**82,941**
Cash and cash equivalents	F22	1,194,437	**1,239,869**
TOTAL ASSETS		**9,045,241**	**9,942,372**

Thousands of Euros	Notes	31/12/2021	31/12/2022
Equity of the Group		**3,167,274**	**3,566,050**
Group shareholders' equity		3,112,882	**3,516,481**
Share capital and premiums		1,384,273	**1,384,273**
Retained earnings		2,151,292	**2,526,051**
Currency translation differences and other reserves	F23	(196,370)	**(127,887)**
Treasury shares		(226,313)	**(265,956)**
Minority interest		54,392	**49,569**
Non-current liabilities		**2,398,400**	**2,242,010**
Provisions for employee benefits	F27	387,206	**286,476**
Financial debt	F24	1,724,037	**1,626,179**
Trade and other payables	F25	47,361	**48,037**
Deferred tax liabilities	F21	24,294	**30,029**
Provisions	F29, F30	215,502	**251,289**
Current liabilities		**3,479,567**	**4,134,312**
Financial debt	F24	430,847	**717,259**
Trade and other payables	F25	2,807,966	**3,110,059**
Income tax payable	F21	197,488	**261,950**
Provisions	F29, F30	43,266	**45,044**
TOTAL EQUITY & LIABILITIES		**9,045,241**	**9,942,372**

The notes F1 (p. 157) through Parent company separate summarized financial statements (p. 223) are an integral part of these consolidated financial statements.

Consolidated statement of changes in equity

Thousands of Euros	Share capital & premiums	Reserves	Currency translation & other reserves	Treasury shares	Minority interest	Total for continuing operations
Balance at the beginning of 2021	**1,384,273**	**1,749,655**	**(367,825)**	**(208,921)**	**64,674**	**2,621,856**
Result of the period	-	618,959	-	-	7,990	**626,949**
Other comprehensive income for the period	-	-	165,218	-	1,578	**166,796**
Total comprehensive income for the period	**-**	**618,959**	**165,218**	**-**	**9,568**	**793,745**
Changes in share-based payment reserves	-	-	14,255	-	-	**14,255**
Dividends	-	(180,530)	-	-	(6,008)	**(186,538)**
Transfers	-	1,137	(5,904)	4,767	-	**-**
Changes in treasury shares	-	-	-	(22,159)	-	**(22,159)**
Changes in scope	-	(37,929)	(2,115)	-	(13,841)	**(53,885)**
BALANCE AT THE END OF 2021	**1,384,273**	**2,151,292**	**(196,370)**	**(226,313)**	**54,392**	**3,167,274**
Result of the period	-	569,878	-	-	2,523	**572,401**
Other comprehensive income for the period	-	-	57,140	-	(2,067)	**55,073**
Total comprehensive income for the period	**-**	**569,878**	**57,140**	**-**	**456**	**627,474**
Changes in share-based payment reserves	-	-	11,824	-	-	**11,824**
Dividends	-	(192,057)	-	-	(5,310)	**(197,367)**
Transfers	-	(3,054)	(481)	3,535	-	**-**
Changes in treasury shares	-	-	-	(43,178)	-	**(43,178)**
Changes in scope	-	(8)	-	-	31	**23**
BALANCE AT THE END OF 2022	**1,384,273**	**2,526,051**	**(127,887)**	**(265,956)**	**49,569**	**3,566,050**

The legal reserve of €55.0 million which is included in the retained earnings is not available for distribution. The share capital of the Group as at 31 December 2022 was composed of 246,400,000 shares with no par value.

The changes in scope movements in 2021 are mainly related to the squeeze-out to acquire the remaining 8.8 % of the shares in Agosi (Allgemeine Gold- und Silberscheideanstalt AG, Germany) for € 53.9 million.

The notes F1 (p. 157) through Parent company separate summarized financial statements (p. 223) are an integral part of these consolidated financial statements.

Consolidated statement of cash flow

Thousands of Euros	Notes	2021	2022
Profit (loss) from continuing operations		626,949	**572,401**
Adjustments for profit of equity companies		(17,347)	**(13,473)**
Adjustment for non-cash transactions	F34	399,936	**411,803**
Adjustments for items to disclose separately or under investing and financing cashflows	F34	228,573	**206,570**
Change in working capital requirement	F34	167,154	**(342,166)**
Cashflow generated from operations		**1,405,265**	**835,135**
Dividend received		5,018	**12,153**
Tax paid during the period		(174,990)	**(216,063)**
Government grants received		23,287	**2,942**
Net operating cashflow	**F34**	**1,258,580**	**634,167**
Acquisition of property, plant and equipment	F16	(379,572)	**(458,859)**
Acquisition of intangible assets	F14	(36,854)	**(32,431)**
Acquisition in additional shareholdings in subsidiaries		(53,870)	**-**
Acquisition of financial assets	F18	(5,014)	**-**
New loans extended	F18	(170)	**(2,091)**
Sub-total acquisitions		**(475,480)**	**(493,381)**
Disposal of property, plant and equipment		1,994	**6,126**
Disposal of intangible assets		623	**59**
Disposal of subsidiaries and associates, net of cash disposed		1,417	**6,210**
Repayment of loans	F18	0	**212**
Sub-total disposals		**4,034**	**12,607**
Net cashflow generated by (used in) investing activities	**F34**	**(471,446)**	**(480,774)**

Thousands of Euros	Notes	2021	2022
Own shares		(22,159)	**(43,178)**
Payment of lease liabilities	F24	(19,534)	**(20,050)**
Interest received		12,098	**3,913**
Interest paid		(54,510)	**(70,164)**
New loans and repayments	F24	(331,718)	**214,599**
Dividends paid to Umicore shareholders		(180,537)	**(192,053)**
Dividends paid to minority shareholders		(6,007)	**(5,595)**
Net cashflow generated by (used in) financing activities	**F34**	**(602,367)**	**(112,528)**
Effect of exchange rate fluctuations		(20,081)	**14,155**
TOTAL NET CASHFLOW OF THE PERIOD		**164,686**	**55,020**
Net cash and cash equivalents at the beginning of the period for continuing operations	F22	**1,001,630**	**1,166,316**
Net cash and cash equivalents at the end of the period for continuing operations	F22	**1,166,316**	**1,221,335**
of which cash and cash equivalents		1,194,437	**1,239,869**
of which bank overdrafts		(28,122)	**(18,534)**

The notes F1 (p. 157) through Parent company separate summarized financial statements (p. 223) are an integral part of these consolidated financial statements.

Notes of the financial statements

General information about the financial statements

The company's consolidated financial statements and the management report prepared in accordance with article 3:33 of the Belgian Companies and Associations Code set forth in the sections labelled About us (p. 27) through Management Responsibility Statement (p. 225) for the year ended 31 December 2022 were authorized for issue by the Supervisory Board on 10 March 2023. They have been prepared in accordance with the legal and regulatory requirements applicable to the consolidated financial statements of Belgian companies. They include those of the company, its subsidiaries and its interests in companies accounted for using the equity method.

F1 Basis of preparation

The Group presents its annual consolidated financial statements in accordance with all International Financial Reporting Standards (IFRS) adopted by the European Union (EU).

The consolidated financial statements are presented in thousands of euros, rounded to the nearest thousand, and have been prepared on a historical cost basis, except for those items that are measured at fair value.

Umicore is a Société Anonyme - Naamloze vennootschap company with its registered office in Brussels, Belgium at Rue du Marais 31 (Broekstraat 31) B - 1000 Brussels (Belgium) and has following LEI code 529900F3AIQECS8ZSV61 .
Umicore operates its business from Belgium. Umicore NV-SA is the ultimate parent company of the Umicore Group.
Umicore Group did not change his name compared to previous year.

Umicore is the circular materials technology Group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Its activities are organised in three business groups: Catalysis, Energy & Surface Technologies and Recycling. Each business group is divided into market-focused business units offering materials and solutions that are at the cutting edge of new technological developments and essential to everyday life. Umicore generates the majority of its revenues and dedicates most of its R&D efforts to clean mobility materials and recycling. Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life. Umicore's industrial and commercial operations as well as R&D activities are located across the world to best serve its global customer base.

F2 Accounting policies

2.1 Principles of consolidation

2.1.1 Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control.

The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Note F5 lists all significant subsidiaries of the Group at the closing date.

The Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Group recognizes any minority interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the minority interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognized in profit or loss.

Any contingent consideration to be transferred by the Group is recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognized in profit or loss. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

Inter-company transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated. When necessary, amounts reported by subsidiaries have been adjusted to conform with the Group's accounting policies. The lines "other operating income" and "other financial income" of the income statement include, depending on the nature of the underlying transactions, the currency translation differences due to intercompany transactions to be translated from the transaction currency into functional currency which may differ from euro for some entities and regions.

IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations) does not specify the treatment for the elimination of inter-company transactions between discontinued and continued operations. As an accounting policy Umicore opts not to eliminate the intercompany transactions within the income statement between the discontinued and continued operations. For the balance sheet presentation however, IFRS 10 (Consolidated Financial Statements) overrides IFRS 5 and requires all intercompany balances to be eliminated including those between the discontinued and continued operations.

2.1.2 Changes in ownership interests in subsidiaries without change of control

Transactions with minority interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners.

The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to minority interests are also recorded in equity.

2.1.3 Disposal of subsidiaries

When the Group ceases to have control, any retained interest in the entity is remeasured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

2.1.4 Associates

Associates are all entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognized at cost, and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition.

The Group's investment in associates includes goodwill identified at acquisition. If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognized in other comprehensive income is reclassified to profit or loss where appropriate. The Group's share of post-acquisition profit or loss is recognized in the income statement, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate. The Group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired. If this is the case, the Group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognizes the amount adjacent to "share in result of companies accounted for using the equity method" in the income statement.

Profits and losses resulting from upstream and downstream transactions between the Group and its associate are recognized in the Group's financial statements only to the extent of unrelated investor's interests in the associates. Unrealized losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the Group. Dilution gains and losses arising in investments in associates are recognized in the income statement.

2.1.5 Joint arrangements

The Group applies IFRS 11 to all joint arrangements. Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations each investor. The Group has assessed the nature of its joint arrangements and determined them to be joint ventures. Joint ventures are accounted for using the equity method. Under the equity method of accounting, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive income.

When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the Group's net investment in the joint ventures), the Group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

2.2 Principles of segmentation

Note F7 provides the Group's segment information, in line with IFRS 8. Umicore is organized in business units. Operating segments under IFRS 8 at Umicore are differentiated by their growth drivers in the areas of Catalysis, Energy & Surface Technologies, and Recycling.

The Catalysis segment provides automotive catalysts for gasoline and diesel light and heavy-duty diesel applications, including on-road and non-road vehicles. The business group also offers stationary catalysis for industrial emissions control and produces precious metals based compounds and catalysts for use in fuel cell applications and in the pharmaceutical and fine chemicals industries.

The Energy & Surface Technologies segment is focused on products that are found in applications used in the production and storage of clean energy and in a range of applications for surface technologies that bring specific properties and functionalities to end products. All the activities offer a closed loop service for the customers. The Recycling segment treats complex waste streams containing precious and other specialty metals. The operations can recover 20 of these metals from a wide range of input materials ranging from industrial residues to end-of-life materials. Other activities include production of precious metals-based materials that are essential for applications as diverse as high-tech glass production, electrics and electronics.

Corporate covers corporate activities, shared operational functions and the Group's Research, Development & Innovation unit. Umicore's minority share in Element Six Abrasives and Ieqsa is also included in Corporate.

Operating segments are reported in a manner consistent with the internal reporting provided to the supervisory board and the management board.

The segment results, assets and liabilities include items directly attributable to the segment as well as those elements that can reasonably be allocated to a segment.

The pricing of inter-segment sales is based on an arm's length transfer pricing system. In the absence of relevant market price references, 'cost plus' mechanisms are used.

Associate companies are allocated to the business group with the closest fit from a market segment perspective.

2.3 Inflation accounting

For the reported period, there is one subsidiary in the Umicore Group having a functional currency belonging to a hyperinflationary economy in Argentina. However, in view of significance to the Group, this is not material for IAS 29 to be applied.

2.4 Foreign currency translation

Functional currency: items included in the financial statements of each entity in the Group are measured using the currency that best reflects the economic substance of the underlying events and circumstances relevant to that entity. The consolidated financial statements are presented in euros which is the functional currency of the parent. To consolidate the Group and each of its subsidiaries, the financial statements are translated as follows:

- Assets and liabilities at the year-end rate as published by the European Central Bank or by the Central Bank of Brazil for the Brazilian Real.
- Income statements at the average exchange rate for the year.
- The components of shareholders' equity at the historical exchange rate.

Exchange differences arising from the translation of the net investment in foreign subsidiaries, joint ventures and associated entities at the period-end exchange rate are recorded as part of the shareholders' equity under "currency translation differences".

When a foreign operation is partially disposed of or sold, exchange differences that were recorded in equity are recognized in the income statement as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as local currency assets and liabilities of the foreign entity and are translated at the closing rate.

2.5 Foreign currency transactions

Foreign currency transactions are recognized during the period in the functional currency of each entity at exchange rates prevailing at the date of transaction. The date of a transaction is the date at which the transaction first qualifies for recognition. For practical reasons a rate that approximates the actual rate at the date of the transaction is used for some operations, for example, an average rate for the week or the month in which the transactions occur.

Subsequently, monetary assets and liabilities denominated in foreign currencies are translated at the closing rate at the end of the reporting period.

Gains and losses resulting from the settlement of foreign currency transactions, and from the translation of monetary assets and liabilities denominated in foreign currencies, are recognized in the income statement as a financial result.

In order to hedge its exposure to certain foreign exchange risks, the Company has entered into certain forward contracts (see Note F2.22, Financial instruments).

2.6 Property, plant and equipment

Property, plant and equipment ("PPE") is recorded at historical cost, less accumulated depreciation and impairment losses. Cost includes all direct costs and appropriate allocation of indirect costs incurred to bring the asset to working condition for its intended use.

Borrowing costs that are directly attributable to investments are capitalized together with the costs of the assets in accordance with IAS 23. All borrowing costs that cannot be linked directly to an investment are recognized as expenses in the period when incurred.

The straight-line depreciation method is applied through the estimated useful life of the assets.

Useful life is the period of time over which an asset is expected to be used by the company.

Repair and maintenance costs are expensed in the period in which they are incurred, if they do not increase the future economic benefits of the asset. Otherwise they are classified as separate components of items of property, plant and equipment. Those major components of items of property, plant and equipment that are replaced at regular intervals are accounted for as separate assets as they have useful lives different from those items of property, plant and equipment to which they relate. Umicore's PPE, being complex and highly customized industrial assets, typically do not have an individual resale value if put outside the overall context of the operations. Therefore, no residual value is taken into account when determining the depreciable value.

The typical useful life per main type of property, plant and equipment are as per table below. For material newly acquired or constructed assets, the useful life is separately assessed at the moment of the investment request and can deviate from the above standards.

Management determines the estimated useful lives and related depreciation charges for property, plant and equipment. Management uses standard estimates based on a combination of physical durability and projected product life or industry life cycles. These useful lives could change significantly as a result of technical innovations, market developments or competitor actions. Management will increase the depreciation charge where useful lives are shorter than previously estimated, or it will write-off or write-down technically obsolete or non-strategic assets that have been abandoned or sold.

Land use rights are part of the Property, Plant and Equipment and are typically amortized over the contractual period.

	years
Land	Non-depreciable
Buildings	
- Industrial buildings	20
- Improvements to buildings	10
- Offices and laboratories	40
Plant, machinery and equipment	10
- Furnaces	7
- Small equipment	5
Furniture and vehicles	
- Vehicles	5
- Mobile handling equipment	7
- Computer equipment	3 - 5
- Furniture and office equipment	5 - 10

2.7 Intangible assets & equity transaction expenses

2.7.1 Equity transaction expenses

Expenses for formation and capital increase are deducted from the share capital.

2.7.2 Goodwill

Goodwill represents the excess of the cost of an acquisition of a subsidiary, associate or jointly controlled entity over the Group's share in the fair value of the identifiable assets and liabilities of the acquired entity at the date of acquisition. Goodwill is recognized at cost less any accumulated impairment losses.

Goodwill from associates and joint ventures is presented in the balance sheet on the line "Investments accounted for under the equity method", together with the investment itself.

To assess impairment, goodwill is allocated to a cash generating unit (CGU). At each balance sheet date, these CGUs are tested for impairment, meaning an analysis is performed to determine whether the carrying amount of goodwill allocated to the CGU is fully recoverable.

If the carrying amount is not fully recoverable, an appropriate impairment loss is recognized in the income statement. These impairment losses are never reversed.

The excess of the Group's interest in the fair value of the net identifiable assets acquired over the cost of acquisition is recognized in the income statement immediately.

2.7.3 Research and development

Research costs related to the prospect of gaining new scientific or technological knowledge and understanding are recognized in the income statement as an incurred expense.

Development costs are defined as costs incurred for the design of new or substantially improved products and for the processes prior to commercial production or use. They are capitalized if, among others, the following conditions are met:

- the intangible asset will give rise to future economic benefits, or in other words, the market potential has been clearly demonstrated.
- the expenditures related to the process or product can be clearly identified and reliably measured.

In case it is difficult to clearly distinguish between research or development costs, the costs are considered as being research. If development costs are capitalized they are amortized using a straight-line method over the period of their expected benefit, in general five years.

2.7.4 CO_2 emission rights

Within the framework of the Kyoto protocol, a third emission trading period started, covering 2013-2020 and the fourth phase started on January 1, 2021 (till 2030). Therefore, the Flemish Government granted emission rights to the Flemish sites of certain companies, including Umicore. Each year, at the end of February, one fifth of these emission rights is put on an official registry account. The release of emission rights to this registry account entails the capitalization in the intangible assets, which is in line with the guidance of the Belgian Accounting Standards Commission. Gains on the recognition of emission rights at fair value are deferred until the certificates are used. Emission rights owned are subject to impairment testing but are not depreciated. If, at a certain closing date, it appears that the closing market price is below the carrying value, a write-down is booked. At each closing date, the Group estimates the actual use of rights for the period and recognizes a provision for the rights that will have to be restituted to the Government. The charge related to the impairment loss or the recognition of provisions are fully compensated in the income statement by the release of deferred revenue. Historically, Umicore owns the required rights to ensure its normal operating activities.

2.7.5 Other intangible assets

All the following types are recorded at historical cost, less accumulated amortization and impairment losses:

- Concessions, patents, licenses: are amortized over the period of their legal protection with a minimum of 5% (in general over 5 years).
- Customer portfolios: are typically amortized over a period of five years.
- ERP software is typically amortized over a period of ten years.
- Smaller software is typically amortized over a period of five years.

In case of an earn-out component, a remeasurement is foreseen, adapting the carrying amount of the asset and the amortization accordingly.

Umicore has currently no intangible asset with an indefinite useful live.

2.8 Lease

IFRS 16 sets out the principles for the recognition, measurement, presentation, and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model. At the commencement date of a lease, lessees recognize a lease liability (i.e. a liability to make lease payments), and a right-of-use asset (i.e. an asset representing the right to use the underlying asset over the lease term).

The lease liabilities are recognized at the present value of the remaining lease payments (see note F24) in non-current liabilities or in current liabilities depending on the due date (up till 2021 lease liabilities were presented in non-current liabilities only).

The right-of-use asset is depreciated over the term of the lease (see note F16). Interest expense is recognized on the lease liability (see note F11). The lease liability is remeasured upon the occurrence of certain events (e.g. a change in the lease term or a change in future lease payments resulting from a change in index). Such remeasurements of the lease liability will generally be recognized as an adjustment to the right-of-use asset.

The Group applies the lease recognition exemptions for short-term leases and leases for which the underlying asset is of low value. The Group elects, by class of underlying asset, not to separate non-lease components from lease components and instead accounts for each lease component and any associated non-lease component as one single lease component.

The Group leases metals to and from third parties for specified periods for which the Group receives or pays fees. Metal lease contracts are typically concluded for less than one year.

The metal leases from and to third parties are still reported as off-balance sheet commitments, as not in the scope of IFRS 16.

2.9 Financial assets at fair value through OCI, loans and non-current receivables

All movements in financial assets at fair value through other comprehensive income ("OCI"), loans and receivables are accounted for at trade date.

Financial assets at fair value through OCI are carried at fair value. Unrealized gains and losses from changes in the fair value of such assets are recognized in equity as financial assets at fair value through OCI reserves. When the assets are sold or impaired, the accumulated fair value adjustments are also included in the OCI. Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

Loans and receivables are carried at amortized cost less any impairment.

All write-downs are recorded on a separate account and are netted with the carrying amounts when all chances of recovery are depleted. Own shares are deducted from equity.

2.10 Inventory

Inventories are classified as:

1. Base products (gross values)
   a. Permanently tied up metal inventories (not hedged)
   b. Commercially available metal inventories (hedged)
   c. Other base products inventories (not hedged)
2. Consumables (gross values)
3. Write down and impairments
4. Advances paid
5. Contracts in progress

Inventories are carried at cost. Cost comprises direct purchase or manufacturing costs and an appropriate allocation of overheads.

Base products (gross values) are mostly metal-containing products on which Umicore is exposed to price fluctuation risks. Most of these inventories follow Umicore's metal accounting rules and are classified in two inventory categories that reflect their specific nature and business use: the permanently tied up metal inventories and the commercially available metal inventories. The latter inventories are subject to an active and systematic hedging process to minimize the effects of market price fluctuations on the financial performance of the Group. Conversely, the permanently tied up metal inventories are typically not hedged. Next to these categories, the other base product inventories consist of materials used in the manufacturing processes to obtain the marketable basis products. These inventories are also typically not hedged. More details on the hedging mechanisms can be found in note F3.

Individualized or weighted average valuation is applied on the initial at cost valuation per category of inventory complemented with the following fair value principles:

- On the permanently tied up metal inventories : In view of their permanent nature, Umicore opted to apply the measurement and recognition rules of Property, Plant and Equipment (IAS 16) and Impairment of Assets (IAS 36). The valuation is based on the "historical cost less any accumulated depreciation and accumulated impairment" principle. As the inventories are considered to have an unlimited useful life, no depreciations are applied. Instead they are subject to Umicore's annual impairment testing of the CGUs carrying these inventories. Any impairments booked are classified under the caption Write downs & Impairments.
- On the commercially available metal inventories : These inventories are economically hedged. For the part of the inventory where Umicore obtained IFRS 9 Fair Value hedge accounting, Umicore applies the mark-to-market valuation principles. When IFRS 9 Fair Value hedge accounting cannot be obtained (see note F2.22.1 transactional risks – fair value hedging), LOCOM (lower of cost or net realizable value, meaning the estimated selling price less the estimated costs of completion and the estimated cost necessary to make the sale) is applied.
- On the other base products inventories, LOCOM and slow moving principles are applied. Any write-downs booked are classified under the caption Write downs & Impairments.

Consumables (gross values) are products that are not used in a direct way in the manufacturing processes (for example: packaging material). They are valued using the weighted-average cost method and are subject to LOCOM. Any write-downs booked are classified under the caption Write downs & Impairments

Write-downs & Impairments are any impairments or write downs booked on the Base products and Consumables which are captured under this line item.

Advances paid are down-payments on transactions with suppliers for which the physical delivery has not yet taken place and are booked at nominal value.

Contracts in progress are valued using the percentage-of-completion method.

2.11 Trade and other receivables

Trade and other receivables are measured at amortized cost, i.e. at the net present value of the receivable amount. Unless the impact of discounting is material, the nominal value is taken. Receivables are written down for irrecoverable amounts. All write-downs are recorded on a separate account and are netted with the carrying amounts when all chances of recovery are depleted.

Trade receivables of which substantially all the risks and rewards have been transferred are derecognized from the balance sheet. The positive fair value of derivative financial instruments is included under this heading.

Trade and other receivables are subject to an impairment methodology, referred to as the Expected Credit Loss (ECL) model, measuring the expected credit losses based on shared credit risk characteristics. Umicore has established an allowance matrix based on different customer and sector ratings, ageing balances, macro-economic and regional factors and historical loss patterns.

The Group may undertake certain linked contracts to sell or buy metal and commit to repurchase or sell the metal in the future. An asset representing the metal which the Group has committed to sell or a liability representing the obligation to repurchase the metal are recognized in trade and other receivables or trade and other payables, respectively. Accordingly, principal cash flows in respect of sale and repurchase agreements are shown as cash flows from operating activities in the cash flow statement rather than cash flows from financing activities as long the financing is short term in time and the underlying transactions are not rolled over. Consistently interest paid and received are shown as cash flows from operating activities and presented as other income in the income statement in line with lease and factoring fees. No revenues are recognized in respect of the sale leg or costs are recognized in respect of the purchase leg if it regards the same metals and quantities engaged with the same party.

2.12 Cash and cash equivalents

Cash includes cash-in-hand and cash with banks. Cash equivalents are short-term, highly liquid investments that are readily convertible into known amounts of cash, have maturity dates of three months or less and are subject to an insignificant risk of change in value.

These items are carried in the balance sheet at nominal value or amortized cost. Bank overdrafts are included in the current liabilities on the balance sheet.

2.13 Impairment of non-financial assets

Property, plant and equipment and other non-current assets, including intangible assets and financial assets not held for trading, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If any such indication exists, the recoverable amount of the asset is estimated.

The recoverable amount is the higher of an asset's net selling price and value in use. To estimate the recoverable amount of individual assets the company often determines the recoverable amount of the cash-generating unit (CGU) to which the asset belongs.

Whenever the carrying amount of an asset exceeds its recoverable value, an impairment loss is recognized as an expense immediately.

A reversal of impairment losses is recognized when there is an indication that the impairment losses recognized for the asset or for the CGU no longer exist or have decreased. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

2.14 Share capital and retained earnings

A. Repurchase of share capital: When the company purchases some of its own shares, the consideration paid, including any attributable transaction costs net of income taxes, is deducted from the total shareholders' equity as treasury shares. No gain or loss shall be recognized in profit or loss on the purchase, sale, issue or cancellation of own shares. When such shares are subsequently sold or reissued, any consideration received is included in shareholders' equity.

B. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction from the proceeds of the issue, net of tax.

C. Dividends of the parent company payable on ordinary shares are only recognized as a liability following approval by the shareholders.

2.15 Minority interests

Minority interests include a proportion of the fair value of identifiable assets and liabilities recognized upon acquisition of a subsidiary that is attributable to third parties, together with the appropriate proportion of subsequent profits and losses.

In the income statement, the minority share in the Group's profit or loss is presented separately from the Group's consolidated result.

2.16 Provisions

Provisions are recognized in the balance sheet when:

- There is a present obligation (legal or constructive) as a result of a past event.
- It is probable that an outflow of resources will be required to settle the obligation.
- A reliable estimate can be made on the amount of the obligation.

A constructive obligation is an obligation that derives from company actions where, by an established pattern of past practice or published policies, the company has indicated that it will accept certain responsibilities and, as a result, the company has created a valid expectation that it will discharge those responsibilities.

The amount recognized as a provision is the best estimate of the expenditure required to settle the present obligation at the end of the reporting period and taking into account the probability of the possible outcome of the event. Where the effect of the time value of money is material, the amount of a provision is the present value of the expenditure expected to be required to settle the obligation. The result of the yearly discounting of the provision, if any, is accounted for as a financial result.

The main types of provision are the following:

2.16.1 Provisions for employee benefits (See note F2.17 - Employee benefits)

2.16.2 Environmental obligations

Environmental provisions are based on legal and constructive obligations from past events, in accordance with the company's environmental approach and applicable legal requirements.

The full amount of the estimated obligation is recognized at the moment the event occurs.

When the obligation is production/activity related, the provision is recognized gradually depending on normal usage/production level.

2.16.3 Other Provisions

These include provisions for litigation, onerous contracts, warranties, exposure to equity investments and restructuring. A provision for restructuring is recognized when the company has approved a detailed and formal restructuring plan and the restructuring has either commenced or has been announced publicly before the end of the reporting period. Any restructuring provision only includes the direct expenditure arising from the restructuring which is necessarily entailed and is not associated with the ongoing activities of the Company.

2.17 Employee benefits

2.17.1 Short-term employee benefits

These include wages, salaries and social security contributions, paid annual leave and sick leave, bonuses and non-monetary benefits, and are taken as an expense in the relevant period.

All company managers are eligible for bonuses that are based on indicators including personal performance and key financial targets. The amount of the bonus is recognized as an expense, based on an estimation made at the end of the reporting period.

2.17.2 Post-employment benefits (pensions, medical care)

The company has various pension and medical care schemes in accordance with the conditions and practices of the countries it operates in. The schemes are generally funded through payments to insurance companies or trustee-administered funds.

2.17.2.1 Defined benefit plans

The company has accounted for all legal and constructive obligations both under the formal terms of defined benefit plans and under the company's informal practices.

The amount presented in the balance sheet is based on actuarial calculations (using the projected unit credit method) and represents the present value of the defined benefit obligations netted with the fair value of the plan assets.

The past service costs are immediately recognized in the income statement since IAS 19 revised.

All remeasurements as a result of changes in the actuarial assumptions of post-employment defined benefit plans are recognized through other comprehensive income (OCI) in the period in which they occur and are disclosed in the statement of comprehensive income as post-employment benefit reserves.

In Belgium, in line with the Belgian legislation applicable to 2nd pillar pension plans (so-called "Law Vandenbroucke"), all Belgian Defined Contribution plans, for which the legal minimum guaranteed return is applicable have to be considered under IFRS as Defined Benefit plans. Liabilities and costs of these plans are therefore calculated following the Projected Unit Credit Method.

In Germany two defined contribution pension plans exist which are externally financed via the "Pensionskasse Degussa" (PKD) or the support fund "Unterstützungskasse Degussa" (RUK).The PKD and RUK plans secure only the inflation and guaranteed interest rate adjustments of the benefits. In recent years, due to the low interest rate environment, there is a risk of shortfalls in the self-funding at the DKP and RUK to honor these adjustments. In case of such shortfalls the PKD and RUK would call upon Umicore to contribute the extra funding required. For this reason, the inflation and guaranteed interest rate adjustments for the PKD and RUK plans are recognized as defined benefit obligation plans under IFRS. Management applied a best estimate simplified method to calculate the shortfall risk and recognized this as an additional obligation.

2.17.2.2 Defined contribution plans

The company pays contributions to publicly or privately administered insurance plans.

The payments are recognized as expenses as they fall due and as such are included in personnel costs.

2.17.3 Other long-term employee benefits (jubilee premiums)

These benefits are accrued for their expected costs over the period of employment using an accounting methodology similar to that for defined benefit pension plans. These obligations are in general valued annually by independent qualified actuaries. All remeasurements as a result of changes in the actuarial assumptions are immediately recognized in the income statement.

2.17.4 Termination benefits (pre-retirement plans, other termination obligations)

These benefits arise as a result of the company's decision to terminate an employee's employment before the normal retirement date or of an employee's decision to accept voluntary redundancy in exchange for those benefits. When they are reasonably predictable in accordance with the conditions and practices of the countries the company operates in, future obligations are also recognized.

These benefits are accrued for their expected costs over the period of employment, using an accounting methodology similar to that for defined benefit pension plans. In general, these obligations are valued annually by independent qualified actuaries. All remeasurements as a result of changes in the actuarial assumptions are immediately recognized in the income statement.

2.17.5 Equity and equity-related compensation benefits (share-based payments IFRS 2)

Different stock option and share programs allow company employees and company senior management to acquire or obtain shares of the company.

The option or share exercise price equals the market price of the (underlying) shares at the date of the grant. When the options are exercised, shares are delivered to the beneficiaries from existing own shares. For the share programs, shares are delivered to the beneficiaries from existing own shares. In both cases, the equity is increased by the amount of the proceeds received corresponding to the exercise price.

The options and shares are typically vested at the moment of the grant and their fair value is recognized as an employee benefit expense with a corresponding increase in equity as share based payment reserves. For the options, the expense to be recognized is calculated by an actuary, using a valuation model which takes into account all features of the stock options, the volatility of the underlying stock and an assumed exercise pattern.

As long as the options granted have not been exercised, their value is reported in the Statement of Changes in Equity as 'share based payments reserve'. The value of the options exercised during the period is transferred to 'retained earnings'.

2.17.6 Presentation

The impact of employee benefits on results is booked under operating results in the income statement, except for the interest and discount rate impacts which are classified under financial results.

2.18 Financial liabilities

All movements in financial liabilities are accounted for at trade date.

Borrowings are initially recognized as proceeds received, net of transaction costs.

Subsequently they are carried at amortized cost using the effective interest rate method.

Amortized cost is calculated by taking into account any issue costs, and any discount or premium on issue. Any differences between cost and redemption value are recognized in the income statement upon redemption.

Financial debt also contains the lease liability as per IFRS 16 (see note F2.8).

The convertible bond is considered as a compound instrument. It contains a liability and a equity component. This instrument is convertible into shares at the option of the holder. Each component is, therefore, accounted for separately. The liability element is determined by fair valuing the cash flows excluding any equity component. The residual is assigned to equity. The equity component is not remeasured, nor at conversion nor at maturity. Note, finally, that the convertible bond is a zero coupon instrument.

2.19 Trade and other payables

Trade payables are measured at amortized cost, i.e. at the net present value of the payable amount. Unless the impact of discounting is material, the nominal value is taken.

The Group may undertake certain linked contracts to sell or buy metal and commit to repurchase or sell the metal in the future. An asset representing the metal which the Group has committed to sell or a liability representing the obligation to repurchase the metal are recognized in trade and other receivables or trade and other payables, respectively. Accordingly, principal cash flows in respect of sale and repurchase agreements are shown as cash flows from operating activities in the cash flow statement rather than cash flows from financing activities as long the financing is short term in time and the underlying transactions are not rolled over. Consistently interest paid and received are shown as cash flows from operating activities and presented as other income in the income statement in line with lease and factoring fees. No revenues are recognized in respect of the sale leg or costs are recognized in respect of the purchase leg if it regards the same metals and quantities engaged with the same party.

The negative fair value of derivative financial instruments is included under this heading.

2.20 Income taxes

Taxes on profit or loss of the year include current and deferred tax. Such taxes are calculated in accordance with the tax regulations in effect in each country the company operates in.

Current tax is the expected tax payable on the taxable income of the year, using tax rates enacted at the end of the reporting period, and any adjustment to tax payable (or receivable) in respect of previous years.

The tax payable is determined based on tax laws and regulations that apply in each of the numerous jurisdictions in which the Group operates. The income tax positions taken are considered by the Group to be supportable and are intended to withstand challenge from tax authorities. However, it is accepted that some of the position can be uncertain and include interpretation of complex tax laws.

Tax provisions are recognized where the precise impact of the tax law and regulations on taxes payable with respect to profit arising in those jurisdiction is unclear and could trigger a tax adjustment represented by a future flow of funds to a tax authority or a consequent adjustment to a deferred tax asset. Uncertain tax positions are assessed periodically, implying a detail assessment following the interpretation of IFRIC 23, considering uncertainties individually or collectively, based on which approach provided the best predictions of the resolution of the uncertainties with the tax authorities; assuming that the tax authority will examine the position (if entitled to do so) and will have full knowledge of all the relevant information; and recognizing an Uncertain Tax Position or UTP (or group of UTPs) using either the most likely amount or the expected value, depending on which is thought to give a better prediction of the resolution of each (group of) UTP(s), to reflect the likelihood of an adjustment being realised on examination. The estimation and judgements in relation to uncertain tax positions are reassessed if the facts and circumstances on which those estimates and judgements were based have changed or as a result of new information that affects the initial assessments. In the measurement of the Uncertain tax positions, the Group considers the statute of limitation applicable in each jurisdiction, additionally interest and penalties are included in the assessment.

Deferred taxes are calculated using the liability method on temporary differences arising between the tax base of assets and liabilities and their carrying amounts in the financial statements. These taxes are measured using the rate prevailing at the end of the reporting period or future applicable tax rates formally announced by the government in the country the Company operates in.

Deferred tax assets are only recognized to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are offset and presented net only if they relate to income taxes levied by the same taxation authority on the same taxable entity.

2.21 Revenue recognition

2.21.1 Revenue recognition from contracts with customers

Despite the complexity of several processes within each business unit, the performance obligations are rather straightforward, those being:

- Catalysis: the delivery of the goods in accordance with contract specifications. These specifications have been predefined and validated through samples. This latter is not considered as a significant stream for further analysis under IFRS 15.
- Recycling: the return of the refined metals back to the client in accordance with the contract either in their pure metal content or as part of a (semi)finished product and the sale of metal (including surplus metal recovered) towards the customers.
- Energy and Surface Technologies: the delivery of the products according to specification agreed in the sales order received.

Umicore has carefully considered the satisfaction of the performance obligation and concludes that for sales within Catalysis the revenue is recognized at a point of time when the control transfers to the customer. Despite the products being customized, the considerations for over time have not been met given that the customer does not control the production process nor has the Group the entitlement to be paid prior to delivery of the goods. The control is therefore transferred based upon the usual delivery terms (incoterms) and the customer accepting the goods upon delivery.

For sales within Recycling, the vast majority of revenue is recognized at a point in time when the control of the refined products or metal is back in the hands of the customers (refinery) or in the hands of the customers (sale of metal, including surplus metal recovered), embarked by the delivery.

For sales within Energy and Surface Technologies the revenue is recognized at a point in time when the control is transferred to the customer, this moment being driven by the delivery of the products according to the incoterms.

No revenue is recognised for the sale leg of contracts under which the Group sells or buys precious metal and commits to repurchase or sells the metal in the future.

Some of the contracts do contain commercial discounts and rebates, however frequency is relatively low, and magnitude is not significant. If applicable, these are recognized in the same period the sale is established.

There are no additional warranty agreements sold to clients on top of legal requirements, therefore these are not considered as a separate performance obligation.

Consequently, the transaction price identified within the agreement is allocated in full to the performance obligation.

There are no significant contract balances where either the Group has performed the performance obligation for which no billing occurred yet, or alternatively has received advance payments for which the performance obligation has not been satisfied.

The revenue from contracts with customers is further detailed in note F7 and F9.

The assessment in view of impairment losses is captured under the expected credit loss model as detailed in note F20.

2.21.2 Government grants

A government grant is accounted for in the balance sheet initially as deferred income when there is reasonable assurance that it will be received and that the company will comply with the conditions attached to it. Grants are recognized in the income statement over the period necessary to match them with the costs they are intended to compensate.

2.22 Financial instruments

The Group uses derivative financial and commodity instruments primarily to reduce the exposure to adverse fluctuations in foreign exchange rates, commodity prices, interest rates and other market risks. The Group uses mainly spot and forward contracts to cover the metal and currency risk, and swaps to hedge the interest rate risk. The operations carried out on the futures markets are not of a speculative nature.

2.22.1 Transactional risks – fair value hedging

Derivative financial and commodity instruments are used for the protection of the fair value of underlying hedged items (assets, liabilities and firm commitments) and are recognized initially at fair value at trade date. The hedged items (physical commitments and commercially available inventory, primarily) are, under Umicore's economical hedging policies, initially valued at fair value by applying mark-to-market.

Where possible Umicore documents hedge accounting according to the criteria set out in IFRS 9. The bottom layer or the net position approach for the fair value hedge on groups of closed portfolios of foreign exchange risk and commodity risk exposures are applied. Under the bottom layer approach, a layer representing the nominal amount of an exposure that has historically been present on a constant and continuous basis is defined.

This layer is further split into smaller unit of accounts, sublayers, which are designated as hedged items. The sublayers are then hedged by hedging instruments that are designated as hedging multiples of such sublayers.

Under the net position approach, hedging is applied based on a group of items with offsetting risk positions, the net position being the hedged item hedged by a hedging instrument.

In both approaches, it regards closed hedged portfolios in which items cannot be added, removed or replaced without treating each change as the transition to a new portfolio. In both approaches, the exposures cover a group of both on balance and off balance foreign exchange and commodity positions, that is, either trade payables, inventories and purchase commitments or trade receivables and sales commitments exposed to the variability of foreign currencies or commodity prices.

In the absence of reaching IFRS 9 hedge accounting as the bottom layer or net position criteria are not met or when no market-based derivatives are available, Umicore recognizes the hedged items at cost. Since under Umicore economical hedging policy, all transactional hedging positions are marked to market for operational risk monitoring purposes, this consists in reversing any positive fair value on these hedged items to keep them at cost (in case of inventories) or off-balance (in case of commitments). Hedges in this category are labeled as economical hedges and are not considered speculative instruments.

When there is a consistent practice of trading of commodities through the use of commodity contracts by a dedicated subsidiary or a cash generating unit (CGU) of the Group and by which the entity takes delivery of the underlying commodity to sell it within a short period after delivery for the purpose of generating a profit from short-term fluctuations in price or trading margins, the inventory is valued at fair value through the income statement and the related physical and / or commodity commitments are classified as derivatives and measured at fair value through the income statement.

2.22.2 Structural risks – cash flow hedging

Derivative financial and commodity instruments used for the protection of future cash flows are designated as hedges under cash-flow hedge accounting. The effective portion of changes in the fair value of hedging instruments which qualify as cash flow hedges are recognized in the shareholders equity as hedging reserves until the underlying forecasted or committed transactions occur (i.e. affect the income statement). At that time the recognized gains and losses on the hedging instruments are transferred from equity to the income statement.

When the underlying hedged transactions are no longer probable or the hedges become ineffective, the corresponding hedging instrument will immediately be terminated and all profits or losses including those which were deferred in equity, are immediately recognized in the income statement.

In the absence of obtaining cash-flow hedge accounting at inception as defined under IFRS 9, then the fair value of the related hedging instruments is recognized in the income statement instead of the equity and this prior to the occurrence of the underlying forecasted or committed transactions.

2.22.3 Embedded derivatives

Executory contracts (the "host contract") may sometimes contain embedded derivatives.

Embedded derivatives cause some or all of the cash flows that would otherwise be expected from the host contract, to be modified according to a specified interest rate, financial instrument price, commodity price, foreign exchange rate, or another variable. If it is concluded that such a derivative is not closely related to the host contract, it is separated from the host contract and accounted for under the rules of IFRS 9 (fair value through profit or loss). The host contract is accounted for using the rules applicable to executory contracts, which effectively means that such a contract is not recognized in the balance sheet or profit and loss before delivery on the contract takes place.

2.23 Climate change

In preparing the consolidated financial statements, the Group has considered the potential impact of climate-related risks which cover both transition risks (market, reputation, policy & legal, technology) and physical risks (direct damage to assets and supply chain disruption). The long term consequences of climate change and the climate-related transition risks scenario analysis for Umicore are further described in the Risk & Opportunities section of this report.

The potential impact of climate change on a number of areas within the financial statements has been considered such as:

- The forecasts and cash flows used in impairment review of non-current assets (including goodwill).
- Recoverability of deferred taxes.
- Expected lives of property, plant and equipment and their exposure to the physical risk posed by climate change. Their expected lives tend to be short to medium term, as such the physical risk posed by climate change in the long term is low.

There is inherent uncertainty over the assumptions used within these areas and how they will impact the Group's business operations, cash flows and profit projections. Nevertheless, the latest outlooks of the Group reflect continuous investment in sustainable technologies and our unique position to meet the market with sustainable solutions.

With the commitment to reach net zero scope 1 and 2 greenhouse gas emissions by 2035 and to run 100% of operations in Europe on renewable electricity by 2025, the Group secures long-term green power purchase agreements (PPAs) for its plants and offices. Agreements are analysed under IFRS to determine whether those contracts are own-used contracts, financial instruments or if they contain a lease. As of 31 December 2022, all our PPAs contracts are accounted for as own-used contracts.

2.24 Adjustments

The adjustments to the result relate to restructuring measures, impairment of assets linked to restructuring measures and other income or expenses arising from events or transactions that are clearly distinct from the ordinary activities of the company such as discontinuation of activities and environmental provisions that relate to historical pollution or linked to non-active sites.

F3 Financial risk management

Each of the Group's activities is exposed to a variety of risks that are financial or non-financial in nature but have the potential to impact the financial performance of the Group. Financial risks include changes in metal prices, in foreign currency exchange rates, in certain market-defined commercial conditions, and in interest rates as well as credit and liquidity risks. The Group's overall risk management program seeks to mitigate risks and potential adverse effects on the financial performance of the Group, including through the use of hedging and insurance instruments.

3.1 Currency risk

Umicore's currency risk can be split into three distinct categories: structural, transactional and translational risks.

3.1.1 Structural risk

A portion of Umicore's revenues are structurally denominated in US dollar (USD), while many of the related operations are located outside the USD zone (particularly in Europe and Asia).

Any change in the USD exchange rate against the EUR or other currencies which are not pegged to the USD will have an impact on the results.

A large portion of such structural currency exposure derives from USD denominated metal prices linked to the recycling and refining operations.

Next to the sensitivity USD vs EUR, there is also a structural and increasing sensitivity to certain other currency pairs such as the USD and EUR vs the Korean won (KRW), the Chinese yuan (CNY), the Canadian dollar (CAD), the Polish Zloty (PLN) and the Brazilian real (BRL).

Structural currency hedging

Umicore's hedging policy allows for hedging forward its structural currency exposure, either in conjunction with the hedging of structural metal price exposure or in isolation, typically when a currency exchange rate or a metal price denominated in EUR is above its historical average and at a level where attractive margins can be secured.

In relation to the structural risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (future probable cash flows) and the hedging instrument including amount and maturity. The Group applies a prudent approach in the application of structural hedging, never up to 100 %, avoiding thereby ineffectiveness arising from difference in maturity between hedged item and hedging instrument or changes in exposure amounts.

At the end of 2022, Umicore had structural currency hedging in place relating to its non-metal related currency sensitivity including the following pairs of currencies: EUR/USD, USD/KRW, USD/CNY, EUR/CNY, EUR/PLN and USD/CAD.

3.1.2 Transactional risk

The company is also subject to transactional risks in respect of currencies, i.e. the risk of currency exchange rates fluctuating between the time the price is fixed with a customer or supplier and the time the transaction is settled. The Group's policy is to hedge the transactional risk to the maximum extent possible, primarily through forward contracts.

In relation to the transactional risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (balance sheet items and commitments) and the hedging instrument including amount and maturity. The Group hedges transactional risks to the maximum extent up to 100 %. Any ineffectiveness can arise from difference in maturity between hedged item and hedging instrument or changes in exposure amounts, but this is not expected to be material.

3.1.3 Translational risk

Umicore is an international company and has foreign operations which do not have the EUR as their functional currency. When the results and the balance sheets of these operations are consolidated into Umicore's Group accounts the translated amount is exposed to variations in the value of such local currencies against the EUR, predominantly the KRW, CNY, USD, BRL, PLN and ZAR. While Umicore does not systematically hedge its translational currency exposures, it may enter into ad hoc translational hedges.

3.2 Metal price risk

Umicore's metal price risk can be split into three distinct categories: structural, transactional and inventory risks.

In relation to the structural and transactional risk, for the purpose of assessing the hedge effectiveness, the Group applies a critical terms match between the hedged item and the hedging instrument including in terms of quantity and maturity. Hedge ratio is 100% whereby our sources of ineffectiveness could be a difference in maturity between hedged item and financial instrument or a change in exposure.

3.2.1 Structural risk

Umicore is exposed to structural metal related price risks. Those risks relate mainly to the impact that metal prices have on surplus metals recovered from materials supplied for treatment or any other revenue component that fluctuates with the metal price. Umicore's policy allows hedging of such metal price exposure, typically if forward metal prices expressed in the functional currency of the concerned businesses are above their historical average and at a level where attractive margins can be secured. The extent to which metal price risk can be hedged depends on the availability of hedging instruments and sufficient associated market liquidity.

The Recycling segment recycles platinum, palladium, rhodium, gold and silver and a wide range of other base and specialty metals. In this segment the short-term sensitivity of revenues and operating profits to metals prices is particularly material. However, given the variability of the raw-material feed over time and the variable duration of the supply contracts negotiated, it is not suitable to provide a fixed sensitivity to any particular metal. In general terms, higher metals prices tend to be earnings enhancing for the Recycling business (and vice versa). Umicore also has a metal price sensitivity in its other business segments (Catalysis, Energy & Surface Technologies) linked primarily to the revenue components that are metal price related and depending on the metals used in these segments. Also, in these cases a higher metal price tends to carry short term benefits for the profitability of each business (and vice versa). However, other commercial conditions which are largely independent of the metal price, such as product premiums, are also significant and independent drivers of revenues and profitability. Finally, sustained high metal prices could in some cases increase other risks such as the risk of substitution or the risk of supply chain disruptions.

Structural metal price hedging

For some metals Umicore hedges part of its forward metal exposure. This hedging is based on documentation demonstrating a high probability of future metal price based cash flows originating from commercial contracts. Umicore hedged part of its forward metal exposure. Over the course of 2022, Umicore entered into additional forward contracts to cover a substantial part of its expected structural price exposure to certain precious metals for 2023, 2024 and 2025. For 2023, based on the respective currently expected exposures, the following lock-ins have been secured: more than a third for silver and gold, somewhat less than half for palladium and close to a quarter for platinum and rhodium. For 2024, the expected lock-in ratios are: close to half for gold and palladium, more than a third for silver and close to a quarter for platinum and rhodium. For 2025, close to a quarter was locked-in for the expected gold and silver exposures. Finally, Umicore also has hedges in place for a portion of its expected lead, copper and nickel exposure for 2023 and 2024.

In relation to the structural risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (future probable cash flows) and the hedging instrument amongst others amount and maturity. The Group applies a prudent approach in the application of structural hedging, never up to 100 %, avoiding thereby ineffectiveness arising from difference in maturity between hedged item and hedging instrument or changes in exposure amounts.

3.2.2 Transactional risk

The Group faces transactional price risks on metals. The majority of its metal-based transactions use third party metal market references, such as the London Metal Exchange. If the underlying metal price were to be constant, the price Umicore pays for the metal contained in the raw materials purchased would be passed through to the customer as part of the price charged for the product. However, because of the lapse of time between the conversion of purchased raw materials into products and the sale of products, the volatility in the reference metal price creates differences between the price paid for the contained metal and the price received.

Accordingly, there is a transactional exposure to any fluctuations in price between the moment raw materials are purchased (i.e., when the metal is "priced in") and the moment the products are sold (i.e. when the metal is "priced out").

The Group's policy is to hedge the transactional risk to the maximum extent possible, primarily through forward contracts.

In relation to the transactional risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (balance sheet items and commitments) and the hedging instrument amongst others amount and maturity. The Group hedges transactional risks to the maximum extent up to 100 %. Any ineffectiveness of such hedges can arise from difference in maturity between hedged item and hedging instrument or changes in exposure amounts, but this is not expected to be material.

The accelerating growth in battery materials in recent years substantially increased the exposure to specific related metals such as cobalt, lithium or nickel. Increasing volumes, the vulnerability to the associated price volatility and in the case of certain metals such as cobalt and lithium the absence of a liquid paper forward market result in increased metal risks. For cobalt and lithium, Umicore's transactional hedging policy aims to match to a maximum extent the pricing in and pricing out of the contracted metal. Such physical back-to-back hedging allows management of transactional risks related to cobalt and lithium in a volatile market.

The Group's economical transactional metal hedging policy prescribes that mark-to-market valuation principles are initially applied on all elements of the transactional hedging position, hedging instruments as well as hedged items. Where possible this happens under IFRS 9 hedge accounting criteria. When IFRS 9 hedge accounting cannot be applied or obtained, Umicore reverses positive mark-to-markets (see note F2.22.1 – Transactional risks – fair value hedging).

3.2.3 Metal inventory risk

The Group faces metal price risks on its permanently tied up metal inventories. This risk is related to the market metal price moving below the carrying value of these inventories.

Umicore tends not to hedge against this risk.

3.3 Interest rate risk

Interest rate risks arise from changes in prevailing market interest rates, which can lead to changes in the fair value of fixed-rate debt instruments and in changes in interest payments for variable-rate debt instruments. This risk is managed by regularly assessing the debt profile of the Group and by entering into interest rate swaps. At the end of December 2022, the Group's gross financial debt stood at € 2,343 million, of which 1,633 million carrying a fixed interest rate.

The outstanding interest rate swaps totaled € 40 million and will expire in 2023.

New US private placements were issued in November 2022 (but only drawn in January 2023) for a total of € 232 million and USD 363 million, with the part in USD hedged to EUR with cross-currency swaps.

3.4 Credit risk

Credit risk and concentration of credit risk

Credit risk is the risk of non-payment by any counterparty in relation to sales of goods or metal lease operations. In order to manage its credit exposure, Umicore has determined a credit policy with credit limit requests, approval procedures, continuous monitoring of the credit exposure and dunning procedure in case of delays. The credit risk resulting from sales is, to a certain extent, covered by credit insurance, letters of credit or similar secure payment means. Umicore entered into several credit insurance agreements with different insurers. One global credit insurance contract has been put in place on a world-wide basis. This contract protects the insured activities against insolvency, political and commercial risks with an individual deductible per invoice of 5% and foresees an indemnification cap set at regional or country levels. Umicore has determined that in a certain number of cases where the cost of credit insurance is disproportionate in relation to the risk to be insured, no such global credit insurance coverage will be sought. For those businesses, characterized by a significant level of customer concentration or by a specific and close relationship with the customers, specific insurance contracts may be set up for a certain period. It should be noted that some sizeable transactions, such as the sales of precious metals by Recycling, have a limited credit risk as payment before delivery is a widely accepted practice. Umicore may further limit selected credit risks by entering into without recourse receivables discounting arrangements or particularly in China by without recourse bank draft discounting. Regarding its risk exposure to financial institutions such as banks and brokers, Umicore is also establishing internal credit lines. Specific limits are set, per financial instrument, covering the various risks to which the Group is exposed when transacting with such counterparties. In accordance with IFRS 9, impairments for expected credit losses on receivables are measured and recognized, applying a simplified approach.

3.5 Liquidity risk

Liquidity risk relates to the ability to service and refinance debt (including notes issued) and to fund operations. The Group manages liquidity risk by maintaining adequate sources of funding, by ensuring a very wide diversification of such funding sources (in terms of instruments, lending banks and other institutions and in terms of geography), by matching as close as possible the maturity profiles of financial assets and liabilities and by staggering the maturities of financing sources. Sources of funding include a.o. operating cash flows, committed and uncommitted bank facilities including Chinese bank draft lines, metal lease lines, commercial paper issuance and long term private debt placements.

Please refer to note F20 and F24 for further details.

3.6 Tax risk

The tax charge included in the financial statements is the Group's best estimate of its tax liability but, until such time as audits by tax authorities are concluded, there is a degree of uncertainty regarding the final tax liability for the period. The Group's policy is to submit tax returns within the statutory time limits and engage tax authorities to ensure that the Group's tax affairs are as current as possible and that any differences in the interpretation of tax legislation and regulation are resolved as quickly as possible. Given the scale and the international nature of the Group's business, VAT, sales tax and intragroup transfer pricing are an inherent tax risk as it is for other international businesses. Changes in tax laws or in their application with respect to matters such as transfer pricing, VAT, foreign dividends, R&D tax credits and tax deductions, could increase the Group's effective tax rate and adversely affect its net results. Based on these tax risks described, management performed a detailed assessment for uncertain tax positions which resulted in provisions recorded for these uncertainties in line with IFRIC 23.

3.7 Capital risk management

The Group's objectives when managing capital are to safeguard its ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may for example adjust the amount of dividends paid to shareholders, return capital to shareholders, buy back its own shares or issue new shares.

The Group monitors its capital structure primarily on the basis of the gearing ratio and the net financial debt over adjusted EBITDA ratio. The gearing ratio is calculated as net financial debt divided by the sum of net financial debt and total Group equity. Net financial debt is calculated as non-current financial debt plus current financial debt less cash and cash equivalents.

The figures for the presented periods are detailed under the note F24 on Financial Debt.

In an ordinary course of business operating environment, the group aims for a capital structure equivalent to investment-grade credit rating status. The group could consider temporarily exceeding the equivalent level of indebtedness in the case of an extraordinary event, such as for example a major acquisition.

3.8 Strategic and operational risks

Umicore faces certain strategic and operational risks that are not necessarily financial in nature but which have the potential to impact the financial performance of the Group. These include a.o. technology risks, supply risks, the risk of product substitution by customers, security of supply related risks (such as for selected critical metals), operational risks related to critical production installations, information system availability and cyber security risks, risks from legal disputes and proceedings, risks related to metal trading activities, asset impairment risks due to a change in the asset's underlying business context & outlook, etc. In some cases a direct link exists between financial and operational risks. For example, a potential continuity of supply risk for certain critical raw materials or metals due to sudden or extreme physical supply tightness could substantially enhance financial risks and in particular metal price-related risks. In the past, certain metals such as for example rhodium or cobalt showed high price volatility related to supply tightness considerations. Please refer to the chapter about Managing Risk Effectively for a description of some of these risks and an outline of Umicore's general approach to risk management.

F4 Critical accounting estimates and judgments

Estimates and judgments used in developing and applying the consolidated entity's financial statements are continually evaluated and are based on historical experience and other factors, including the expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results.

Assumptions and estimates are applied when:

- Assessing the need for and measurement of impairment losses.
- Accounting for pension obligations.
- Recognizing and measuring provisions for tax, environmental, warranty and litigation risks, product returns, onerous contracts and restructuring.
- Determining inventory write-downs.
- Assessing the extent to which deferred tax assets will be realized.
- Useful lives of Property, Plant and Equipment and Intangible assets excluding goodwill.

The critical estimates and judgments that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are listed below.

4.1 Impairment testing

The Group performs an impairment test on the carrying value of its cash generating units whenever certain external or internal triggering events suggest a potential impairment risk for such unit. The Group performs annual impairment tests on the goodwill carried by its cash generating units. An impairment loss is recognized when the carrying value exceeds the recoverable amount in a structural way. The recoverable amount is the higher of the fair value less costs to sell and its value in use in accordance with the accounting policy. This value in use is calculated by discounting related future free cash flows (DCF model) to calculate their present value. These calculations require the use of and are sensitive to estimates and assumptions such as discount rates, exchange rates, commodity prices, future capital requirements and future operating performance. Internal estimates of future business performance are based on an analysis of a combination of factors including: market growth projections, market share estimates, competitive landscape, pricing and cost evolution. Such analysis combines both internally-generated estimates and data from external sources.

As at 31 December 2022, the carrying amount of the goodwill for the consolidated entity was € 158.4 million (€ 158.6 million in 2021). We refer to note F15 Goodwill for more details on the annual goodwill impairment testing.

4.2 Rehabilitation obligations

Provision is made for the anticipated costs of future rehabilitation of industrial sites and surrounding areas to the extent that a legal or constructive obligation exists in accordance with accounting policy 2.15. These provisions include future cost estimates associated with reclamation, plant closures, waste site closures, monitoring, demolition, decontamination, water purification and permanent storage of historical residues. These future cost estimates are discounted to their present value. The calculation of these provision estimates requires assumptions such as application of environmental legislation, plant closure dates, available technologies and engineering cost estimates and specifically related to the Hoboken Green Zone, the purchase cost of houses. A change in any of the assumptions used may have a material impact on the carrying value of rehabilitation provisions. As at 31 December 2022, the carrying amount of rehabilitation provisions was € 108.3 million (€ 109.8 million in 2021). We refer to note F29 Environmental provisions for more details.

4.3 Defined benefit obligations

An asset or liability in respect of defined benefit plan is recognized on the balance sheet in accordance with accounting policy 2.17. The present value of a defined benefit obligation is dependent upon a number of factors that are determined on an actuarial basis.

The consolidated entity determines the appropriate discount rate to be used at the end of each year. The consolidated entity's employee benefit obligations are discussed in more detail in Note F27. At 31 December 2022, a liability with respect to employee benefit obligations of € 286.5 million was recognized (€ 387.2 million in 2021).

4.4 Recovery of deferred tax assets

Deferred tax assets are recognized for deductible temporary differences, unused tax losses and fair value reserves entries only if it is probable that future taxable profits (based on Group operational plans) are available to use those temporary differences and losses. The actual tax results in future periods may differ from the estimate made at the time the deferred taxes are recognized.

Other assumptions and estimates are disclosed in the respective notes relevant to the item where the assumptions or estimates were used for measurement.

4.5 Provisions for other liabilities and charges

The fast growth of Umicore's battery materials sales for transport applications in particular is increasing the Group's exposure to the automotive industry end market. This industry has a practice of applying warranty and recall settlements related to potential product quality events (irrespective of whether any legal obligation exists). In view thereof, Umicore continued in 2022 its dedicated provisioning model for battery materials as introduced in previous years.

Additional significant provisions for other liabilities and charges are related to onerous contracts. An onerous contract provision is recognised when the unavoidable cost of meeting the obligations under the contract exceed the economic benefits expected to be received under it.

As at 31 December 2022, the carrying amount of the provisions for other liabilities and charges amount to € 126.7 million (€ 89.4 million in 2021).

4.6 Provisions for uncertainty over income tax treatments

As mentioned under the note F2.20, Umicore makes a detail assessment of all tax uncertainties within the Group as per IFRIC 23. In the measurement of the uncertain tax positions, the Group has considered the statute of limitation taking into account the tax law and regulations that are applied in the correspondent country, resulting in a range of three to ten years. The resolution of the tax positions taken by the Group can take considerable period of time to conclude and, in some cases, it is difficult to predict the outcome. The estimates made reflect where the Group: is involved in routine tax audits; has identified potential tax exposures related to transfer pricing ; or is involved in discussions with tax authorities. The estimation of the tax liability and income tax expense includes the corresponding penalties and late payment interests. Most of the uncertain tax positions are measured using the expected value, consisting to the sum of the probability - weighted outcome of a range of potential outcomes, nevertheless the most likely amount has also been used in a limited number of uncertain tax positions. The large majority of the provision for uncertainty over tax treatments is related to various individual uncertainties whether the tax authority will accept a certain applied transfer pricing methodology or to various individual uncertainties related to the deductibility of an amount for tax purposes. Group provision for uncertainty over tax treatments at December 2022 amounting to € 108.9 million (2021 : € 101.1 million) results in an increase of those liabilities by € 7.8 million. This provision was booked under Income Tax Payable in the consolidated balance sheet. The movement of the year corresponds to remeasurement and roll-forward of existing uncertain tax positions; reversal of uncertain tax position based on mitigation actions taken and on the expiration of the statute of limitation; and the recognition of newly uncertain tax positions.

F5 Group companies

Below is a list of the main operating companies included in the consolidated financial statements

		% INTEREST IN 2021	% INTEREST IN 2022
For continuing operations			
Argentina	Umicore Argentina S.A.	100.00	**100.00**
Australia	Umicore Marketing Services Australia Pty Ltd.	100.00	**100.00**
Austria	Oegussa GmbH	100.00	**100.00**
Belgium	Todini (BE 0834.075.185)	100.00	**100.00**
-	Umicore Financial Services (BE 0428.179.081)	100.00	**100.00**
-	Umicore Marketing Services Belgium (BE 0402.964.625)	100.00	**100.00**
-	Umicore Specialty Materials Brugge (BE 0405.150.984)	100.00	**100.00**
-	Umicore Holding Belgium (BE 0731.571.921)	100.00	**100.00**
Brazil	Coimpa Industrial Ltda	100.00	**100.00**
-	Umicore Brasil Ltda	100.00	**100.00**
-	Clarex S.A.	100.00	**100.00**
-	Umicore Shokubai Brasil Industrial Ltda	60.00	**60.00**
-	Umicore Catalisadores Ltda.	100.00	**100.00**
Canada	Umicore Canada Inc.	100.00	**100.00**
-	Umicore Autocat Canada Corp.	100.00	**100.00**
-	Umicore Precious Metals Canada Inc.	100.00	**100.00**
-	Umicore Rechargeable Battery Materials Canada Inc	100.00	**100.00**
China	Umicore Marketing Services (Shanghai) Co., Ltd.	100.00	**100.00**
-	Umicore Marketing Services (Hong Kong) Ltd.	100.00	**100.00**
-	Umicore Autocat (China) Co. Ltd.	100.00	**100.00**
-	Umicore Changxin Surface Technology (Jiangmen) Co., Ltd.	80.00	**80.00**
-	Jiangmen Umicore Changxin New Materials Co., Ltd.	90.00	**90.00**
-	Umicore Shokubai (China) Co Ltd	60.00	**60.00**
-	Umicore Platinum Engineered Materials (Suzhou) Co., Ltd.	100.00	**100.00**
-	Umicore Catalyst (China) Co., Ltd.	100.00	**100.00**
Denmark	Umicore Denmark ApS	100.00	**100.00**
Finland	Umicore Finland OY	100.00	**100.00**
France	Umicore France S.A.S.	100.00	**100.00**
-	Umicore IR Glass S.A.S.	100.00	**100.00**
-	Umicore Autocat France S.A.S.	100.00	**100.00**
-	Umicore Specialty Powders France S.A.S.	100.00	**100.00**
-	Umicore Marketing Services France S.A.S.	100.00	**100.00**
-	Todini France S.A.S.	100.00	**100.00**
Germany	Umicore AG & Co. KG (*)	100.00	**100.00**
-	Agosi AG	100.00	**100.00**
-	Umicore Galvanotechnik GmbH	100.00	**100.00**
-	Todini Deutschland GmbH	100.00	**100.00**
-	Umicore Shokubai Germany GmbH	60.00	**60.00**
Italy	Todini and CO. S.P.A.	100.00	**100.00**
India	Umicore Autocat India Pvt LTD	100.00	**100.00**
-	Umicore India Private Limited	100.00	**100.00**
-	Todini Metals and Chemicals India Private Limited	70.00	**70.00**
Japan	Umicore Japan KK	100.00	**100.00**
-	Umicore Shokubai Japan Co Ltd	60.00	**60.00**
South Korea	Umicore Korea Ltd.	100.00	**100.00**
-	Umicore Marketing Services Korea Co., Ltd.	100.00	**100.00**
-	Umicore Catalysis Korea LLC	100.00	**100.00**
Liechtenstein	Umicore Thin Film Products AG	100.00	**100.00**
Luxemburg	Umicore International	100.00	**100.00**
-	Umicore Autocat Luxembourg	100.00	**100.00**
-	Umicore Shokubai	60.00	**60.00**
Mexico	Todini Atlántica S.A. de C.V.	70.00	**70.00**
Netherlands	Schöne Edelmetaal BV	100.00	**100.00**
Philippines	Umicore Specialty Chemicals Subic Inc.	78.20	**78.20**
Poland	Umicore Autocat Poland sp. z o.o.	100.00	**100.00**

		% INTEREST IN 2021	% INTEREST IN 2022
-	Todini Europe sp. z o.o.	70.00	**70.00**
-	Umicore Poland Sp. z o.o.	100.00	**100.00**
Portugal	Umicore Marketing Services Lusitana Metais Lda	100.00	**100.00**
South Africa	Umicore Marketing Services Africa (Pty) Ltd.	100.00	**100.00**
-	Umicore Catalyst South Africa (Pty) Ltd.	65.00	**65.00**
Spain	Todini Quimica Ibérica, S.L.	100.00	**100.00**
Sweden	Umicore Autocat Sweden AB	100.00	**100.00**
Switzerland	Allgemeine Suisse SA	100.00	**100.00**
Taiwan	Umicore Thin Film Products Taiwan Co Ltd	100.00	**100.00**
Thailand	Umicore Precious Metals Thailand Ltd.	100.00	**100.00**
-	Umicore Autocat (Thailand) Co., Ltd.	100.00	**100.00**
-	Umicore Shokubai (Thailand) Co., Ltd.	60.00	**60.00**
United Kingdom	Umicore Coating Services Ltd.	100.00	**100.00**
-	Umicore Marketing Services UK Ltd	100.00	**100.00**
USA	Umicore USA Inc.	100.00	**100.00**
-	Umicore Autocat USA Inc.	100.00	**100.00**
-	Umicore Precious Metals NJ LLC	100.00	**100.00**
-	Umicore Precious Metal Chemistry USA LLC	100.00	**100.00**
-	Umicore Precious Metals USA Inc.	100.00	**100.00**
-	Umicore Optical Materials USA Inc.	100.00	**100.00**
-	Umicore Shokubai USA Inc	60.00	**60.00**
-	Palm Commodities International	100.00	**100.00**
-	Umicore Electrical Materials USA Inc.	100.00	**100.00**
-	Umicore Catalyst USA, LLC	100.00	**100.00**

(*) Umicore AG & Co. KG, with its registered office in Hanau, Germany, is exempt from its obligation to prepare, audit and publish annual and consolidated financial statements and a management and group management report in accordance with sections 264b and 291 of the German Commercial Code (HGB).

F6 Foreign currency measurement

For the main currencies applicable within the Group's consolidated entities and investments, the prevailing rates used for translation into the Group's presentation currency (EUR), are as set out below. All subsidiaries, associates and joint-ventures have as functional currency the currency of the country in which they operate, except for Element Six Abrasives (United Kingdom) where the functional currency is the US dollar (USD).

		CLOSING RATES		AVERAGE RATES	
		2021	2022	2021	2022
American Dollar	USD	1.133	**1.067**	1.183	**1.053**
Indian Rupee	INR	84.229	**88.171**	87.439	**82.686**
Canadian Dollar	CAD	1.439	**1.444**	1.483	**1.369**
Hong Kong Dollar	HKD	8.833	**8.316**	9.193	**8.245**
Japanese Yen	JPY	130.380	**140.660**	129.877	**138.027**
Brazilian Real	BRL	6.320	**5.565**	6.381	**5.439**
South African Rand	ZAR	18.063	**18.099**	17.477	**17.209**
Chinese Yuan	CNY	7.195	**7.358**	7.628	**7.079**
Thai Baht	THB	37.653	**36.835**	37.837	**36.856**
Korean Won (100)	KRW	13.464	**13.441**	13.541	**13.581**
Polish Zloty	PLN	4.597	**4.681**	4.565	**4.686**

F7 Segment information

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Thousands of Euros	Notes	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated	Eliminations	Total Continued
Total segment turnover		**8,154,850**	**3,533,830**	**15,609,350**	**34,849**	**(3,278,440)**	**24,054,439**
External turnover		7,989,680	3,478,360	12,551,550	34,849	-	**24,054,439**
Inter-segment turnover		165,170	55,470	3,057,800	-	(3,278,440)	**-**
Total segment revenues (excluding metals) (*)		**1,687,430**	**1,001,155**	**1,108,140**	**-**	**(5,920)**	**3,790,805**
External revenues (*)		1,685,690	1,000,915	1,104,200	-	-	**3,790,805**
Inter-segment revenues		1,740	240	3,940	-	(5,920)	**-**
Result from operating activities	**F9**	**307,811**	**132,841**	**528,640**	**(90,355)**	**-**	**878,938**
Adjusted		326,365	131,522	572,927	(79,981)	-	**950,833**
Adjustments		(18,554)	1,319	(44,287)	(10,374)	-	**(71,896)**
Share in result of companies accounted for using the equity method	**F9**	**-**	**7,659**	**-**	**9,688**	**-**	**17,347**
Adjusted		-	7,659	-	12,884	-	**20,543**
Adjustments		-	-	-	(3,197)	-	**(3,197)**
EBIT	**F9**	**307,811**	**140,500**	**528,640**	**(80,668)**	**-**	**896,284**
Adjusted		326,365	139,181	572,927	(67,097)	-	**971,377**
Adjustments		(18,554)	1,319	(44,287)	(13,571)	-	**(75,092)**
Depreciation and amortisation	**F9**	**75,180**	**122,613**	**66,921**	**14,811**	**-**	**279,526**
Adjusted		75,229	122,613	66,921	14,811	-	**279,576**
EBITDA	**F9**	**382,991**	**263,114**	**595,562**	**(65,856)**	**-**	**1,175,810**
Adjusted		401,595	261,795	639,848	(52,286)	-	**1,250,952**
Consolidated total assets		**3,356,473**	**4,364,500**	**1,426,498**	**1,825,075**	**(1,927,305)**	**9,045,241**
Segment assets		3,356,473	4,316,864	1,426,498	1,717,571	(1,927,305)	**8,890,101**
Investments accounted for using the equity method		-	47,636	-	107,504	-	**155,140**
Consolidated total liabilities		**1,858,320**	**2,075,177**	**973,614**	**2,898,161**	**(1,927,305)**	**5,877,967**
Capital Employed at 31/12 of previous year		1,727,443	2,133,138	446,861	149,138	-	**4,456,580**
Capital Employed at 30/06		1,846,061	2,191,046	236,829	77,507	-	**4,351,443**
Capital Employed at 31/12	F31	1,551,494	2,275,465	460,723	89,213	-	**4,376,895**
Average Capital Employed in first half year	F31	1,786,752	2,162,092	341,845	113,323	-	**4,404,011**
Average Capital Employed in second half year	F31	1,698,778	2,233,255	348,776	83,360	-	**4,364,169**
Average Capital Employed for the period	**F31**	**1,742,765**	**2,197,674**	**345,310**	**98,341**	**-**	**4,384,090**
ROCE	F31	18.73%	6.33%	165.92%	-68.23%	0.00%	**22.16%**
Capital expenditure	**F34**	**70,052**	**218,674**	**83,097**	**16,774**	**-**	**388,596**
Total R&D expenditure	**F9**	**141,592**	**63,518**	**13,164**	**26,939**	**-**	**245,213**
R&D recognized in operating expenses	F9	132,726	49,903	13,164	21,590	-	**217,383**
R&D capitalized as intangible assets	F34	8,867	13,614	-	5,349	-	**27,830**

(*) Revenues of 2021 and 2022 have been restated to exclude the pass-through value of the purchased lithium and manganese

BUSINESS GROUP INFORMATION 2022

Thousands of Euros	Notes	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated	Eliminations	Total Continued
Total segment turnover		**7,737,980**	**4,974,110**	**15,337,950**	**44,233**	**(2,658,750)**	**25,435,523**
External turnover		7,570,330	4,957,480	12,863,480	44,233	-	**25,435,523**
Inter-segment turnover		167,650	16,630	2,474,470	-	(2,658,750)	**-**
Total segment revenues (excluding metals) (*)		**1,776,470**	**1,277,547**	**1,106,600**	**-**	**(5,420)**	**4,155,197**
External revenues (*)		1,775,140	1,277,397	1,102,660	-	-	**4,155,197**
Inter-segment revenues		1,330	150	3,940	-	(5,420)	**-**
Result from operating activities	F9	**330,609**	**163,597**	**462,711**	**(138,250)**	**-**	**818,667**
Adjusted		341,850	161,500	462,854	(117,769)	-	**848,435**
Adjustments		(11,241)	2,096	(143)	(20,481)	-	**(29,768)**
Share in result of companies accounted for using the equity method	F9	**-**	**4,929**	**-**	**8,545**	**-**	**13,473**
Adjusted		-	4,929	-	11,275	-	**16,204**
Adjustments		-	-	-	(2,731)	-	**(2,731)**
EBIT	F9	**330,609**	**168,525**	**462,711**	**(129,705)**	**-**	**832,140**
Adjusted		341,850	166,429	462,854	(106,495)	-	**864,639**
Adjustments		(11,241)	2,096	(143)	(23,212)	-	**(32,499)**
Depreciation and amortisation	F9	**76,952**	**123,778**	**69,300**	**15,877**	**-**	**285,907**
Adjusted		76,952	123,778	69,300	15,877	-	**285,907**
EBITDA	F9	**407,561**	**292,303**	**532,011**	**(113,828)**	**-**	**1,118,047**
Adjusted		418,802	290,207	532,154	(90,618)	-	**1,150,545**
Consolidated total assets		**2,934,242**	**5,431,475**	**1,389,803**	**1,895,611**	**(1,708,759)**	**9,942,372**
Segment assets		2,934,242	5,380,156	1,389,803	1,787,987	(1,708,759)	**9,783,429**
Investments accounted for using the equity method		-	51,319	-	107,624	-	**158,943**
Consolidated total liabilities		**1,423,712**	**2,670,793**	**1,040,149**	**2,950,427**	**(1,708,759)**	**6,376,322**
Capital Employed at 31/12 of previous year	F31	1,551,494	2,275,465	460,723	89,213	-	**4,376,895**
Capital Employed at 30/06	F31	1,486,142	2,483,699	425,709	79,205	-	**4,474,755**
Capital Employed at 31/12	F31	1,563,571	2,750,911	346,513	55,001	-	**4,715,996**
Average Capital Employed in first half year	F31	1,518,818	2,379,582	443,216	84,209	-	**4,425,825**
Average Capital Employed in second half year	F31	1,524,856	2,617,305	386,111	67,103	-	**4,595,375**
Average Capital Employed for the period	F31	**1,521,837**	**2,498,444**	**414,664**	**75,656**	**-**	**4,510,600**
ROCE	F31	22.46%	6.66%	111.62%	-140.76%	0.00%	**19.17%**
Capital expenditure	F34	**67,358**	**295,709**	**81,332**	**25,479**	**-**	**469,878**
Total R&D expenditure	F9	**139,088**	**106,519**	**23,837**	**46,422**	**-**	**315,866**
R&D recognized in operating expenses	F9	133,030	91,513	23,503	46,407	-	**294,453**
R&D capitalized as intangible assets	F34	6,058	15,005	334	15	-	**21,412**

(*) Revenues of 2021 and 2022 have been restated to exclude the pass-through value of the purchased lithium and manganese

Segment information is presented in respect of the Group's business segments as defined below.

The segment results, assets and liabilities include items directly attributable to the segment as well as those elements that can reasonably be allocated to a segment.

The pricing of inter-segment sales is based on an arm's length transfer pricing system. In the absence of relevant market price references, 'cost plus' mechanisms are used. Segment turnover and revenue (without metals) is taking into account intragroup operations. Those are mainly related to recycling services and sales of refined metal from the recycling segment to the other group segments and are important to assess the performance of the segments concerned.

Since these transactions cannot be considered as external operations, they are eliminated at the Group level, to present a net position. Eliminations of total assets and total liabilities represent the intra-segment eliminations as well as the inter-segment eliminations.

The Group's business segments have no single external customer that amounts to 10 per cent or more of the Group's revenue.

Umicore determined segments as the accurate level of detail to split the product sales since the underlying business, competences and technologies, application and product characteristics and customer portfolio within each individual segment are similar. Moreover, obtaining information at a more disaggregated level would result in excessive costs and efforts compared to the added value for an external reader of the consolidated financial statements.

GEOGRAPHICAL INFORMATION 2021

Thousands of Euros	Notes	Europe	of which Belgium	Asia-Pacific	North America	South America	Africa	Total
Total segment turnover		12,676,355	213,003	6,422,284	3,761,205	1,010,605	183,991	**24,054,439**
Total non current assets		1,487,101	592,688	1,200,470	122,993	51,229	4,283	**2,866,076**
Capital expenditure	F34	253,053	102,104	108,851	16,984	9,213	496	**388,596**
Employee compensation & benefits		613,163	329,680	138,417	71,916	21,497	8,147	**853,140**
Income taxes		88,603	42,066	40,374	17,440	28,557	4,070	**179,044**

GEOGRAPHICAL INFORMATION 2022

Thousands of Euros	Notes	Europe	of which Belgium	Asia-Pacific	North America	South America	Africa	Total
Total segment turnover		13,050,441	158,623	6,399,746	4,618,198	1,151,961	215,177	**25,435,523**
Total non current assets		1,656,524	618,814	1,189,977	128,273	70,002	3,760	**3,048,536**
Capital expenditure	F34	325,307	100,929	109,657	14,588	19,756	570	**469,878**
Employee compensation & benefits		637,061	347,680	152,030	81,087	28,786	7,542	**906,507**
Income taxes		69,068	6,674	5,630	30,972	26,463	5,467	**137,600**

Total non current assets by region does not include deferred tax assets, loans granted, investments accounted for using the equity method and assets related to employee benefits.

BUSINESS GROUPS

The Group is organized into the following reporting segments:

CATALYSIS

The segment includes the Automotive Catalysts, Precious Metals Chemistry and Fuel Cell & Stationary Catalysts business units. Catalysis provides automotive catalysts for gasoline and diesel light and heavy-duty diesel applications, including on-road and non-on road vehicles. The business group also offers stationary catalysis for industrial emissions control and produces precious metals-based compounds and catalysts for use in fuel cell applications and in the pharmaceutical and fine chemicals industries.

ENERGY & SURFACE TECHNOLOGIES

The segment includes the Cobalt & Specialty Materials, Electro-Optic Materials, Metal Deposition Solutions and Rechargeable Battery Materials business units. Energy & Surface Technologies' products are found in applications used in the production and storage of clean energy and in a range of applications for surface technologies that bring specific properties and functionalities to end products. All the activities offer a closed loop service for the customers. This segment includes the associates Ganzhou Yi Hao Umicore Industries and Jiangmen Chancsun Umicore Industry.

RECYCLING

The segment consists of the business units Precious Metals Refining, Jewelry & Industrial Metals, Precious Metals Management and Battery Recycling Solutions. Recycling treats complex waste streams containing precious and other specialty metals. The recycling operations can recover 20 of these metals from a wide range of input materials ranging from industrial residues to end-of-life materials.

Other activities include production of precious metals-based materials that are essential for applications as diverse as high-tech glass production, electrics and electronics.

CORPORATE

Corporate covers corporate activities, shared operational functions and the Group's Research, Development & Innovation unit. Umicore's shareholdings in Element Six Abrasives and Ieqsa are also included in Corporate.

In the geographical segment information, the figures presented as non-current assets exclude the amounts for long term investments, non-current loans granted, deferred tax assets and assets for employee benefits as required by IFRS 8. Performance of the segments is reviewed by the chief operating decision maker based on the adjusted EBIT/ result from operating activities. As illustrated in the table above, the difference between the adjusted result from operating activities and the result of operating activities as presented in the Consolidated income statement consists of the adjustments for which definitions are given in the glossary.

Associate companies are allocated to the business group with the closest fit from a market segment perspective.

F8 Business combinations and acquisitions of associates and joint ventures

There were no business combinations during the year 2022.

F9 Result from operating activities

Thousands of Euros	2021	2022
Sales	23,901,842	**25,266,272**
Services	152,597	**169,251**
Turnover	**24,054,439**	**25,435,523**
Re-invoicing of costs to third parties	61,307	**123,929**
Operating grants	26,031	**20,275**
Royalties and license fees	11,264	**13,827**
Emission rights income	8,945	**16,040**
Insurance recovery	18,406	**8,871**
Various interests and penalties for late payments	880	**761**
Gains on disposals of assets	1,057	**3,201**
Translation difference on intra-group eliminations	(1,361)	**(11,389)**
Tax incentives	5,294	**3,707**
Tax credits	39,779	**2,329**
Other	5,318	**3,001**
Other operating income	**176,919**	**184,552**
OPERATING INCOME OF CONTINUING OPERATIONS	**24,231,358**	**25,620,075**
Raw materials and consumables	**(21,644,346)**	**(22,875,549)**
Payroll and related benefits	**(853,140)**	**(906,507)**
Depreciation and amortisation	(279,526)	**(285,907)**
Impairment loss	(48,504)	**(24,931)**
Write-down on inventory and impairment of financial assets	(10,747)	**(17,544)**
Depreciation and impairments	**(338,777)**	**(328,382)**
Services and outsourced refining and production costs	(422,798)	**(547,584)**
Royalties, licence fees, consulting and commissions	(57,820)	**(81,667)**
Taxes other than income taxes	(22,960)	**(29,748)**
Provisions (increase/use and reversal)	(13,477)	**(35,944)**
Losses on disposal of assets	(258)	**(1,678)**
Other operating expenses	**(517,313)**	**(696,621)**
OPERATING EXPENSES OF CONTINUING OPERATIONS	**(23,353,576)**	**(24,807,059)**

Turnover refers to turnover from customers as per IFRS 15. The further disaggregation is detailed in note F7. As described in the accounting policy 2.21, the revenue from contracts with customers are mainly recognized at a point in time. The increase in turnover in 2022 is mainly related to the increase of metal prices and to a volume effect.

Services mainly include the revenues from tolling contracts.

Tax credits mainly concerns the tax credits in Brazil resulting from a landmark ruling by the Brazilian Supreme Court in May 2021 covering multiple years.

The increase in raw materials and consumables used is mainly related to the increase of metal prices and a volume effect. Raw materials and consumables include primarily the value of the purchased metals. Utilities (water, gas and electricity) represent for € 250.8 million in 2022 (€ 144.2 million in 2021).

The impairment losses have decreased compared to 2021. In 2022, those impairments are mainly related to the restructuring of the stationary catalyst business in Denmark and to a lesser extent to impairments of capitalized development costs.

The line provisions contains the movements in the environmental provisions and in the provisions for other liabilities and charges which are detailed in the notes F29 and F30.

R&D EXPENDITURE

Thousands of Euros	Notes	2021	2022
R&D recognized in other operating expenses		217,383	**294,453**
R&D capitalized as intangible assets	F14	27,830	**21,412**
TOTAL R&D EXPENDITURE FOR CONTINUING OPERATIONS		**245,213**	**315,866**

Total R&D expenditure was € 315.9 million in the fully consolidated companies in 2022 (€ 245.2 million in 2021). The part of the R&D expenditures that is directly recognized in operating expenses amounts to € 294.4 million in 2022 (€ 217.4 million in 2021).

ADJUSTMENTS INCLUDED IN THE RESULT

			2021			2022		
Thousands of Euros	**Notes**		**Total**	**Adjusted**	**Adjustments**	**Total**	**Adjusted**	**Adjustments**
Turnover		a	24,054,439	24,054,439	-	**25,435,523**	**25,435,523**	**-**
Other operating income		b	176,919	137,133	39,786	**184,552**	**181,849**	**2,703**
Operating income		**c=a+b**	**24,231,358**	**24,191,572**	**39,786**	**25,620,075**	**25,617,372**	**2,703**
Raw materials and consumables		d	(21,644,346)	(21,644,346)	-	**(22,875,549)**	**(22,875,549)**	**-**
Payroll and related benefits		e	(853,140)	(852,147)	(993)	**(906,507)**	**(906,393)**	**(114)**
Depreciation and impairments		f	(338,777)	(298,187)	(40,590)	**(328,382)**	**(316,156)**	**(12,227)**
of which depreciation and amortisation		g	(279,526)	(279,576)	50	**(285,907)**	**(285,907)**	**-**
Other operating expenses		h	(517,313)	(446,256)	(71,057)	**(696,621)**	**(670,141)**	**(26,480)**
Operating expenses		**i=d+e+f+h**	**(23,353,576)**	**(23,240,935)**	**(112,641)**	**(24,807,060)**	**(24,768,239)**	**(38,821)**
Income (loss) from other financial assets		j	1,156	196	959	**5,652**	**(697)**	**6,349**
Result from operating activities		**k=c+i+j**	**878,938**	**950,833**	**(71,896)**	**818,667**	**848,435**	**(29,768)**
Share in result of companies accounted for using the equity method		l	17,347	20,543	(3,197)	**13,473**	**16,204**	**(2,731)**
EBIT		**m=k+l**	**896,284**	**971,377**	**(75,092)**	**832,140**	**864,639**	**(32,499)**
EBITDA		**n=m-g**	**1,175,810**	**1,250,952**	**(75,142)**	**1,118,047**	**1,150,546**	**(32,499)**
Net financial result	F11	o	(90,292)	(99,586)	9,294	**(122,139)**	**(124,792)**	**2,653**
Income taxes	F13	p	(179,044)	(196,309)	17,266	**(137,600)**	**(144,933)**	**7,333**
Profit (loss) of the period		**q=m+o+p**	**626,949**	**675,482**	**(48,533)**	**572,401**	**594,914**	**(22,513)**
of which minority share		r	7,990	7,990	-	**2,523**	**1,855**	**668**
of which Group share		s=q-r	618,959	667,492	(48,533)	**569,878**	**593,059**	**(23,181)**
Effective tax rate		t=p/(k+o)	23%	23%	28%	**20%**	**20%**	**27%**

ADJUSTMENTS PER SEGMENT AND NATURE INCLUDED IN THE RESULT

	2021					2022				
Thousands of Euros	**Total**	**Catalysis**	**Energy & Surface Technologies**	**Recycling**	**Corporate & Unallocated**	**Total**	**Catalysis**	**Energy & Surface Technologies**	**Recycling**	**Corporate & Unallocated**
Other operating income	**39,786**	30,312	1,877	7,597	-	**2,703**	**2,389**	**4**	**214**	**97**
Operating income	**39,786**	**30,312**	**1,877**	**7,597**	**-**	**2,703**	**2,389**	**4**	**214**	**97**
Payroll and related benefits	**(993)**	(993)	-	-	-	**(114)**	**(114)**	**-**	**-**	**-**
Depreciation and impairments	**(40,590)**	(40,406)	-	(185)	-	**(12,227)**	**(12,157)**	**-**	**(69)**	**-**
Other operating expenses	**(71,057)**	(7,467)	(1,522)	(51,699)	(10,370)	**(26,480)**	**(1,359)**	**2,093**	**(287)**	**(26,927)**
Operating expenses	**(112,641)**	**(48,866)**	**(1,522)**	**(51,883)**	**(10,370)**	**(38,821)**	**(13,630)**	**2,093**	**(357)**	**(26,927)**
Income (loss) from other financial assets	**959**	-	964	-	(4)	**6,349**	**-**	**-**	**-**	**6,349**
Result from operating activities	**(71,896)**	**(18,554)**	**1,319**	**(44,287)**	**(10,374)**	**(29,768)**	**(11,241)**	**2,096**	**(143)**	**(20,481)**
Share in result of companies accounted for using the equity method	**(3,197)**	-	-	-	(3,197)	**(2,731)**	**-**	**-**	**-**	**(2,731)**
EBIT	**(75,092)**	**(18,554)**	**1,319**	**(44,287)**	**(13,571)**	**(32,499)**	**(11,241)**	**2,096**	**(143)**	**(23,212)**
Related to restructuring	**(33,879)**	(31,281)	41	110	(2,749)	**(1,862)**	**(2,884)**	**3,093**	**(64)**	**(2,006)**
Related to environment	**(58,251)**	-	-	(48,836)	(9,415)	**(26,500)**	**-**	**(1,000)**	**508**	**(26,008)**
Related to asset impairments	**(17,857)**	(17,585)	-	-	(272)	**(12,255)**	**(11,949)**	**-**	**-**	**(306)**
Other	**34,895**	30,312	1,278	4,439	(1,134)	**8,118**	**3,593**	**4**	**(587)**	**5,108**

Adjustments had a negative impact of € 32 million on EBIT of which € 20 million was already accounted for in the first half. These adjustments were mainly related to the increase of some environmental provisions linked to legacy remediation initiatives and include € 12 million of restructuring charges in the stationary catalyst business in Denmark.

Including positive adjustments to financial and tax items of respectively € 3 million and € 7 million, the total adjustments to the profit of the period corresponded to negative impact of € 23 million.

F10 Payroll and related benefits

Thousands of Euros	2021	2022
Wages, salaries and direct social advantages	(640,870)	**(681,056)**
Other charges for personnel	(28,834)	**(42,349)**
Temporary staff	(10,189)	**(10,357)**
Share-based payments	(14,255)	**(11,824)**
Employee salaries	**(694,148)**	**(745,586)**
Employer's social security	**(108,765)**	**(119,003)**
Defined benefit contributions	(20,581)	**(34,179)**
Contribution to defined contribution plans	(16,893)	**(17,443)**
Employer's voluntary contributions (other)	(3,064)	**(3,406)**
Pensions paid directly to beneficiaries	(3,628)	**(4,733)**
Provisions for employee benefits (-increase / + use and reversal)	(6,063)	**17,842**
Pensions and other benefits	**(50,229)**	**(41,919)**
PAYROLL AND RELATED BENEFITS OF CONTINUING OPERATIONS	**(853,140)**	**(906,507)**

The defined contribution plans of the Group in some countries like the USA, Canada, South Africa and Germany are directly recognized in the Consolidated income statement under the line "Contribution to defined contribution plans".

The cash discounts that the authorities give back to Umicore Belgium on the social security contributions, relating to incentives regarding a.o. shift premiums, overtime and R&D are disclosed under the item "Employer's social security".

AVERAGE HEADCOUNT IN CONSOLIDATED COMPANIES

	2021	2022
Executives and managerial staff	2,045	**2,156**
Non managers	8,910	**9,151**
Total for continuing operations	10,955	**11,307**

SHARE-BASED PAYMENTS

Thousands of Euros	Notes	2021	2022
Date of grant		11/02/2021	**16/02/2022**
Share price at the date of grant (Belgium & Other)	F28	47.47	**33.86**
Number of stock options granted	F28	1,108,500	**1,289,064**
Valuation model		Present Economic Value	
Assumed volatility (% pa)		27.50	**27.50**
Risk-free interest rate (% pa)		(0.710)	**0.110**
Dividend increase (% pa)		10.00	**10.00**
Rate of pre-vesting forfeiture (%pa)		NA	**NA**
Rate of post-vesting leaving (%pa)		5.00	**2.00**
Minimum gain threshold (% pa)		15.00	**15.00**
Proportion who exercise given minimum gain achieved (% pa)		100.00	**100.00**
Fair value per granted instrument determined at the grant date (EUR)		8.56	**6.43**
Total fair value of options granted		**9,489**	**8,289**
10.000 shares granted at 49,72 EUR		497	**-**
52.000 shares granted at 47,08 EUR		2,448	**-**
48.500 shares granted at 37,55 EUR		1,821	**-**
49.811 shares granted at 33,22 EUR		-	**1,655**
43.459 shares granted at 34,23 EUR		-	**1,488**
10.000 shares granted at 38,22 EUR		-	**382**
334 shares granted at 31,75 EUR		-	**11**
Total fair value of shares granted		**4,767**	**3,535**
SHARE-BASED PAYMENTS		**14,255**	**11,824**

The Group recognized a share-based payment expense of € 11.8 million during the year.

The part of this expense related to stock options is calculated by an external actuary using the Present Economic Value model which takes into account all features of the stock option plans and the volatility of the underlying stock. This volatility has been determined using the historical volatility of the Group shareholders' return over different averaging periods and different terms. For the calculation of the option value based on the lattice model, weekly steps were introduced, therefore focusing on a weekly term of volatility. The retained volatility assumption was set at 27.5% to reflect the increase of observed volatility. No other market condition has been included in the basis of calculation of fair market value.

The free share part of the expense is valued at the market price of the shares at the grant date. In 2022, shares have been granted mainly to senior management resulting in an expense of € 3.5 million.

F11 Net financial result

Thousands of Euros	2021	2022
Interest income	12,962	**7,095**
Interest expenses	(64,460)	**(81,396)**
Discounting of non-current provisions	(3,046)	**(6,047)**
Foreign exchange gains and losses	(23,480)	**(27,698)**
Other financial income	942	**184**
Other financial expenses	(13,210)	**(14,277)**
TOTAL OF CONTINUING OPERATIONS	**(90,292)**	**(122,139)**

All interest income and expenses are recognized using the effective interest rate method.

The 2022 interest income reached € 7.1 million benefiting from the € 2.7 million impact related to the interests on the tax credit in Brazil (9.3 million in 2021), resulting from a landmark ruling by the Brazilian Supreme Court in May 2021 and covering multiple years. Those related interests have been taken in adjustments (see note F9). The interest expenses amounted to € 81.4 million. Those expenses included € 10.2 million of interest expenses (theoretical phantom interests) on the debt component of the convertible debt (€ 10.0 million in 2021) and € 1.1 million of interests related to leases as per IFRS 16. The increase of the year mainly comes from interest expenses on other short term loans.

The discounting of non-current provisions relates mainly to employee benefits provisions and to a lesser extent to environmental provisions. This amount is influenced by the present value of these liabilities, which in turn is influenced by changes in the discount rate, by the cash-out profile and by the recognition of new non-current liabilities. Most of the discounting results in 2022 were booked in Germany and to a lesser extent in Belgium.

Foreign exchange results, mainly explained by the cost of forward points in hedging instruments, include realized exchange results and the unrealized translation adjustments on monetary items using the closing rate of the period. They also include fair value gains and losses on other currency financial instruments (see Note F33).

Other financial expenses include payment discounts, bank expenses and other financial fees incurred.

F12 Income from other financial investments

Thousands of Euros	2021	2022
Capital gains and losses on disposal of financial investments	946	**6,210**
Dividend income	210	**251**
Interest income from financial assets	-	**3**
Impairment results on financial investments	-	**(811)**
TOTAL FOR CONTINUING OPERATIONS	**1,156**	**5,652**

Capital gain and losses on disposal of financial investments includes € 6.2 million of profit linked to the disposal of Umicore's Zinc Chemicals activities which occurred in 2016 and for which Umicore was contractually entitled to some earn-out that materialised in 2022.

F13 Income taxes

Thousands of Euros	2021	2022
Income tax expense		
Recognized in the income statement		
Current income tax	(201,870)	**(244,991)**
Deferred income tax	22,826	**107,391**
Total tax expense for continuing operations	**(179,044)**	**(137,600)**
RELATIONSHIP BETWEEN TAX EXPENSE (INCOME) AND ACCOUNTING PROFIT		
Result from operating activities	878,938	**818,667**
Financial result	(90,292)	**(122,139)**
Profit (loss) before income tax of consolidated companies	**788,646**	**696,528**
Weighted average theoretical tax rate (%)	24.77	**27.62**
Income tax calculated at the weighted average theoretical tax rate for continuing operations	**(195,312)**	(192,362)
Tax effect of :		
Expenses not deductible for tax purposes	(7,395)	**(6,056)**
Tax-exempted revenues	303	**4,497**
Dividends from consolidates companies & Associates	(66)	**(18)**
Gains & Losses taxed at a reduced rate	36	**592**
Tax incentives and tax holidays	26,903	**49,890**
Tax computed on other basis	563	**(3,868)**
Utilisation of previously unrecognized tax losses	4,130	**4,182**
Write down (or reverse of previous write down) of DTA	(6,475)	**(1,371)**
Change in applicable tax rate	(300)	**15,522**
Other tax credits (excluding R&D tax credits)	1,058	**7,072**
Non recoverable foreign withholding taxes	(7,943)	**(7,615)**
Previous years adjustments	(3,299)	**(13,313)**
Other (including IFRIC 23)	8,753	**5,248**
TAX EXPENSE AT THE EFFECTIVE TAX RATE FOR THE YEAR	**(179,044)**	**(137,600)**

The weighted average theoretical tax rate evolved from 24.8% in 2021 to 27.6% in 2022. Excluding the impact of adjustments, the adjusted effective tax rate for 2022 was 20.0%. This compares to the 23.1% in 2021.

F14 Intangible assets other than goodwill

Thousands of Euros	Development expenses capitalized	Concessions, patents, licences, etc.	Software	CO2 emission rights	Other intangible assets	Total
At the beginning of previous year						
Gross value	157,704	98,840	150,989	15,898	103,637	**527,068**
Accumulated amortisation	(119,187)	(64,134)	(124,295)	-	(28,556)	**(336,172)**
Net book value at the beginning of previous year	**38,517**	**34,707**	**26,694**	**15,898**	**75,081**	**190,897**
. additions	8,867	842	1,435	8	25,702	**36,854**
. disposals	(553)	-	(26)	0	(45)	**(623)**
. amortisation charged (included in "Depreciation and impairments")	(9,424)	(8,890)	(8,119)	-	(4,691)	**(31,123)**
. impairment losses recognized (included in "Depreciation and impairments")	(5,099)	(17,381)	(274)	-	(214)	**(22,968)**
. emission rights allowances	-	-	-	1,979	-	**1,979**
. translation differences	(145)	5	329	(1)	533	**722**
. other movements	3,843	3,507	8,463	0	(10,287)	**5,526**
At the end of previous year	**36,006**	**12,790**	**28,503**	**17,884**	**86,079**	**181,263**
Gross value	156,213	104,755	158,921	17,884	116,012	**553,785**
Accumulated amortisation	(120,207)	(91,965)	(130,418)	-	(29,932)	**(372,522)**
Net book value at the end of previous year	**36,006**	**12,790**	**28,503**	**17,884**	**86,079**	**181,263**
. additions	6,226	294	3,535	-	22,375	**32,431**
. disposals	-	-	(5)	0	0	**(4)**
. amortisation charged (included in "Depreciation and impairments")	(9,057)	(5,548)	(8,282)	-	(4,377)	**(27,265)**
. impairment losses recognized (included in "Depreciation and impairments")	(11,969)	(3,659)	(66)	-	(334)	**(16,028)**
. emission rights allowances	-	-	-	8,329	-	**8,329**
. translation differences	(388)	(3)	(43)	0	267	**(166)**
. other movements	16,092	5	10,040	0	(19,747)	**6,391**
At the end of the year	**36,910**	**3,880**	**33,683**	**26,214**	**84,264**	**184,951**
Gross value	152,534	105,008	170,955	26,214	119,250	**573,961**
Accumulated amortisation	(115,624)	(101,128)	(137,272)	-	(34,986)	**(389,010)**
NET BOOK VALUE FOR CONTINUING OPERATIONS	**36,910**	**3,880**	**33,683**	**26,214**	**84,264**	**184,951**

In 2022, additions amounted to € 32.4 million and mainly contain capitalized expenses in internally generated developments for € 21.4 million (see note F9), of which € 15.2 million is included in “Other intangible assets” as intangible assets in progress. Additions mainly relate to capitalized development expenses in new battery materials technology & processes as well as capitalized expenses related to the renewal of a Group software. Impairment losses are mainly linked to impairment on selected capitalized development projects in Catalysis and impairment of IP's following the restructuring of the stationary catalyst business in Denmark. Net increase of emission right allowances amounts to € 8.3 million in 2022 (new grants € 17.2 million and settlement €-8.9 million). Other movements mainly include the transfer between intangible assets in progress (included under “other intangible assets”) and the other categories of intangible assets and transfers from tangible assets. The other intangible assets category contains intangible assets in progress for € 71.1 million (mainly capitalized development costs) but also some business portfolio and customers’ list acquired for € 12.4 million. There are no pledges on, or restrictions to, the title on intangible assets, other than disclosed in note F35.

F15 Goodwill

Thousands of Euros	31/12/2021	31/12/2022
At the end of the previous year		
Gross value	165,627	**168,915**
Accumulated impairment losses	(9,637)	**(10,330)**
Net book value at the end of previous year	**155,990**	**158,585**
. impairment losses recognized (included in "Depreciation and impairment")	-	**(2,149)**
. translation differences	2,595	**1,979**
At the end of the year	**158,585**	**158,415**
Gross value	168,915	**171,495**
Accumulated impairment losses	(10,330)	**(13,080)**
NET BOOK VALUE FOR CONTINUING OPERATIONS	**158,585**	**158,415**

This table includes goodwill related to fully consolidated companies only. Goodwill relating to companies accounted for using the equity method is detailed in note F17.

The change of the period relates to the impairment of the goodwill related to the stationary catalyst business in Denmark partially offset by the translation differences.

The goodwill accounted in each of the CGU groups, but summarized by segment, is as follows:

Thousands of Euros	Catalysis	Energy & Surface Technologies	Recycling	Total
31/12/2021	**49,988**	**90,264**	**18,333**	**158,585**
31/12/2022	**47,795**	**92,297**	**18,322**	**158,415**

Management tests annually whether goodwill has suffered any impairment in accordance with the accounting policy stated in note F2. Such impairment tests are performed at a cash generating unit level, which may vary in scope from a total business unit to an individual plant but never a full segment scope. The recoverable amounts of cash-generating units to which goodwill is allocated have been determined based on value-in-use calculations by means of discounted cash flow modelling on the basis of the Group's operational plans which typically look forward 5 years, followed by a long term projection. On macroeconomic and external indicators such as currency and metal prices, the testing uses typically prevailing market conditions at the time the plans are drafted. The rates used are typically the ones observed on international exchanges in the last quarter of the year. Beside the impairment taken on the stationary catalyst business in Denmark, the 2022 goodwill impairment testing indicated sufficient headroom in the respective cash generating units and hence no other goodwill impairments were recognized. The 2022 impairment testing used an average tax rate of 25.0% (unchanged versus 2021) and a weighted average cost of capital post-tax of 7.7% (compared to 7.0% in 2021) . A uniform WACC rate was applied across cash generating units with unit-specific risk factors considered to be reflected in the underlying cash flow projections. Terminal values were determined on the basis of a perpetual growth rate of on average 2% (same as in 2021). Inflation rates were based on guidance from national and international institutes such as the NBB or ECB.

In this exercise, the Group has considered the potential impact of climate change (forecasts and cash flows used, expected live of property, plant and equipment, capital expenditures to meet net zero scope 1 and 2 greenhouse gas emissions).

F16 Property, plant and equipment

Thousands of Euros	Land and buildings	Plant, machinery and equipment	Furniture and vehicles	Other tangible assets	Construction in progress and advance payments	Total
At the beginning of previous year without leasing						
Gross value	1,242,294	2,478,662	260,590	23,522	508,033	**4,513,101**
Accumulated depreciation	(546,526)	(1,657,994)	(178,187)	(22,619)	-	**(2,405,326)**
Net book value at the beginning of previous year without leasing	**695,767**	**820,668**	**82,403**	**903**	**508,033**	**2,107,775**
. additions	76,361	42,349	14,979	16,148	229,435	**379,272**
. disposals	(446)	(207)	(111)	(312)	(113)	**(1,189)**
. depreciations (included in "Depreciation and impairments")	(47,462)	(159,613)	(20,906)	(331)	-	**(228,312)**
. net impairment losses recognized (included in "Depreciation and impairments")	(462)	(24,543)	(743)	312	-	**(25,436)**
. translation differences	16,705	19,803	600	39	24,674	**61,822**
. other movements	50,119	183,342	10,746	40	(249,089)	**(4,842)**
At the end of previous year without leasing	**790,583**	**881,799**	**86,969**	**16,799**	**512,941**	**2,289,090**
At the beginning of the year without leasing						
Gross value	1,382,096	2,703,328	276,986	39,340	512,940	**4,914,690**
Accumulated depreciation	(591,513)	(1,821,529)	(190,017)	(22,540)	-	**(2,625,599)**
Net book value at the beginning of the year without leasing	**790,583**	**881,799**	**86,970**	**16,799**	**512,940**	**2,289,091**
. additions	22,479	39,665	10,742	6,122	379,852	**458,859**
. disposals	(2,541)	(1,103)	(354)	(586)	(14)	**(4,598)**
. depreciations (included in "Depreciation and impairments")	(52,591)	(163,603)	(21,493)	(654)	-	**(238,340)**
. net impairment losses recognized (included in "Depreciation and impairments")	(1,342)	(1,819)	(594)	-	-	**(3,754)**
. translation differences	(4,622)	(5,878)	209	4	(5,226)	**(15,513)**
. other movements	63,216	190,895	13,311	1,476	(275,011)	**(6,114)**
At the end of the financial year without leasing	**815,183**	**939,956**	**88,791**	**23,161**	**612,541**	**2,479,631**
Gross value	1,451,062	2,877,669	289,795	46,294	612,541	**5,277,361**
Accumulated depreciation	(635,880)	(1,937,713)	(201,004)	(23,133)	-	**(2,797,729)**
NET BOOK VALUE FOR CONTINUING OPERATIONS WITHOUT LEASING	**815,183**	**939,956**	**88,791**	**23,161**	**612,541**	**2,479,631**

Thousands of Euros	Land and buildings	Plant, machinery and equipment	Furniture and vehicles	Other tangible assets	Construction in progress and advance payments	Total
Gross value	67,193	1,055	24,865	637	-	**93,750**
Accumulated depreciation	(26,327)	(713)	(10,689)	(135)	-	**(37,864)**
Net book value at the beginning of previous year for leasing	**40,865**	**342**	**14,176**	**502**	**-**	**55,886**
. additions	16,638	1,274	7,662	-	-	**25,573**
. depreciations (included in "Depreciation and impairments")	(11,907)	(771)	(7,330)	(105)	-	**(20,113)**
. translation differences	1,336	2	40	0	-	**1,378**
. transfer	(681)	-	1	-	-	**(680)**
At the end of previous year for leasing	**46,251**	**847**	**14,549**	**397**	**-**	**62,043**
Leasing at the beginning of the year						
Gross value	68,958	2,310	28,436	625	-	**100,329**
Accumulated depreciation	(22,707)	(1,463)	(13,888)	(228)	-	**(38,286)**
Net book value at the beginning of the year for leasing	**46,251**	**847**	**14,549**	**397**	**-**	**62,044**
. additions	6,172	43	7,583	12	-	**13,811**
. depreciations (included in "Depreciation and impairments")	(11,802)	(848)	(7,542)	(103)	-	**(20,296)**
. translation differences	97	(14)	11	(1)	-	**93**
At the end of the financial year for leasing	**37,732**	**28**	**14,603**	**306**	**-**	**52,669**
Gross value	70,390	159	31,823	637	-	**103,010**
Accumulated depreciation	(32,659)	(131)	(17,220)	(331)	-	**(50,340)**
NET BOOK VALUE FOR LEASING	**37,732**	**28**	**14,603**	**306**	**-**	**52,669**
Tangible asset including leasing						
Gross value	1,521,453	2,877,828	321,618	46,931	612,541	**5,380,371**
Accumulated depreciation	(668,538)	(1,937,844)	(218,223)	(23,464)	-	**(2,848,070)**
NET BOOK VALUE FOR CONTINUING OPERATIONS INCLUDING LEASING	**852,914**	**939,984**	**103,394**	**23,467**	**612,541**	**2,532,301**

Capital expenditure totaled € 470 million (including additions on intangible assets but without the capitalized R&D costs as per Umicore's capital expenditures definition), compared to € 389 million the previous year. Energy & Surface Technologies accounted for more than 60 % of the Group's capital expenditure, driven by investments in the expansion of the Rechargeable Battery Materials business unit European’s footprint. In the Catalysis and Recycling business segments capital expenditure slightly decreased. In Catalysis, the Automotive Catalysts business unit continued to focus on investments in production footprint optimization and targeted capacity expansions. In Recycling, the capital expenditure was mainly related to environmental and safety investments in the Precious Metals Refining business unit.

Impairments on property, plant and equipment are mainly related to the restructuring of the stationary catalyst business in Denmark.

The line ‘other movements’ mainly includes the transfer between construction in progress and the other categories of assets and to a lesser extent transfer to intangible assets.
There are no pledges on, or restrictions to, the title on property, plant and equipment, other than disclosed in note F35.

F17 Investments accounted for using the equity method

The investments in companies accounted for using the equity method are composed mainly of the following associates:

	Country	Measurement currency	Percentage 2021	Percentage 2022
For continuing operations				
Associates				
IEQSA	Peru	PEN	40.00%	**40.00%**
Ganzhou Yi Hao Umicore Industries	China	CNY	40.00%	**40.00%**
Element Six Abrasives	United Kingdom	USD	40.22%	**40.22%**
Jiangmen Chancsun Umicore Industry Co.,LTD	China	CNY	40.00%	**40.00%**

Investments in associates are accounted for in accordance with the equity method and represent approximately 1.6% of Umicore's consolidated balance sheet total. Umicore has no individual material investments in associates. Considering the objectives of the IFRS 12 disclosure requirements, the most significant associate is Element Six Abrasives, in which Umicore holds 40.22%. Element Six Abrasives is a synthetic diamond materials group, part of De Beers Group, its majority shareholder. The group operates worldwide with primary manufacturing facilities in Ireland, Germany, the UK, the US and South Africa. Element Six Abrasives is on an adjusted results basis a profitable group, generating positive cash flow. The group's functional currency is USD. Umicore is represented in the Board of Directors and the audit committee of Element Six Abrasives. Besides its equity share in this company, Umicore has no other commitments, guarantees or obligations arising from its involvement in this associate. Adjustments, if any, in respect of the financial statements of Element Six Abrasives, are separately disclosed under the relevant captions of Umicore's consolidated financial statements (see note F9 for adjustments).

Thousands of Euros	Net book value	Goodwill	Total
At the end of previous year	**109,557**	**45,583**	**155,140**
. Profit (loss) of the period	13,473	-	**13,473**
. dividends	(11,902)	-	**(11,902)**
. change in other reserves	1,858	-	**1,858**
. translation differences	38	336	**374**
AT THE END OF THE YEAR FOR CONTINUING OPERATIONS	**113,025**	**45,919**	**158,943**

The elements recognized in other comprehensive income for investments accounted for using the equity method are mainly related to employee benefits reserves and translation reserves.

Umicore's share in the aggregated balance sheet and profit and loss items of the associates would have been as follows:

Thousands of Euros	31/12/2021	31/12/2022
Assets	270,781	**302,125**
Liabilities	143,037	**170,650**
Turnover	261,159	**355,164**
profit (loss) of the period	17,347	**13,473**

F18 Financial assets at fair value through OCI and loans granted

Thousands of Euros	Financial assets at FV through OCI	Loans granted
Non-current financial assets		
At the beginning of previous year	**8,352**	**3,252**
. increase	5,014	39
. translation differences	78	36
. fair value recognized in equity	(43)	-
. other movements	719	(719)
At the end of previous year	**14,120**	**2,608**
. increase	-	970
. decrease	-	(212)
. impairment losses (included in "Income (loss) from other financial assets")	-	(794)
. translation differences	(7)	(42)
. fair value recognized in equity	8,076	-
. other movements	(24)	63
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**22,165**	**2,592**
CURRENT FINANCIAL ASSETS		
At the end of the preceding financial year	**-**	**169**
. change in scope	-	10
. increase	-	1,121
. translation differences	-	(28)
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**-**	**1,273**

In 2021, the increase in financial assets at fair value through OCI included, amongst other, the equity investment in a developer of next-generation solid state batteries. In 2022, the € 8.1 million gain on financial assets measured at fair value through other comprehensive income mainly relates to the revaluation at fair value of this investment.

F19 Inventories

Thousands of Euros	31/12/2021	31/12/2022
Analysis of inventories		
Base products - gross value	2,874,788	**3,389,853**
.Permanently tied up metal inventories (not hedged)	834,372	**1,052,088**
.Commercially available metal inventories (hedged) (*)	1,364,202	**2,028,691**
.Other base products inventories (not hedged)	676,214	**309,074**
Consumables - gross value	111,128	**125,699**
Write-downs	(118,279)	**(137,666)**
Advances paid	12,059	**4,103**
Contracts in progress	(10,626)	**11,686**
TOTAL INVENTORIES FOR CONTINUING OPERATIONS	**2,869,071**	**3,393,674**

* applying Umicore's transactional metal hedging - see note F2.22.1 and F3.2.2

Inventories have increased by € 524.6 million compared with December 2021. While higher battery metal prices increased the value of inventory in Energy & Surface Technologies, inventories remained relatively stable in Catalyst and Recycling. The increase of permanently tied up inventories is mainly linked to the battery materials activities, where ramp-up of production capacity and commissioning of new production lines requires higher quantities of permanent metal inventory.

The total gross book value of Umicore's permanently tied-up metal inventories at 31 December 2022 compares to a value of € 4,067 million when applying the 31 December 2022 market prices (€ 3,298 million at end December 2021).

In line with Umicore's accounting policies related to inventories (see Note F2.10), metals are classified in inventory categories that reflect their specific nature and business use. Umicore classifies permanently tied-up metal inventories as a separate inventory category. At start of the year, Umicore carried permanently tied-up inventories for silver, gold, platinum, palladium, rhodium, cobalt, nickel, germanium, lead and copper. In the course of the first half of 2022, Umicore initiated a permanently tied-up lithium metal inventory in Energy & Surface Technologies to cover part of the current and expected future needs for the metal linked to the projected expansion in battery materials. As this inventory category is considered to have an unlimited useful life, no depreciations are applied but instead it will be subject to Umicore's annual impairment testing of the Cash Generating Units carrying these inventories. Applying the LOCOM principle on permanently tied-up metal inventories on 31 December 2022 would have given rise to a non-cash impairment charge of € 40.9 million for the Group.

The change in inventory recognized in Raw Materials and Consumables in the consolidated income statement is a positive amount of € 550 million (representing the cash movements on inventory balances). The net write-down of inventory recorded in the consolidated income statement in 2022 amounts to € 18 million.

Write-downs on inventories amount to € 137.7 million and mainly relate to write-downs on scrapping during production ramp-up, and internal and customer qualifications.

There are no pledges on, or restrictions to, the title on inventories.

F20 Trade and other receivables

Thousands of Euros	Notes	31/12/2021	31/12/2022
Non current			
Cash guarantees and deposits		9,737	**9,596**
Other receivables maturing > 1 year		10,217	**4,330**
Assets employee benefits		718	**4,786**
TOTAL FOR CONTINUING OPERATIONS		**20,672**	**18,712**
Current			
Trade receivables (at cost)		1,394,540	**1,313,156**
Trade receivables (write down)		(18,771)	**(17,893)**
Other receivables (at cost)		243,746	**309,323**
Other receivables (write down)		(207)	**(378)**
Interest receivable		1,439	**1,942**
Fair value receivable financial instruments held for cash-flow hedging	F33	80,452	**62,187**
Fair value receivable - financial instruments related to FV hedging (IFRS 9 hedge accounting)	F33	9,868	**23,141**
Fair value receivable - financial instruments related to FV hedging (economic hedging)	F33	3,977	**25,219**
Deferred charges and accrued income		116,989	**113,843**
TOTAL FOR CONTINUING OPERATIONS		**1,832,033**	**1,830,540**

Increase in other receivables mainly comes from an increase in margin calls for € 36 million.

Thousands of Euros	Total	Not due	Overdue between 0-30 days	30-60 days	60-90 days	> 90 days
Ageing balance analysis at the beginning of the year						
Trade receivables (w/o doubtful and securitized receivables) - at cost	**1,357,690**	1,222,865	111,435	12,724	6,021	4,645
Other receivables - at cost	**243,746**	236,195	2,940	1,186	252	3,173
Loss allowance	**16,595**	10,006	1,465	270	692	4,162
Expected loss rate	**1.04%**	0.69%	1.28%	1.94%	11.03%	53.24%
Ageing balance analysis at the end of year						
Trade receivables (w/o doubtful and securitized receivables) - at cost	**1,296,087**	1,140,691	120,486	26,522	6,778	1,610
Other receivables - at cost	**309,323**	299,034	955	1,921	4,288	3,125
Loss allowance	**15,536**	9,257	1,438	232	798	3,811
Expected loss rate	**0.97%**	0.64%	1.18%	0.82%	7.21%	80.48%

CREDIT RISK – TRADE RECEIVABLES

Thousands of Euros	Trade receivables (write-down)	Other receivables (write-down)	Total
At the beginning of previous year	**(22,320)**	**(207)**	**(22,526)**
. Impairment losses recognized in income statement	(1,761)	-	**(1,761)**
. Reversal of impairment losses	1,535	-	**1,535**
. Impairment written off against asset carrying amount	4,564	-	**4,564**
. Other movements	129	-	**129**
. Translation differences	(918)	0	**(917)**
At the end of previous year	**(18,771)**	**(207)**	**(18,978)**
At the beginning of the financial year	**(18,771)**	**(207)**	**(18,977)**
. Impairment losses recognized in income statement	(1,022)	(171)	**(1,193)**
. Reversal of impairment losses	1,700	-	**1,700**
. Impairment written off against asset carrying amount	171	-	**171**
. Other movements	148	-	**148**
. Translation differences	(120)	(1)	**(121)**
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**(17,893)**	**(378)**	**(18,271)**

The Group applies the IFRS 9 simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected loss rates are based on historical payment profiles of sales and the corresponding credit losses experienced. The historical loss rates are adjusted to reflect current and forward-looking information on macro-economic factors affecting the ability of the customers to settle the receivables. The Group has identified macro-economic factors, Probability of Default (PD) and Loss Given Default (LGD) to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

In principle, Umicore uses credit insurance as a means to mitigate the credit risk related to trade receivables. In 2022, three main credit insurance policies with three different insurers were in place. At closing, € 551.2 million of the Group's outstanding invoices were covered by a policy where indemnification in case of non-payment amounts to 95% with an indemnification cap set at regional or country level. The other two policies covered € 289 million of trade invoices with a global annual deductible of € 5 million, a maximum indemnity per year of € 200 million and an indemnification in case of non-payment of 95%. The Group also managed credit exposure by selling invoices to financial institutions without recourse (€ 533 million end of 2022 compared to € 410 million end of 2021), partly covered by the above credit insurance policies. Under one of these facilities, the carrying amount of receivables sold before the transfer amounts to € 206 million while total carrying amount of the assets that the entity continues to recognize and the related continuing involvement liability equal to € 16.9 million as of 31 December 2022. The latter consist mainly of non-transferred credit risk as well as late payment risk over the relevant portfolio. Other facilities, amounting to € 345 million, are derecognized in their entirety.

Specifically in China, Umicore reduces credit risk by discounting bank acceptance drafts it receives from its customers without recourse (and hence derecognized) (€ 268 million end of year 2022 compared to € 290 million end of 2021).

Finally, some businesses units do not use credit insurance and instead use internal credit limits that are set based on available financial information and business knowledge. Theses limits are duly reviewed and approved by management.

F21 Tax assets and liabilities

Thousands of Euros	31/12/2021	31/12/2022
Tax assets and liabilities		
Income tax receivables	46,762	**82,941**
Deferred tax assets	219,248	**315,996**
Income tax payable	(197,488)	**(261,950)**
Deferred tax liabilities	(24,294)	**(30,029)**

	Assets		Liabilities		Net	
Thousands of Euros	2021	2022	2021	2022	2021	2022
At the end of preceding financial year	**221,938**	**219,248**	**(22,846)**	**(24,294)**	**199,092**	**194,954**
Deferred tax recognized in the P&L	18,119	**111,110**	4,707	**(3,719)**	22,826	**107,391**
Deferred tax recognized in equity	(23,322)	**5,933**	(8,156)	**(21,025)**	(31,478)	**(15,092)**
Translation differences	5,359	**(1,200)**	(84)	**(86)**	5,275	**(1,286)**
Transfer	(2,085)	**(19,095)**	2,085	**19,095**	-	**-**
Other movements	(761)	**-**	-	**-**	(761)	**-**
AT THE END OF FINANCIAL YEAR	**219,248**	**315,996**	**(24,294)**	**(30,029)**	**194,954**	**285,967**

Thousands of Euros	Assets 2021	Assets 2022	Liabilities 2021	Liabilities 2022	Net 2021	Net 2022
Deferred tax in respect of each type of temporary difference						
Intangible assets	25,797	**31,180**	(6,392)	**(1,815)**	19,405	**29,365**
Goodwill on fully consolidated companies	-	**-**	(556)	**(590)**	(556)	**(590)**
Property, plant and equipment	11,848	**9,193**	(29,662)	**(36,849)**	(17,814)	**(27,656)**
Long term receivables	141	**72**	(470)	**(227)**	(329)	**(155)**
Inventories	77,332	**164,375**	(27,804)	**(28,669)**	49,528	**135,706**
Trade and other receivables	15,529	**18,641**	(58,640)	**(53,822)**	(43,111)	**(35,181)**
Group Shareholder's equity	105	**-**	(3,959)	**(4,313)**	(3,854)	**(4,313)**
Long Term Financial Debt and other payable	15,743	**18,749**	(24,307)	**(17,478)**	(8,564)	**1,271**
Provisions Employee Benefits	77,506	**51,854**	(7,299)	**(13,546)**	70,207	**38,308**
Provisions for Environment	29,969	**28,785**	(205)	**(285)**	29,764	**28,500**
Provisions for other liabilities and charges	22,889	**31,219**	(658)	**(1,169)**	22,231	**30,050**
Current Financial Debt	1,224	**-**	(4,858)	**(567)**	(3,634)	**(567)**
Current Provisions for Environment	1,969	**4,731**	-	**-**	1,969	**4,731**
Current Provisions for Other Liabilities & Charges	4,281	**4,703**	(8)	**(8)**	4,273	**4,695**
Trade and other payables	60,570	**84,638**	(877)	**(1,840)**	59,693	**82,798**
Total deferred tax due to temporary differences	**344,903**	**448,140**	**(165,695)**	**(161,178)**	**179,208**	**286,962**
Tax losses to carry forward	**80,051**	**58,137**	**-**	**-**	**80,051**	**58,137**
Investments deductions	650	**650**	-	**-**	650	**650**
Other	2,236	**2,039**	-	**-**	2,236	**2,039**
Deferred tax assets not recognized	(67,191)	**(61,821)**	-	**-**	(67,191)	**(61,821)**
Total tax assets/liabilities	**360,649**	**447,145**	**(165,695)**	**(161,178)**	**194,954**	**285,967**
Compensation of assets and liabilities within same entity	(141,401)	**(131,149)**	141,401	**131,149**		**-**
NET AMOUNT	**219,248**	**315,996**	**(24,294)**	**(30,029)**	**194,954**	**285,967**

Thousands of Euros	2021 Base	2022 Base	2021 Tax	2022 Tax
Amount of deductible temporary differences, unused tax losses or tax credits for which no deferred tax asset is recognized in the balance sheet				
Expiration date with no time limit	249,850	**231,706**	67,191	**61,821**

The changes of the period in temporary differences are charged to the consolidated income statement except those arising from events that were recognized directly in the consolidated statement of comprehensive income.

The main movements in deferred tax recognized directly in the consolidated statement of comprehensive income are deferred taxes generated by temporary differences included within the lines "Trade and other receivables" (positive by € 3.2 million), “Provisions for employee benefits” (negative by € 26.8 million) and “Trade and other payables” (positive by € 8.2 million). The main movements in deferred tax recognized in the consolidated income statement are deferred taxed generated by temporary differences included within the line inventories.

Deferred tax assets are only recognized to the extent that their utilization is probable, i.e. if a tax benefit is expected in future periods. The Group assesses a recoverability in a range of 5 to 10 years. The actual tax results in future periods may differ from the estimate made at the time the deferred taxes are recognized.

Unrecognized deferred tax assets of € 61.8 million mainly arise from tax losses (€ 56.5 million).

In accordance with IAS 12, a deferred tax liability on untaxed reserves of the Belgian companies, amounting potentially to € 37.5 million, has not been recognized as management anticipates that this liability will not be incurred in a foreseeable future.

Group current income tax payable at 31 December 2022 amounting € 262.0 million (2021 : € 197.5 million) include uncertain tax positions of € 108.9 million (€ 101.1 million in 2021).

F22 Net cash and cash equivalents

Thousands of Euros	31/12/2021	31/12/2022
Cash and cash equivalents		
Short-term investments : bank term deposits	272,965	**612,839**
Short-term investments : term deposits (other)	43	**98**
Cash-in-hands and bank current accounts	921,428	**626,932**
Total cash and cash equivalents	**1,194,437**	**1,239,869**
Bank overdrafts	28,122	**18,534**
NET CASH AS IN CASH FLOW STATEMENT	**1,166,315**	**1,221,335**

All cash and cash equivalents are fully available for the Group.

Liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed (unused in 2022), uncommitted credit facilities from a large pool of financial institutions and the ability to close out market positions.

Due to the dynamic nature of the underlying businesses, the Group aims to maintain funding flexibility through committed credit lines. Excess liquidities are invested for very short periods and are spread over a limited number of banks, all enjoying a satisfactory credit rating.

F23 Currency translation differences and other reserves

The detail of the Group's share in currency translation differences and other reserves is as follows:

Thousands of Euros	Conversion rights recognized in equity	Financial assets at FV through OCI reserves	Cash flow hedge reserves - Commodities	Cash flow hedge reserves - Currencies	Cash flow hedge reserves - IRS	Deferred taxes directly recognized in OCI	Changes in post employment benefits, arising from changes in actuarial assumptions	Share-based payment reserves	Currency translation differences	Total
Balance at the beginning of previous year	**50,324**	**(3,052)**	**(27,688)**	**16,721**	**(771)**	**79,187**	**(325,033)**	**44,642**	**(202,157)**	**(367,826)**
Remeasurements recognized in other comprehensive income	-	2	69,150	(16,354)	(1,971)	(25,487)	48,082	-	-	**73,423**
Remeasurements recognized in equity	-	-	-	-	-	-	-	14,255	-	**14,255**
Remeasurements derecognized out of other comprehensive income	-	-	28,949	(14,165)	-	(6,044)	(0)	-	-	**8,740**
Transfer from/to retained earnings	-	-	-	-	-	-	-	(5,904)	-	**(5,904)**
Change in scope	-	-	-	-	-	912	(3,026)	-	-	**(2,114)**
Exchange differences	-	40	393	150	(143)	(176)	(2,107)	-	84,898	**83,055**
BALANCE AT THE END OF PREVIOUS YEAR	**50,324**	**(3,009)**	**70,804**	**(13,649)**	**(2,885)**	**48,391**	**(282,085)**	**52,994**	**(117,259)**	**(196,370)**
Balance at the beginning of the year	**50,324**	**(3,009)**	**70,804**	**(13,649)**	**(2,885)**	**48,391**	**(282,085)**	**52,994**	**(117,259)**	**(196,370)**
Remeasurements recognized in other comprehensive income	-	8,076	10,056	(18,402)	(6,159)	(23,205)	94,387	-	-	**64,752**
Remeasurements recognized in equity	-	-	-	-	-	-	-	11,824	-	**11,824**
Remeasurements derecognized out of other comprehensive income	-	-	(44,952)	11,907	-	7,708	-	-	-	**(25,337)**
Transfer from/to retained earnings	-	(402)	-	-	-	-	646	(725)	-	**(481)**
Exchange differences	-	(28)	(186)	(777)	586	78	(1,754)	-	19,807	**17,725**
BALANCE AT THE END OF THE YEAR	**50,324**	**4,637**	**35,723**	**(20,922)**	**(8,458)**	**32,972**	**(188,806)**	**64,092**	**(97,452)**	**(127,887)**

The net losses recognized in the OCI regarding cash flow hedges (€ 14.5 million) are the changes in fair value of new cash flow hedging instruments or existing ones at opening but which have not yet expired at year end. The net gains derecognized from OCI (€ 33.0 million) are the fair values of the cash-flow hedging instruments existing at the opening which expired during the year. The total impact incurred at expiration of the cash-flow hedges during the year represents a gain of € 25.8 million, recognized in the income statement. This amount includes the mentioned net gains derecognized from OCI (€ 33.0 million) and the fair value changes incurred in the course of the year on expired existing cash-flow hedges and on new instruments contracted during the year (€ -7.2 million).

Remeasurements as a result of changes in the actuarial assumptions on the defined post-employment benefit plans have been recognized in OCI for € 94.4 million (refer to Note 27 on Provisions for employee benefits). The 2022 shares and stock option plans have led to a share-based payment reserve increase of € 11.8 million (refer to note F10 on employee benefits). € 0.7 million, linked to exercised options and free shares plans, have been transferred to retained earnings.

The movements on exchange differences are mainly related to the strengthening of the USD (€ 20.3 million) and BRL (€ 17.2 million) and weaker CNY (-13.2 million) and PLN (-9.2 million) compared to EUR. The total exchange differences are mainly impacted by the following currencies : CNY, BRL, KRW, PLN, ZAR, ARS and USD.

F24 Financial debt

Thousands of Euros	Bank loans	Lease liability	Other loans	Total
Non-current				
At the beginning of previous year	**1,205,000**	**52,865**	**447,289**	**1,705,154**
. Increase	-	25,573	32,109	**57,682**
. Decrease	-	(19,534)	(824)	**(20,358)**
. Translation differences	-	1,400	(0)	**1,400**
. Transfers	-	2,588	(22,430)	**(19,842)**
At the end of previous year	**1,205,000**	**62,892**	**456,145**	**1,724,037**
. Increase	-	13,842	42,328	**56,170**
. Decrease	-	(20,050)	-	**(20,050)**
. Translation differences	-	40	(3)	**37**
. Transfers	(88,000)	(16,015)	(30,000)	**(134,015)**
At the end of the financial year	**1,117,000**	**40,709**	**468,470**	**1,626,179**
Current portion of long-term financial debts				
At the end of the preceding financial year	**-**	**-**	**20,000**	**20,000**
. Increase / decrease	-	-	(20,026)	**(20,026)**
. Translation differences	-	-	26	**26**
. Transfers	88,000	16,015	30,000	**134,015**
At the end of the financial year	**88,000**	**16,015**	**30,000**	**134,015**

Thousands of Euros	Short term bank loans	Bank overdrafts	Short term loan : commercial paper	Other loans	Total
Current					
At the end of the preceding financial year	**374,720**	**28,122**	**8,005**	**1**	**410,847**
. Increase / decrease	(103,981)	(9,217)	86,913	219,563	**193,278**
. Transfers	0	-	0	0	**1**
. Translation differences	(12,148)	(371)	-	(8,362)	**(20,881)**
At the end of the financial year	**258,591**	**18,534**	**94,918**	**211,201**	**583,244**

Net financial debt at 31 December 2022 stood at € 1,103.6 million compared with € 960.4 million at the start of the year.

The financial debt includes the Schuldschein issued in 2017 (€ 330 million; fair value € 313.7 million), the US private placements issued in 2017 (€ 360 million; fair value € 320.4 million) and in 2019 (€ 390 million; fair value of € 330.5 million), the European Investment Bank (EIB) loan issued in 2020 (€ 125 million; fair value € 103.8 million) and the convertible bond issued in 2020 (€ 500 million ; fair value € 468.5 million).

On December 31, 2022, an amount of € 65 million was outstanding on the French NEU CP program and an amount of € 30 million was outstanding on the French NEU MTN program (out of € 600 million available under each program).

An amount of € 30 million was outstanding on the Belgian Commercial Paper program (out of € 600 million available under the program).

On December 31, 2022, there were no outstanding advances under the € 500 million sustainability-linked Syndicated Bank Credit Facility concluded in 2021 and maturing in October 2027, nor under the € 495 million Syndicated Bank Credit Facility maturing in April 2025.

The aforementioned Syndicated Bank Credit Facilities and the long term debt instruments require the Company to comply with certain financial covenants. Umicore has not faced any breach of those covenants in 2022 or in previous years.

The long-term debts mainly consist of debt instruments in euros. New US private placements were issued in November 2022 but only drawn in January 2023. This new debt amounts to a total of € 232 million and USD 363 million, with the part in USD hedged to EUR with cross-currency-swaps. On December 31, 2022, no debt is yet outstanding for this issuance as the amount is not yet drawn but the fair value of the cross-currency swaps is already recorded and included in Note F33 Fair Value of financial instruments (derivatives).

The interest rate on the average gross debt amounted to 2.66% for full year 2022 (2.23% for full year 2021).

The line "new loans and repayment of loans" in the consolidated statement of cash flow does not include the movements on bank overdrafts and the currency translation differences, nor the theoretical phantom interests on the debt component part of the convertible debt (€10.2 million in 2022) which is non cash.

The net gearing ratio (see definition in Glossary) end of 2022 of 23.6% (23.3% in 2021) and the net financial debt over adjusted EBITDA ratio of 0.96x (compared to 0.77x end of 2021) position the Group well within its targeted capital structure limits.

Maturity of gross financial debt

Thousands of Euros	Type of Interest	Due within 1 year	Due between 1 and 5 years	Due beyond 5 years	Total
Gross Financial debt of previous year					
Lease Liabilities		-	45,209	17,683	**62,892**
Credit Institutions	Fixed/Floating	402,847	-	-	**402,847**
Commercial Papers	Floating	28,000	-	-	**28,000**
Schuldschein	Fixed/Floating	-	287,000	43,000	**330,000**
US Private Placement	Fixed	-	50,000	700,000	**750,000**
EIB Loan	Fixed	-	125,000	-	**125,000**
Convertible Bond	Fixed	-	456,145	-	**456,145**
TOTAL		**430,847**	**963,354**	**760,683**	**2,154,884**

Thousands of Euros	Type of Interest	Due within 1 year	Due between 1 and 5 years	Due beyond 5 years	Total
Gross Financial debt of the year					
Lease Liabilities		16,015	25,743	14,966	**56,724**
Credit Institutions	Fixed/Floating	488,325	-	-	**488,325**
Commercial Papers	Floating	124,919	-	-	**124,919**
Schuldschein	Fixed/Floating	88,000	242,000	-	**330,000**
US Private Placement	Fixed	-	210,000	540,000	**750,000**
EIB Loan	Fixed	-	125,000	-	**125,000**
Convertible Bond	Fixed	-	468,470	-	**468,470**
TOTAL		**717,259**	**1,071,213**	**554,966**	**2,343,438**

Analysis of long term debts by currencies (including current portion)

Thousands of Euros	EUR	Total
Analysis of long term debts by currencies (including current portion)		
Bank loans	1,205,000	**1,205,000**
Other loans	498,470	**498,470**
NON-CURRENT FINANCIAL DEBTS (INCLUDING CURRENT PORTION)	**1,703,470**	**1,703,470**

Net financial debt

Thousands of Euros	2021	2022
Non current financial debt	1,724,037	**1,626,179**
Current portion of non current financial debt	20,000	**134,015**
Current financial debt	410,847	**583,244**
Cash and cash equivalents	(1,194,437)	**(1,239,869)**
NET FINANCIAL DEBT	**960,447**	**1,103,569**

Proportion of gross outstanding debt by category

Gross outstanding debt	
Short term bank loans	**14.8%**
Long term bank loans	**47.7%**
Commercial paper	**4.1%**
Bank overdrafts	**0.8%**
Lease liability	**2.4%**
Convertible Bond	**20.0%**
Other bank facilities	**10.3%**

Gearing ratio (%)

Millions of Euros		2021	2022
Net financial debt	a	960.4	**1,103.6**
Equity of the Group	b	3,167.3	**3,566.1**
Total	c=a+b	4,127.7	**4,669.6**
Gearing ratio (%)	d=a/c	23.3	**23.6**

F25 Trade and other payables

Thousands of Euros	Notes	31/12/2021	31/12/2022
Non-current			
Long-term trade payables		-	**23**
Other long-term debts		6,540	**6,324**
Investment grants and deferred income from grants		40,821	**41,690**
Total for continuing operations		**47,361**	**48,037**
Current			
Trade payables		2,196,225	**2,250,707**
Advances received on contracts in progress		29,851	**33,061**
Tax payable (other than income tax)		32,885	**31,645**
Payroll and related charges		168,014	**183,630**
Other amounts payable		67,708	**116,096**
Dividends payable		11,612	**11,616**
Accrued interest payable		10,326	**11,181**
Fair value payable financial instrument held for cash flow hedging	F33	24,504	**56,541**
Fair value payable - financial instruments related to FV hedging (IFRS 9 hedge accounting)	F33	31,874	**64,867**
Fair value payable - financial instruments related to FV hedging (economical hedging)		433	**14,477**
Accrued charges and deferred income		234,534	**336,237**
Total for continuing operations		**2,807,966**	**3,110,059**

Compared with 31 December 2021, trade payables increased, driven mainly by more purchase volumes at higher metal prices with longer payment terms. Trade payables include bank acceptance drafts issued by Umicore in China. Bank acceptance drafts are a commonly used form of payment in China, often preferred by suppliers in view of their transferability, their use as financing collateral or their ability to be discounted. End of 2022, Umicore issued €336 million of bank acceptance drafts in China (compared to € 260 million end of 2021). Trade payables end of 2022 include contracted metals to be repurchased for an amount of € 210 million (compared to € 136 million end of 2021). The tax payables (other than income tax) mainly include VAT payables.

Umicore has no global supply chain program. However, some suppliers have agreements in place with banks through which Umicore is expected to provide confirmation that suppliers invoices are correct and will be settled on the due date. At the end of 2022, such confirmations were provided for a total outstanding payable amount of € 267 million (compared to € 242 million end of 2021).

F26 Liquidity of the financial liabilities

PREVIOUS FINANCIAL YEAR

	Earliest contractual maturity					
Thousands of Euros	**< 1 Month**	**1 to 3 Months**	**3 Months to 1 Year**	**1 to 5 Years**	**> 5 years**	**Total**
Financial debt	**252,209**	**69,764**	**108,874**	**963,354**	**760,683**	**2,154,884**
Current	**252,209**	**69,764**	**108,874**	**-**	**-**	**430,847**
Short term bank loans	216,083	69,764	88,873	-	-	**374,720**
Bank overdrafts	28,122	-	-	-	-	**28,122**
Short-term loan: commercial paper	8,005	-	-	-	-	**8,005**
Other loans	-	-	1	-	-	**1**
Current portion of other long-term loans	-	-	20,000	-	-	**20,000**
Non-current	**-**	**-**	**-**	**963,354**	**760,683**	**1,724,037**
Bank loans	-	-	-	462,000	743,000	**1,205,000**
Lease liability	-	-	-	45,209	17,683	**62,892**
Other loans	-	-	-	456,145	0	**456,145**
TRADE AND OTHER PAYABLES	**1,868,161**	**583,445**	**342,920**	**48,278**	**12,522**	**2,855,327**
Current	**1,868,161**	**583,445**	**342,920**	**13,439**	**-**	**2,807,966**
Trade payables	1,539,519	463,937	192,769	-	-	**2,196,225**
Advances received on contracts in progress	16,545	9,155	4,151	-	-	**29,851**
Tax payable (other than income tax)	26,481	6,186	218	-	-	**32,885**
Payroll and related charges	50,943	42,202	74,869	-	-	**168,014**
Other amounts payable	26,120	27,639	13,949	-	-	**67,708**
Dividends payable	11,612	-	-	-	-	**11,612**
Accrued interest payable, third parties	6,777	139	3,410	-	-	**10,326**
Fair value payable financial instrument held for cash flow hedging	1,949	1,831	10,942	9,782	-	**24,504**
Fair value payable - financial instruments related to FV hedging (IFRS 9 hedge accounting)	8,974	12,550	6,693	3,657	-	**31,874**
Fair value payable - financial instruments related to FV hedging (economical hedging)	-	-	433	-	-	**433**
Accrued charges and deferred income	179,242	19,806	35,487	-	-	**234,534**
Non-current	**-**	**-**	**-**	**34,839**	**12,522**	**47,361**
Other long-term debts	-	-	-	1,178	5,362	**6,540**
Investment grants and deferred income from grants	-	-	-	33,661	7,161	**40,821**

FINANCIAL YEAR

	Earliest contractual maturity					
Thousands of Euros	**< 1 Month**	**1 to 3 Months**	**3 Months to 1 Year**	**1 to 5 Years**	**> 5 years**	**Total**
Financial debt	**406,340**	**28,799**	**282,119**	**1,071,213**	**554,966**	**2,343,438**
Current	**406,340**	**28,799**	**282,119**	**-**	**-**	**717,259**
Short term bank loans	81,689	28,799	148,103	-	-	**258,591**
Bank overdrafts	18,534	-	-	-	-	**18,534**
Short-term loan: commercial paper	94,918	-	-	-	-	**94,918**
Other loans	211,200	-	1	-	-	**211,201**
Current portion of long-term bank loans	-	-	88,000	-	-	**88,000**
Current portion of other long-term loans	-	-	30,000	-	-	**30,000**
Lease liability	-	-	16,015	-	-	**16,015**
Non-current	**-**	**-**	**-**	**1,071,213**	**554,966**	**1,626,179**
Bank loans	-	-	-	577,000	540,000	**1,117,000**
Lease liability	-	-	-	25,743	14,966	**40,709**
Other loans	-	-	-	468,470	-	**468,470**
TRADE AND OTHER PAYABLES	**2,224,458**	**570,447**	**285,722**	**63,328**	**14,140**	**3,158,094**
Current	**2,224,458**	**570,447**	**285,722**	**29,431**	**-**	**3,110,058**
Trade payables	1,823,579	368,251	58,877	-	-	**2,250,707**
Advances received on contracts in progress	10,816	17,811	4,435	-	-	**33,061**
Tax payable (other than income tax)	27,315	119	4,210	-	-	**31,645**
Payroll and related charges	54,844	48,747	80,039	-	-	**183,630**
Other amounts payable	16,868	77,677	21,552	-	-	**116,096**
Dividends payable	11,616	-	-	-	-	**11,616**
Accrued interest payable, third parties	6,735	579	3,867	-	-	**11,181**
Fair value payable financial instrument held for cash flow hedging	5,446	3,915	28,049	19,132	-	**56,541**
Fair value payable - financial instruments related to FV hedging (IFRS 9 hedge accounting)	7,659	11,720	35,189	10,299	-	**64,867**
Fair value payable - financial instruments related to FV hedging (economical hedging)	-	11,009	3,467	-	-	**14,477**
Accrued charges and deferred income	259,581	30,619	46,037	-	-	**336,237**
Non-current	**-**	**-**	**-**	**33,896**	**14,140**	**48,037**
Long-term trade payables	-	-	-	23	-	**23**
Other long-term debts	-	-	-	1,293	5,031	**6,324**
Investment grants and deferred income from grants	-	-	-	32,580	9,110	**41,690**

F27 Provisions for employee benefits

The Group has various legal and constructive defined benefit obligations, the vast majority of them being “final pay” plans linked to the Belgian and German operations.

Thousands of Euros	Post-employment benefits, pensions and similar	Post-employment benefits - other	Termination benefits early retirement & similar	Other long-term employee benefits	Total
At the end of the previous year	**339,383**	**2,817**	**27,588**	**17,418**	**387,206**
. Increase (included in "Payroll and related benefits")	33,368	142	4,553	(926)	**37,137**
. Reversal (included in "Payroll and related benefits")	588	-	-	(268)	**320**
. Use (included in "Payroll and related benefits")	(47,244)	(72)	(6,622)	(1,457)	**(55,395)**
. Interest and discount rate impacts (included in "Financial expenses")	5,418	14	615	209	**6,256**
. Translation differences	(26)	(26)	14	(11)	**(49)**
. Transfers	3,883	-	(164)	128	**3,847**
. Recognized in other comprehensive income	(88,645)	(90)	(3,217)	(894)	**(92,846)**
AT THE END OF THE FINANCIAL YEAR	**246,725**	**2,785**	**22,768**	**14,198**	**286,476**

The above table shows the balances and the movements in provisions for employee benefits of the fully consolidated subsidiaries only.

The termination benefits mainly concern some severance pay schemes in Korea and Belgian pre-retirement plans. Other long-term benefits mainly concern jubilee premium in Belgium and Germany.

The lines “Increase”, “Reversal” and “Use” of employee benefits provisions can be linked with the line “Provisions for employee benefits” of the note F10. The amount recognized in other comprehensive income originates mainly from an increase in discount rates on the pension plans. A reconciliation with the note F23 and the consolidated statement of comprehensive income is provided in the tables below.

The transfers mainly relates to transfer to assets employee benefits which are disclosed in note F20.

The defined contribution plans of the Group in some countries like in the USA, Canada, South Africa and Germany are not part of this note as the amounts are directly recognized in the income statement under the line “Contribution to defined contribution plans” (see note F10).

The following disclosure requirements under IAS 19 amended were derived from the reports obtained from external actuaries.

The largest post-employment plans in 2022 are in Belgium and in Germany. These two countries represent 90% of the total defined benefit obligations.

Thousands of Euros	31/12/2021	Movements 2022	31/12/2022
Belgium	77,061	(29,065)	**47,996**
Germany	280,427	(64,974)	**215,453**
Subtotal	**357,488**	**(94,039)**	**263,449**
Other entities	29,718	(6,691)	**23,028**
TOTAL	**387,206**	**(100,730)**	**286,476**

Umicore defined benefit pension schemes for the 2 major countries are the following:

BELGIUM	**Characteristics of the Defined Benefit plans** Umicore companies in Belgium operate defined benefit plans that provide retirement or long-term employee benefits which are related to salary and age or length of service. These retirement and long term benefit plans represent a defined benefit obligation of € 253.0 million and assets for € 205.0 million. They foresee in lump sum or monthly payments upon retirement or pre-retirement and benefits in case of reaching a number of years of service or in case of death or disability prior to retirement.
	The net provisions for pension of € 48.0 million can be broken down in post-employment defined benefit plans (€ 19.3 million of which € 122.1 million is the obligation and € 102.8 million relates to plan assets), termination benefits plan (€ 3.2 million of obligation not funded), jubilee premium (€ 3.0 million, not funded) and post-employment defined contributions plans and bonus saving plans with guaranteed return and therefore treated as Defined Benefit plans (€ 22.5 million of which € 124.7 million is the obligation and € 102.2 million relates to plan assets).
	Funding The post-employment plans are externally funded through either insurance companies or a self-administrated institution for occupational retirement provision ("IORP"). For the IORP, the necessary governance processes for risk management are in place. One of the risk measures is to perform on a regular basis a "Continuity Test" in which the consequences of strategic investment policies are analyzed in terms of risk- and-return profiles and solvency measures. A statement of investment principles and funding policy are derived from this. The purpose is to have a well-diversified asset allocation to control the risk.
	Fair values of plan assets The fair values of the equity and debt instruments are determined based on quoted market prices in active markets (level 1 fair value classification). The plans hold no direct positions in Umicore shares or bonds, nor do they own any property used by an Umicore entity. Investments are well diversified so that the failure of any single investment would not have a material impact on the overall level of assets.
GERMANY	**Characteristics of the Defined Benefit plans** The post-employment benefits are mainly unfunded pension plans of defined benefit type providing retirement, disability and death benefits. All benefit plans are based on final or final average pay excluding the deferred compensation plans. The benefits of the deferred compensation plan are based on annual converted salary and provide a guaranteed interest of 3.0% p.a. (6.0% p.a. for salary conversions before 2014). All post-employment plans represent a defined benefit obligation of € 221.1 million and assets for € 9.5 million.
	The net provisions for pension of € 211.6 million mainly includes the Degussa pension defined benefit plans, including the contribution plan where the inflation and interest rate adjustments of the benefits are guaranteed (€ 165.2 million), the closed and open compensation plans (€ 34.7 million), a jubilee premium plan (€ 6.6 million) and other termination benefits (€ 5.0 million).
	Funding As mentioned above, the post-employment benefits are mainly unfunded plans. A minor part is funded by pledged reinsurance contracts.
	Fair values of plan assets All plan assets relate to pledged insurance contracts and have no quoted market price.

The most significant risks related to the defined benefit plans are:

- Asset volatility: The plan liabilities are calculated using a discount rate set with reference to corporate bond yields; if plan assets underperform this yield, this will create a deficit.
- Changes in bond yields: A decrease in corporate bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plan's bond holdings.
- Salary risk: The majority of the plans' benefit obligations are calculated by reference to the future salaries of plan members. As such, any salary increase of plan members higher than expected will lead to higher liabilities.
- Longevity risk: All pension plans beside the new deferred compensation plan as from 2014 provide life annuities which involve the risk of longevity i.e. the risk that the payment period of the pension increases due to the increase in life expectancy. The company uses mortality rates which depend on the year of birth to include this risk in the pension obligation.
- Risk of cash outflow: Since death as active and disability benefits are provided there is a risk of cash outflow before retirement.
- Legislation risks: If the law which define the benefit changes, it can result in a change of the obligations.

Some additional risks are related to Germany only:

- In Germany two defined contribution pension plans exist which are externally financed via the "Pensionskasse Degussa" (PKD) or the support fund "Unterstützungskasse Degussa" (RUK). With respect to the required pension adjustments of pensions paid by these plans, there is a risk that these adjustments cannot be fully borne by the PKD or RUK and therefore can result in additional unfunded pension obligations. This part of the PKD and RUK plans is therefore considered as a Defined Benefit Plan and the risk of the additional obligation expected until end of 2025 has been included in the defined benefit obligation and is yearly reviewed (additional obligation of € 11.6 million for PKD and € 0.7 million for RUK at the end of 2022).
- The closed deferred compensation plan provides a guaranteed interest rate of 6% which increases the risk for a pension cost in addition to the converted salary. The plan was closed at 31 December 2013 and replaced by a plan with no significant risk in this respect.

And some risks are related to Belgium only:

- Because of the Belgian legislation applicable to 2nd pillar pension plans (so-called "Law Vandenbroucke"), all Belgian Defined Contribution plans have to be considered under IFRS as Defined Benefit plans. Law Vandenbroucke states that in the context of defined contribution plans, the employer must guarantee a minimum return of 3.75% on employee contributions and 3.25% on employer contributions. However, shortly before year-end 2015, a change in the Belgian Law was enacted resulting in a decrease of the guaranteed return from 3.25 % to a minimum interest rate defined based upon the Belgian 10-year interest rate but within the range 1.75% – 3.75%. The new rate (currently 1.75%) applies for the years after 2015 on future contributions and also on the accumulated past contributions as at 31 December 2015 if the financing organization does not guarantee a certain result on contributions until retirement age. If the organization does guarantee such a result, the rates

3.25/3.75% still apply on the accumulated past contributions as at 31 December 2015. Because of this minimum guaranteed return, the employer is exposed to a financial risk: further contributions could be required if the return on assets would not be sufficient to reach the minimum benefits to be paid. The Group has plans that are financed through insurance contract as well as one plan financed through an IORP. The related defined benefit obligations have been aggregated with the other obligations for defined benefit plans. The Projected Unit Credit (PUC) methodology has been used. Total defined benefit obligations related to those plans amounts to € 124.7 million as at the end of December 2022 and related plan assets to € 102.2 million.

Change in benefit obligation

Thousands of Euros	2021	2022
Change in benefit obligation		
Benefit obligation at beginning of the year	**697,222**	**677,967**
Current service cost	43,641	**40,519**
Interest cost	5,904	**9,648**
Plan Participants' Contributions	843	**1,089**
Remeasurements - changes in demographic assumptions	(831)	**(1,615)**
Remeasurements - changes in financial assumptions	(37,337)	**(178,215)**
Remeasurements - experience adjustments	723	**40,444**
Benefits paid from plan/company	(30,537)	**(35,310)**
Expenses paid	(2,479)	**(3,765)**
Exchange rate changes	818	**900**
BENEFIT OBLIGATION AT END OF THE YEAR	**677,967**	**551,662**

Change in plan assets

Thousands of Euros	2021	2022
Change in plan assets		
Fair value of plan assets at the beginning of the year	**271,690**	**291,479**
Expected return on plan assets	2,069	**3,392**
Remeasurements on plan assets	11,671	**(42,086)**
Employer contributions	37,350	**54,380**
Member contributions	843	**1,089**
Benefits paid from plan/company	(30,537)	**(35,310)**
Expenses paid	(2,534)	**(3,825)**
Exchange rate changes	927	**853**
FAIR VALUE OF PLAN ASSETS AT THE END OF THE YEAR	**291,479**	**269,972**

Pension plans mainly in Belgium, Korea, Liechtenstein and Japan are wholly or partly funded with assets covering a substantial part of the obligations. All other plans have no material funding or are unfunded.

Change in net liability

Thousands of Euros	2021	2022
Amount recognized in the balance sheet		
Defined benefit obligations	677,967	**551,662**
Fair value of plan assets	291,479	**269,972**
Funded Status	**386,488**	**281,690**
NET LIABILITY (ASSET)	**386,488**	**281,690**
Components of pension costs		
Amounts recognized in income statement		
Current service cost	43,641	**40,519**
Interest cost	5,904	**9,648**
Interest income on plan assets	(2,069)	**(3,392)**
Remeasurement of other long term benefits	(920)	**(4,454)**
Administrative expenses and taxes	55	**60**
Total pension cost recognized in income statement	**46,611**	**42,381**
Amounts recognized in other comprehensive income ("OCI")		
Cumulative remeasurements at opening	**299,829**	**254,689**
Remeasurements of the year	(48,196)	**(92,846)**
Minorities	27	**(26)**
Other movements	-	**(646)**
Translation differences	4	**39**
Change in scope	3,026	**-**
Total recognized in the OCI at subsidiaries	**254,689**	**161,210**
Remeasurements at associates and joint ventures	27,396	**27,595**
TOTAL RECOGNIZED IN THE OCI	**282,084**	**188,805**
Remeasurements recognised in OCI as per Note F23 (w/o Minorities)	48,082	**94,387**
Currency translation differences as per Note F23 (w/o Minorities)	(2,107)	**(1,754)**
Reameasurements related to Minorities (including ctd's on Minorities)	32	**(5)**
Total Remeasurement shown in OCI	**46,007**	**92,628**
.Currency translation differences as per Note F23 (w/o Minorities)	2,107	**1,754**
.Currency translation differences related to Minorities	(5)	**(22)**
.Remeasurements related to equity companies	87	**(1,514)**
REMEASUREMENTS OF THE YEAR SHOWN IN NOTE F27	**48,196**	**92,846**
Remeasurements (recognized in OCI)		
Effect of changes in demographic assumptions	(805)	**(1,615)**
Effect of changes in financial assumptions	(37,103)	**(174,568)**
Effect of experience adjustments	1,404	**41,265**
(Return) on plan assets (excluding interest income)	(11,692)	**42,072**
TOTAL REMEASUREMENTS INCLUDED IN OCI	**(48,196)**	**(92,846)**

The interest cost and return on plan assets as well as the remeasurement impact on the non post-employment benefit plans, are recognized under the financial expenses (discounting of non-current provisions) in the income statement (see note F11). All other elements of the expense of the year are classified under the wages, salaries and direct social advantages in operating expenses.

Remeasurements of the year recognized in other comprehensive income originate mainly from a change in discount rates on the pension plans and differences between the expected and actual return on plan assets offset as well as effects of experience adjustments (higher inflation, pension adjustment on PKD and RUK plans).

	2021	2022
PRINCIPAL ACTUARIAL ASSUMPTIONS		
Weighted average assumptions to determine benefit obligations at year end		
Discount rate (%)	1.17	**3.73**
Rate of compensation increase (%)	2.62	**2.57**
Rate of price inflation (%)	1.80	**2.02**
Rate of pension increase (%)	1.27	**1.58**
Weighted average assumptions used to determine net cost		
Discount rate (%)	0.78	**1.17**
Rate of compensation increase (%)	2.55	**2.62**
Rate of price inflation (%)	1.75	**1.80**
Rate of pension increase (%)	1.30	**1.27**

Category of plan assets

	2022	
	Fair value of all plan assets	Fair Value of plan assets with quoted market price
Plan assets		
Cash and cash equivalents	**34,335**	**30,306**
Equity instruments	**53,603**	**53,603**
Debt instruments	**85,794**	**85,794**
Real estate	**7,413**	**7,413**
Assets held by insurance company	**80,543**	**71,086**
Other	**8,284**	**7,432**
TOTAL PLAN ASSETS	**269,972**	**255,634**

Assumptions are recommended by the local actuaries in line with the IAS19 revised. The standard reference for the Eurozone is iBOXX AA Index yield and similar indexes are used for the other regions. Mortality tables used are country specific.

Other plan assets are predominantly invested in insurance contracts and bank term deposits. The expected long-term rate of return on assets assumptions is documented for the individual plans as recommended by the local actuaries.

Sensitivities on the defined benefits obligation

	2022	
Thousands of Euros	Valuation trend +0,25%	Valuation trend -0,25%
Sensitivity to trend rate assumptions on discount rate		
Present value of defined benefit obligation	**538,639**	**565,545**
Weighted average duration of benefit obligation (in years)	**9.54**	**10.05**
Sensitivity to trend rate assumptions on inflation rate		
Present value of defined benefit obligation	**532,479**	**519,542**
Sensitivity to trend rate assumptions on salary increase rate		
Present value of defined benefit obligation	**556,322**	**545,126**

Balance sheet reconciliation

Thousands of Euros	2021	2022
BALANCE SHEET RECONCILIATION		
Balance sheet liability (asset) as of previous year	**425,529**	**386,488**
Pension expense recognized in income statement for the period	46,611	**42,381**
Amounts recognized in OCI	(48,196)	**(92,846)**
Employer contributions via funds for the period	(25,572)	**(41,191)**
Employer contributions paid directly for the period	(11,771)	**(13,189)**
Other	(3)	**-**
Currency translation differences	(109)	**46**
BALANCE SHEET LIABILITY (ASSET) AS OF END OF THE YEAR	**386,489**	**281,690**
Provisions for employee benefits in non current liabilities as per Balance Sheet	387,206	**286,476**
Asset employee benefit in non current asset (note F20)	(718)	**(4,786)**
NET OBLIGATION ON BALANCE SHEET	**386,488**	**281,690**

At 31 December

Thousands of Euros	2018	2019	2020	2021	2022
Present value of defined benefit obligation	549,052	651,685	697,222	677,967	**551,662**
Fair value of plan assets	216,101	259,952	271,690	291,479	**269,972**
Deficit (surplus) in the plan	**332,951**	**391,733**	**425,532**	**386,488**	**281,690**
Experience adjustments on plan assets	4,410	(17,138)	(5,398)	(11,671)	**42,086**
Experience adjustments on plan liabilities	5,967	3,032	2,942	723	**40,444**

Thousands of Euros	2022
EXPECTED CASH FLOWS FOR FOLLOWING YEAR	
Expected employer contributions	**43,867**
Expected total benefit payments	
Year 1	**32,975**
Year 2	**21,394**
Year 3	**32,002**
Year 4	**31,532**
Year 5	**63,124**
Next 5 years	**172,409**

F28 Stock option plans granted by the company

Plan	Expiry date	Exercise	Exercise price EUR (the exercise price may be higher in certain countries)	Number of options still to be exercised
ISOP 2016	04/02/2023	all working days of Euronext Brussels	16.63	**139,200**
				139,200
ISOP 2017	13/02/2024	all working days of Euronext Brussels	25.50	**394,250**
			27.04	**23,750**
				418,000
ISOP 2018	08/02/2025	all working days of Euronext Brussels	40.90	**968,125**
				968,125
ISOP 2019	10/02/2026	all working days of Euronext Brussels	34.08	**1,188,250**
			36.78	**5,000**
				1,193,250
ISOP 2020	09/02/2027	all working days of Euronext Brussels	42.05	**1,163,375**
				1,163,375
ISOP 2021	10/02/2028	all working days of Euronext Brussels	47.08	**1,103,500**
				1,103,500
ISOP 2022	16/02/2029	all working days of Euronext Brussels	33.22	**1,279,064**
				1,279,064
TOTAL				**6,264,514**

ISOP refers to “Incentive Stock Option Plan” (worldwide plan for senior managers and above).

The stock options, which are typically vested at the time of the grant, are foreseen to be settled with treasury shares. Options which have not been exercised before the expiry date elapse automatically.

	2021		2022	
	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price
DETAILS OF THE SHARE OPTIONS OUTSTANDING DURING THE YEAR				
Outstanding at the beginning of the year	**5,785,190**	**32.00**	**5,201,500**	**38.23**
Granted during the year	1,108,500	47.08	**1,289,064**	**33.22**
Forfeited during the year	-	-	**28,000**	**37.17**
Exercised during the year	1,692,190	22.72	**198,050**	**20.13**
OUTSTANDING AT THE END OF THE YEAR	**5,201,500**	**38.23**	**6,264,514**	**37.78**
Exercisable at the end of the year	1,703,625	32.82	**2,718,575**	**34.31**

The options outstanding at the end of the year have a weighted average contractual life until September 2026.

The details concerning the calculation of the fair value of the options granted are detailed under note F10 on Payroll and related Benefits.

F29 Environmental provisions

Thousands of Euros	Provisions for soil clean-up & site rehabilitation	Other environmental provisions	Total
At the end of previous year	**109,780**	**20,836**	**130,615**
. Increase (included in "Other operating expenses")	28,154	25,099	**53,252**
. Reversal (included in "Other operating expenses")	(5,764)	(3,377)	**(9,141)**
. Use (included in "Other operating expenses")	(23,571)	(12,287)	**(35,858)**
. Discounting (included in "Financial expenses")	(209)	-	**(209)**
. Translation differences	697	2	**698**
. Other movements	(819)	819	**-**
AT THE END OF THE FINANCIAL YEAR	**108,267**	**31,092**	**139,359**
Of which - Non Current	106,109	13,085	**119,194**
Of which - Current	2,158	18,007	**20,165**

Provisions for environmental legal and constructive obligations are recognized and measured by reference to an estimate of the probability of future cash outflows as well as to historical data based on the facts and circumstances known at the end of the reporting period. The actual liability may differ from the amounts recognized.

Provisions increased overall by € 8.7 million, with additional provisions which are higher than the uses and reversals of existing provisions.

The increase of provisions for soil and site rehabilitation are mainly related to revised provisions taken in Belgium at Olen site. The use of provision in 2022 mainly relates to the green zone neighboring the Hoboken plant for € 20.0 million.

Early 2020, the Federal Agency for Nuclear Control issued guiding principles for the permanent remediation and storage of the legacy radioactive material related to Umicore's Olen site in Belgium. Joint working groups have been established, including governmental agencies such as NIRAS/ONDRAF, OVAM, FANC and Umicore to elaborate a roadmap describing the different steps that need to be taken to reach a permanent storage solution. Going forward, the joint working groups will provide updates of the estimated future remediation and storage costs and the dedicated existing environmental provisions. The provision will be adapted in view of changing circumstances and insights developed during the project. Developing and implementing this detailed roadmap is currently expected to take several years. Umicore will in the meantime continue the monitoring works to guarantee that no risks are emanating from those remnants, neither for the workers on site, nor for the surrounding population.

The movements of the other environmental provisions are mainly related to the need for and adjustment of CO2 emission rights in Belgium.

Management expects the most significant cash outflows on these projects for non-current elements to take place within 10 years.

F30 Provisions for other liabilities and charges

Thousands of Euros	Provisions for reorganisation & restructuring	Provisions for litigation	Provisions for other liabilities and charges	Total
At the end of the previous year	**38,754**	**2,527**	**86,869**	**128,148**
. Increase (included in "Other operating expenses")	3,260	-	46,343	**49,602**
. Reversal (included in "Other operating expenses")	(1,475)	(10)	(3,821)	**(5,306)**
. Use (included in "Other operating expenses")	(11,124)	(309)	(5,174)	**(16,607)**
. Translation differences	865	(21)	292	**1,136**
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**30,280**	**2,187**	**124,512**	**156,974**
Of which - Non Current	22,440	482	109,173	**132,095**
Of which - Current	7,836	1,704	15,339	**24,879**

Provisions for reorganization and restructuring and other liabilities and charges are recognized and measured by reference to an estimate of the probability of future outflow of cash as well as to historical data based on the facts and circumstances known at the end of the reporting period. The actual liability may differ from the amounts recognized.

Provisions for other liabilities and charges relate to provisions for onerous contracts, warranty and quality recall risks (€ 108.3 million) and other provisions (€ 16.2 million).

In 2022, provisions increased overall by € 28.8 million. Additional other provisions for liabilities and charges include € 36.5 million of provision for warranty and quality recall risks that are mainly linked to risks related to automotive end market applications in both Catalysis and Energy & Surface Technologies (the latter referring to the dedicated provisioning model for battery materials) and € 5.5 million of provision for onerous contracts.

The uses of provision for reorganization and restructuring (€ 11.1 million) mainly relate to the execution of the previously announced restructurings in Cobalt & Specialty Materials in the USA and in Catalysis in Denmark and in the USA.

The provisions for litigation are not including the tax provisions related to IFRIC 23 as those are booked under the line Income tax payable in the balance sheet.

No reliable estimation could be made regarding the expected timing of cash outflows related to the non-current part of the provisions for other liabilities and charges.

F31 Capital employed

Thousands of Euros	Notes	31/12/2021	30/06/2022	31/12/2022
Intangible assets	F14,F15	339,849	342,500	**343,366**
Property, plant and equipment	F16	2,351,134	2,436,788	**2,532,301**
Investments accounted for using the equity method	F17	155,140	170,895	**158,943**
Financial assets at FV through OCI	F18	14,120	14,207	**22,165**
Inventories	F19	2,869,071	3,142,604	**3,393,674**
Non current receivable (excluding assets employee benefits)	F20	19,954	19,205	**13,926**
Current trade and other receivables for capital employed calculation		1,750,174	2,226,229	**1,730,814**
Income tax receivable		46,762	57,221	**82,941**
Assets included in capital employed		**7,546,203**	**8,409,651**	**8,278,131**
Non-current trade and other payables	F25	47,360	46,596	**48,037**
Current trade and other payables for capital employed calculation		2,783,459	3,437,611	**3,053,518**
Translation reserves	F23	(117,250)	(40,347)	**(97,444)**
Non-current provisions	F29,F30	215,502	244,141	**251,289**
Current provisions	F29,F30	43,266	43,575	**45,044**
Income tax payable		197,488	209,885	**261,950**
Liabilities included in capital employed		**3,169,825**	**3,941,461**	**3,562,394**
Capital employed		**4,376,378**	**4,468,190**	**4,715,737**
Eliminations		517	6,565	**259**
CAPITAL EMPLOYED AS PUBLISHED		**4,376,895**	**4,474,755**	**4,715,996**
Average Capital Employed in first half of the year (*)		4,404,011		**4,425,825**
Average Capital Employed in second half of the year (**)		4,364,169		**4,595,375**
Average Capital Employed for the period		**4,384,090**		**4,510,600**
Adjusted EBIT	F9	971,377		**864,639**
ROCE in year preceding closing date		**22.16%**		**19.17%**

(*) calculated as the average of the Capital Employed at June 30 and the Capital Employed at the end of the previous year

(**) calculated as the average of the Capital employed at the end of the period and the capital employed at June 30

The current trade and other receivables used for the calculation of the capital employed do not take into account the margin calls (€ 37.5 million at the end of 2022) and the gains booked on the mark-to-market value of strategic hedging instruments (€ 62.5 million in 2022). The current trade and other payables used for the calculation of the capital employed do not take into account the losses booked on the mark-to-market value of strategic hedging instruments (€ 56.6 million at the end of 2022).

Average capital employed for the period is calculated as the average of the capital employed of both half years.

F32 Financial instruments by category

AS AT THE END OF PREVIOUS YEAR

Thousands of Euros	Level	Fair value	Held for trading - economic hedging	Fair value hedge accounting	Cash Flow hedge accounting	Loans, receivables and payables	Carrying amount Financial assets at FV through OCI
ASSETS							
Financial assets at fair value through Other Comprehensive Income		**14,120**	**-**	**-**	**-**	**-**	**14,120**
Financial assets at fair value through Other Comprehensive Income - Shares	1	14,120	-	-	-	-	14,120
Loans granted		**2,777**	**-**	**-**	**-**	**2,777**	**-**
Loans to associates and non consolidated affiliates		2,777	-	-	-	2,777	-
Trade and other receivables		**1,852,705**	**3,977**	**9,868**	**80,452**	**1,758,408**	**-**
Non-current							
Cash guarantees and deposits		9,737	-	-	-	9,737	-
Other receivables maturing in more than 1 year		10,217	-	-	-	10,217	-
Assets employee benefits		718	-	-	-	718	-
Current							
Trade receivables (at cost)		1,394,540	-	-	-	1,394,540	-
Trade receivables (write-down)		(18,771)	-	-	-	(18,771)	-
Other receivables (at cost)		243,746	-	-	-	243,746	-
Other receivables (write-down)		(207)	-	-	-	(207)	-
Interest receivable		1,439	-	-	-	1,439	-
Fair value of financial instruments held for cash-flow hedging	2	80,452	-	-	80,452	-	-
Fair value receivable - financial instruments related to FV hedging	2	13,845	3,977	9,868	-	-	-
Deferred charges and accrued income		116,989	-	-	-	116,989	-
Cash and cash equivalents		**1,194,436**	**-**	**-**	**-**	**1,194,436**	**-**
Short-term investments: bank term deposits		272,965	-	-	-	272,965	-
Short-term investments: term deposits (other)		43	-	-	-	43	-
Cash-in-hand and bank current accounts		921,428	-	-	-	921,428	-
TOTAL OF FINANCIAL INSTRUMENTS (ASSETS)		**3,064,038**	**3,977**	**9,868**	**80,452**	**2,955,621**	**14,120**

Thousands of Euros	Level	Fair value	Held for trading - economic hedging	Fair value hedge accounting	Cash Flow hedge accounting	Loans, receivables and payables	Carrying amount Financial assets at FV through OCI
LIABILITIES							
Financial debt		**2,182,852**	**-**	**-**	**-**	**2,154,884**	**-**
Non-current							
Bank loans		1,232,968	-	-	-	1,205,000	-
Lease liability		62,892	-	-	-	62,892	-
Other loans		456,145	-	-	-	456,145	-
Current							
Short term bank loans		374,720	-	-	-	374,720	-
Bank overdrafts		28,122	-	-	-	28,122	-
Short term loan: commercial paper		8,005	-	-	-	8,005	-
Other loans		20,001	-	-	-	20,001	-
Trade and other payables		**2,855,327**	**433**	**31,874**	**24,504**	**2,798,516**	**-**
Non-current							
Other long term debts		6,540	-	-	-	6,540	-
Investments grants and deferred income from grants		40,821	-	-	-	40,821	-
Current							
Trade payables		2,196,225	-	-	-	2,196,225	-
Advances received on contracts in progress		29,851	-	-	-	29,851	-
Tax - other than income tax - payable		32,885	-	-	-	32,885	-
Payroll and related charges		168,014	-	-	-	168,014	-
Other amounts payable		67,708	-	-	-	67,708	-
Dividends payable		11,612	-	-	-	11,612	-
Accrued interest payable		10,326	-	-	-	10,326	-
Fair value financial instrument held for cash flow hedging	2	24,504	-	-	24,504	-	-
Fair value payable - financial instruments related to FV hedging	2	32,307	433	31,874	-	-	-
Accrued charges and deferred income		234,534	-	-	-	234,534	-
TOTAL OF FINANCIAL INSTRUMENTS (LIABILITIES)		**5,038,179**	**433**	**31,874**	**24,504**	**4,953,400**	**-**

AS AT THE END OF THE FINANCIAL YEAR

Thousands of Euros	Level	Fair value	Held for trading - economic hedging	Fair value hedge accounting	Cash Flow hedge accounting	Loans, receivables and payables	Carrying amount Financial assets at FV through OCI
ASSETS							
Financial assets at fair value through Other Comprehensive Income		**22,165**					**22,165**
Financial assets at fair value through Other Comprehensive Income - Shares	1	22,165					22,165
Loans granted		**3,865**				**3,865**	
Loans to associates and non consolidated affiliates		3,865				3,865	
Trade and other receivables		**1,849,252**	**25,219**	**23,141**	**62,187**	**1,738,705**	
Non-current							
Cash guarantees and deposits		9,596				9,596	
Other receivables maturing in more than 1 year		4,330				4,330	
Assets employee benefits		4,786				4,786	
Current							
Trade receivables (at cost)		1,313,156				1,313,156	
Trade receivables (write-down)		(17,893)				(17,893)	
Other receivables (at cost)		309,323				309,323	
Other receivables (write-down)		(378)				(378)	
Interest receivable		1,942				1,942	
Fair value of financial instruments held for cash-flow hedging	2	62,187			62,187		
Fair value receivable - financial instruments related to FV hedging	2	48,359	25,219	23,141			
Deferred charges and accrued income		113,843				113,843	
Cash and cash equivalents		**1,239,869**				**1,239,869**	
Short-term investments: bank term deposits		612,839				612,839	
Short-term investments: term deposits (other)		98				98	
Cash-in-hand and bank current accounts		626,932				626,932	
TOTAL OF FINANCIAL INSTRUMENTS (ASSETS)		**3,115,151**	**25,219**	**23,141**	**62,187**	**2,982,439**	**22,165**

Thousands of Euros	Level	Fair value	Held for trading - economic hedging	Fair value hedge accounting	Cash Flow hedge accounting	Loans, receivables and payables	Carrying amount Financial assets at FV through OCI
LIABILITIES							
Financial debt		**2,294,869**				**2,343,438**	
Non-current							
Bank loans		1,068,431				1,117,000	
Lease liability		40,709				40,709	
Other loans		468,470				468,470	
Current							
Short term bank loans		346,591				346,591	
Lease liability		16,015				16,015	
Bank overdrafts		18,534				18,534	
Short term loan: commercial paper		94,918				94,918	
Other loans		241,201				241,201	
Trade and other payables		**3,158,095**	**14,477**	**64,867**	**56,541**	**3,022,210**	
Non-current							
Long term trade payables		23				23	
Other long term debts		6,324				6,324	
Investments grants and deferred income from grants		41,690				41,690	
Current							
Trade payables		2,250,707				2,250,707	
Advances received on contracts in progress		33,061				33,061	
Tax - other than income tax - payable		31,645				31,645	
Payroll and related charges		183,630				183,630	
Other amounts payable		116,096				116,096	
Dividends payable		11,616				11,616	
Accrued interest payable		11,181				11,181	
Fair value financial instrument held for cash flow hedging	2	56,541			56,541		
Fair value payable - financial instruments related to FV hedging	2	79,344	14,477	64,867			
Accrued charges and deferred income		336,237				336,237	
TOTAL OF FINANCIAL INSTRUMENTS (LIABILITIES)		**5,452,964**	**14,477**	**64,867**	**56,541**	**5,365,649**	**-**

Loans and debt have been issued at market rates which would not create any major differences with effective interest expenses. All categories of financial instruments of Umicore are at fair value except the non-current bank loans for which the carrying amounts differ from the fair value (see note F24). The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period. The fair value of financial instruments that are not traded in an active market is determined using valuation techniques, mainly discounted cash-flow, using market assumptions prevailing at the end of the reporting period. In particular, the fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange, metal and energy contracts is determined using quoted forward exchange, metal and energy rates at the end of the reporting period. The fair value of quoted financial assets held by the Group is their quoted market price at the end of the reporting period. The fair value of financial liabilities is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments. The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values.

32.1 Fair value hierarchy

The Group adopted the amendment to IFRS 7 for financial instruments which are measured in the balance sheet at fair value, with effect from January 2009. This amendment requires disclosures of fair value measurements by level, based on the following fair value measurement hierarchy:

- Level 1: fair value based on quoted prices in active markets for identical assets or liabilities.
- Level 2: fair value based on inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly.
- Level 3: fair value for the asset or liability valuation are based on unobservable inputs.

In the Group, the fair values on financial assets at fair value through OCI are measured as level 1.

All the metal, energy and foreign currency derivatives are measured as level 2.

During the year, there were no transfer between levels in the fair value hierarchy.

32.2 Sensitivity analysis on financial instruments

Umicore is sensitive to commodity prices, foreign currency and interest rate risk on its financial instruments. The fair values of the financial instruments reflect the difference between the contract rates and the closing rates. The sensitivity calculations are performed by stressing the closing rates (being commodity prices, currency exchange rates, electricity and gas prices and interest rates) with 10% up and down. The market values in the stressed scenario's are then compared to the original market values.

32.2.1 Commodity prices

The fair value on financial instruments related to cash flow hedging sales would have been € 14.1 million lower/higher if the metal prices would strengthen/weaken by 10%.

The fair value on financial instruments related to cash flow hedging purchases would have been € 11.5 million higher/lower if the energy prices would strengthen/weaken by 10%.

The fair value on other commodity sales hedge compliant financial instruments would have been € 48.4 million lower/higher and the fair value on other commodity purchases hedge compliant financial instruments would have been € 11.4 million higher/lower if the metal prices would strengthen/weaken by 10%.

The fair value on other commodity sales financial instruments according to economic logic would have been € 15.8 million lower/higher and the fair value on other commodity purchases financial instruments according to economic logic would have been € 2.1 million higher/lower if the metal prices would strengthen/weaken by 10%.

32.2.2 Foreign currency

The fair value of forward currency contracts related to cash flow hedging would have been € 40.2 million higher if the EUR would strengthen against USD by 10% and would have been € 49.1 million lower if the EUR would weaken against USD by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 9.3 million lower if the USD would strengthen against KRW by 10% and would have been € 9.3 million higher if the USD would weaken against KRW by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 3.7 million higher if the EUR would strengthen against CNY by 10% and would have been € 4.5 million lower if EUR would weaken against CNY by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 3.3 million lower if the USD would strengthen against CNY by 10% and would have been € 3.3 million higher if USD would weaken against CNY by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 6.1 million lower if the USD would strengthen against BRL by 10% and would have been € 6.1 million higher if USD would weaken against BRL by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 6.0 million lower if the USD would strengthen against CAD by 10% and would have been € 7.3 million higher if USD would weaken against CAD by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 8.3 million lower if the EUR would strengthen against PLN by 10% and would have been € 10.2 million higher if EUR would weaken against PLN by 10%.

The fair value of other forward currency contracts sold would have been € 54.1 million higher if the EUR would strengthen against USD by 10% and would have been € 66.2 million lower if the EUR would weaken against USD by 10%.

The fair value of other forward currency contracts bought would have been € 15.8 million lower if the EUR would strengthen against USD by 10% and would have been € 19.4 million higher if the EUR would weaken against USD by 10%.

The fair value of net position of current assets and liabilities exposed to USD would have been € 31.2 million lower if the EUR would strengthen against USD by 10% and would have been € 38.1 million higher if the EUR would weaken against USD by 10%.

The fair value of other forward currency contracts sold would have been € 6.7 million higher if the EUR would strengthen against CNY by 10% and would have been € 8.2 million lower if the EUR would weaken against CNY by 10%.

The fair value of net position of current assets and liabilities exposed to CNY would have been € 6.6 million lower if the EUR would strengthen against CNY by 10% and would have been € 8.1 million higher if the EUR would weaken against CNY by 10%.

The fair value of other forward currency contracts sold would have been € 9.8 million higher if the CNY would strengthen against USD by 10% and would have been € 12.0 million lower if the CNY would weaken against USD by 10%.

The fair value of other forward currency contracts sold would have been € 4.3 million higher if the EUR would strengthen against PLN by 10% and would have been € 5.2 million lower if the EUR would weaken against PLN by 10%.

The fair value of net position of current assets and liabilities exposed to PLN would have been € 4.8 million higher if the EUR would strengthen against PLN by 10% and would have been € 5.8 million lower if the EUR would weaken against PLN by 10%.

The fair value of other forward currency contracts sold would have been € 9.3 million lower if the KRW would strengthen against USD by 10% and would have been € 9.3 million higher if the KRW would weaken against USD by 10%.

The fair value of other forward currency contracts bought would have been € 4.0 million higher if the KRW would strengthen against USD by 10% and would have been € 4.0 million lower if the KRW would weaken against USD by 10%.

The fair value of net position of current assets and liabilities exposed to KRW would have been € 9.9 million lower if the EUR would strengthen against KRW by 10% and would have been € 12.2 million higher if the EUR would weaken against KRW by 10%.

32.2.3 Interest rate

The fair value of long term loans would have been € 21.7 million lower if interest rate levels would increase by 10% and € 22.2 million higher if interest rate levels would decrease by 10%.

F33 Fair value of financial instruments (derivatives)

Umicore hedges its structural and transactional commodity (metal and energy), currency and interest rate risks using respectively commodity derivatives (mainly quoted on the London Metal Exchange), currency derivatives and (cross-currency) interest rate swaps with reputable brokers and banks.

33.1 Financial instruments related to cash-flow hedging

	Notional or Contractual amount		Fair value		Change in fair value
Thousands of Euros	**31/12/2021**	**31/12/2022**	**31/12/2021**	**31/12/2022**	**31/12/2022**
Forward commodities sales	156,750	**151,101**	11,241	**9,680**	(1,560)
Forward commodities purchases	(52,394)	**(89,600)**	59,564	**25,388**	(34,176)
Forward currency contracts sales	681,471	**787,569**	(16,315)	**(22,001)**	(5,686)
Forward currency contracts purchases	(57,804)	**(96,565)**	4,621	**2,801**	(1,820)
Forward IRS contracts	396,600	**796,913**	(3,164)	**(10,222)**	(7,059)
Total fair value impact subsidiaries			**55,947**	**5,646**	**(50,301)**
recognized under trade and other receivables			80,452	**62,187**	
recognized under trade and other payables			(24,504)	**(56,541)**	
Total fair value impact associates and joint ventures			(1,953)	**(1,735)**	
Total			**53,995**	**3,911**	

The principles and documentation on the hedged risks as well as the timing related to the Group's cash flow hedging operations are included in note F3 Financial risk management.

The fair values of the effective hedging instruments are in the first instance recognized in the fair value reserves recorded in equity and are derecognized when the underlying forecasted or committed transactions occur (see note F23).

The forward commodities sales contracts are set up to hedge primarily the following commodities: gold, silver, palladium, platinum, nickel, lead, rhodium, cobalt and copper. The forward commodity purchase contracts are set up to hedge primarily the electricity, gas and fuel oil price risks. The forward currency contracts are set up to hedge USD towards EUR, KRW, CNY, BRL and CAD as well as EUR towards PLN and CNY. The terms and conditions of the forward contracts are common market conditions. Following the new issuance of US private placements in November 2022 (see note F24), Umicore set up cross currency swaps whose notional and fair value are included in the forward currency contract sales category. (Cross-currency) interest rates swap contracts are set up to hedge primarily intercompany loans to Group's entities whose functional currency is different from the loan currency.

Umicore did not face any ineffectiveness on cash flow hedging in P&L in 2021 and 2022.

The fair values of the hedging instruments reflect the difference between the contract rates and the closing rates. The total fair value of financial instruments for cash-flow hedging has a positive impact on the fair value reserves in equity at end of 2022. This positive impact is most significant for commodities purchased and sold, while forward currency contracts and (cross-currency) interest swaps offset part of this positive impact. All of the hedging instruments have their maturity within the next three years except for the cross currency swaps related to the new issuance of US private placements which have longer maturities.

33.2 Financial instruments related to fair value hedging

	Notional or Contractual amount		Fair value		Change in fair value
Thousands of Euros	**31/12/2021**	**31/12/2022**	**31/12/2021**	**31/12/2022**	**31/12/2022**
Forward commodities sales (IFRS 9-hedge accounting)	259,702	**360,386**	(14,858)	**(53,093)**	(38,235)
Forward commodities sales (economic hedging)	59,432	**168,485**	1,984	**10,451**	8,467
Forward commodities purchases (IFRS 9-hedge accounting)	(82,064)	**(79,685)**	4,934	**16,940**	12,006
Forward commodities purchases (economic hedging)	(58,194)	**(21,413)**	1,560	**291**	(1,269)
Forward currency contracts sales	1,216,640	**1,260,888**	(12,232)	**(668)**	11,565
Forward currency contracts purchases	(494,154)	**(428,554)**	150	**(4,905)**	(5,055)
Total fair value impact subsidiaries			**(18,463)**	**(30,984)**	**(12,522)**
recognized under trade and other receivables (IFRS 9- hedge accounting)			9,868	**23,141**	
recognized under trade and other receivables (economic hedging)			3,977	**25,219**	
recognized under trade and other payables (IFRS 9- hedge accounting)			(31,875)	**(64,867)**	
recognized under trade and other payables (economic hedging)			(433)	**(14,477)**	
Total			**(18,462)**	**(30,984)**	

The principles and documentation related to the Group's transactional hedging are included in note F3 "Financial Risk Management". Under Umicore's economical hedging policy, financial instruments for currency and commodity hedging are used to protect the fair value of underlying hedged items (assets, liabilities and firm commitments) and are recognized at fair value at closing date. Umicore obtained for the fair value hedging of its currency risk exposures hedge accounting under the criteria of IFRS 9 (see note F2.22.1).

For the fair value hedging of its commodity risk exposures, Umicore did not obtain hedge accounting under the criteria of IFRS 9 for some metals. Hedge accounting principles are accepted for copper, lead and nickel. In the absence of hedge accounting, the financial instruments are measured at fair value as if they were held for trading. However, such instruments are being used to cover existing transactions, considered as hedged items under Umicore transactional hedging risk policy (primarily inventory and firm commitments) and so these commodity hedging instruments held for trading are not speculative in nature.

The fair values are immediately recognized in the income statement under Other Operating income for the commodity instruments and the Net Finance cost for the currency instruments. The adjustments for the hedged items as well as the hedging instruments are recorded in the following caption of the statement of financial position: "trade and other receivables" and "trade and other payables".

The fair values of the hedging instruments reflect the difference between the contract rates and the market closing rates. In view of the intent of the Group policy on transactional hedging, the net impact on operating income of fair value movements on both hedging instruments and hedged items is neutral. The booking of the fair value movements on financial instruments under fair value hedging had a negative impact on the operating income at the end of 2022. Most of the fair values of the hedging instruments are not significant as the closing rates do not materially differ from the strike rates. Only for the commodities sold and purchased the fair values are significant. These concern metal hedging instruments of which most have their maturity within the next year. The forward commodities sales contracts are set up to hedge primarily the following commodities: nickel, lead and copper. The forward commodity purchase contracts are set up to hedge primarily nickel, lead and copper. The forward currency contracts are set up to hedge mainly USD towards EUR, BRL and KRW as well as EUR towards CNY, KRW, and PLN.

The forward contracts following the economic logic are contracts to hedge following commodities: silver, gold, platinum and palladium.

Fair value hedged items and hedging instruments compliant with IFRS 9 hedge accounting

	31/12/2021		31/12/2022				
Thousands of Euros	**Fair Value Hedged Items**	**Fair Value Hedging Instruments**	**Fair Value Hedged Items**	**Fair Value Hedging Instruments**	**Change in Fair Value Hedged Items**	**Change in Fair Value Hedging Instruments**	**Ineffectiveness**
Transactional metal hedges	18,905	(12,031)	**55,080**	**(41,920)**	36,175	(29,889)	6,285

The main source of hedge ineffectiveness on the fair value hedging originates from differences in maturity dates between the hedging instruments and the underlying hedged item. With respect to the fair value currency hedges, the hedged items are mirroring the hedging instruments and are included in various sections of the balance sheet. The total fair value on these transactional currency hedges amounted to a loss of € 5.5 million. The ineffectiveness on currency hedges is immaterial.

AS AT THE END OF PREVIOUS YEAR

Thousands of Euros	Earliest contractual maturity (undiscounted) - notional amounts					Earliest contractual maturity (undiscounted) - fair value				
	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total
FINANCIAL INSTRUMENTS ASSETS (FAIR VALUE)										
Interest Rate Risk										
(Cross-currency) Interest rate swaps	-	-	-	121,600	**121,600**	-	-	-	47	**47**
Commodity risk										
Total forward sales (CFH)	10,140	33,666	43,231	55,937	**142,974**	191	(254)	(509)	12,444	**11,872**
Total forward purchases (CFH)	2,475	4,952	32,113	12,854	**52,394**	1,515	3,006	43,242	11,801	**59,564**
Total forward purchases (FV - IFRS 9 Hedge Accounting)	25,929	30,273	25,862	-	**82,064**	1,445	1,528	1,961	-	**4,934**
Total forward sales (FV economic hedging)	-	43,666	2,592	-	**46,258**	-	2,224	193	-	**2,417**
Total forward purchases (FV economic hedging)	14,932	40,885	2,377	-	**58,194**	497	1,041	21	-	**1,560**
FX Risk										
Forward currency contracts sales (CFH)	32,617	9,338	49,359	23,610	**114,924**	963	501	2,865	18	**4,348**
Forward currency contracts purchases (CFH)	2,475	4,952	34,319	16,058	**57,804**	337	680	3,287	317	**4,621**
Forward currency contracts sales (FV - IFRS 9 Hedge Accounting)	81,149	40,909	25,430	-	**147,488**	755	306	256	-	**1,318**
Forward currency contracts purchases (FV - IFRS 9 Hedge Accounting)	121,549	78,972	47,854	385	**248,759**	1,419	394	1,801	1	**3,616**
FINANCIAL INSTRUMENTS LIABILITIES (FAIR VALUE)										
Interest Rate Risk										
(Cross-currency) Interest rate swaps	-	-	-	275,000	**275,000**	-	-	-	(3,211)	**(3,211)**
Commodity risk										
Total forward sales (CFH)	305	1,870	6,514	5,087	**13,776**	(55)	(87)	(337)	(152)	**(631)**
Total forward sales (FV - IFRS 9 Hedge Accounting)	65,774	94,180	58,764	40,983	**259,702**	(2,455)	(3,406)	(5,197)	(3,801)	**(14,858)**
Total forward sales (FV economic hedging)	-	-	13,174	-	**13,174**	-	-	(433)	-	**(433)**
FX Risk										
Forward currency contracts sales (CFH)	41,509	44,982	256,654	223,401	**566,547**	(1,894)	(1,744)	(10,605)	(6,420)	**(20,663)**
Forward currency contracts sales (FV - IFRS 9 Hedge Accounting)	486,931	351,714	192,287	38,220	**1,069,152**	(5,800)	(6,746)	(1,148)	144	**(13,550)**
Forward currency contracts purchases (FV - IFRS 9 Hedge Accounting)	76,362	115,950	53,083	-	**245,394**	(720)	(2,398)	(348)	-	**(3,466)**

AS AT THE END OF THE FINANCIAL YEAR

	Earliest contractual maturity (undiscounted) - notional amounts					Earliest contractual maturity (undiscounted) - fair value				
Thousands of Euros	**< 1 Month**	**1 to 3 Months**	**3 Months to 1 Year**	**1 to 5 Years**	**Total**	**< 1 Month**	**1 to 3 Months**	**3 Months to 1 Year**	**1 to 5 Years**	**Total**
Financial Instruments Assets										
Interest Rate Risk										
(Cross-currency) Interest rate swaps	-	-	40,000	362,032	**402,032**	-	-	367	7,305	**7,672**
Commodity risk										
Total forward sales (CFH)	2,213	13,395	49,859	28,085	**93,552**	644	2,021	7,505	10,608	**20,779**
Total forward purchases (CFH)	-	-	67,574	22,026	**89,600**	-	-	(3,086)	28,474	**25,388**
Total forward purchases (FV - IFRS 9 Hedge Accounting)	18,438	14,177	35,265	-	**67,881**	3,739	2,829	10,381	-	**16,950**
Total forward sales (FV economic hedging)	5,274	8,999	51,506	14,493	**80,272**	2,067	3,234	15,632	3,969	**24,901**
Total forward purchases (FV economic hedging)	-	20,223	-	-	**20,223**	-	317	-	-	**317**
FX Risk										
Forward currency contracts sales (CFH)	2,093	4,186	18,843	(70,334)	**(45,212)**	111	235	1,166	4,036	**5,547**
Forward currency contracts purchases (CFH)	3,557	7,114	32,056	53,837	**96,565**	216	386	993	1,206	**2,801**
Forward currency contracts sales (FV - IFRS 9 Hedge Accounting)	465,048	268,646	123,938	7,800	**865,433**	2,775	(1,477)	4,364	278	**5,940**
Forward currency contracts purchases (FV - IFRS 9 Hedge Accounting)	60,449	58,311	67,615	-	**186,375**	171	18	61	-	**251**
Financial Instruments Liabilities										
Interest Rate Risk										
(Cross-currency) Interest rate swaps	-	20,361	154,520	220,000	**394,881**	-	(368)	(3,404)	(14,123)	**(17,895)**
Commodity risk										
Total forward sales (CFH)	3,814	5,888	29,906	17,941	**57,549**	(472)	(1,245)	(5,969)	(3,412)	**(11,098)**
Total forward sales (FV - IFRS 9 Hedge Accounting)	24,773	67,531	196,307	71,775	**360,386**	(5,234)	(8,171)	(31,104)	(8,585)	**(53,093)**
Total forward purchases (FV - IFRS 9 Hedge Accounting)	2,354	9,451	-	-	**11,804**	5	(15)	-	-	**(10)**
Total forward sales (FV economic hedging)	-	59,988	28,225	-	**88,213**	-	(11,009)	(3,440)	-	**(14,450)**
Total forward purchases (FV economic hedging)	-	-	1,190	-	**1,190**	-	-	(27)	-	**(27)**
FX Risk										
Forward currency contracts sales (CFH)	55,789	58,224	321,211	297,557	**732,780**	(4,974)	(2,301)	(18,676)	(1,597)	**(27,548)**
Forward currency contracts sales (FV - IFRS 9 Hedge Accounting)	129,273	175,451	90,732	-	**395,455**	(671)	(2,920)	(3,017)	-	**(6,608)**
Forward currency contracts purchases (FV - IFRS 9 Hedge Accounting)	143,101	34,645	23,645	40,788	**242,179**	(1,759)	(614)	(1,068)	(1,714)	**(5,156)**

F34 Notes to the cash flow statement

34.1 Definitions

The cash flow statement identifies operating, investing and financing activities for the period.

Umicore uses the indirect method for the operating cash flows. The profit (loss) of the period is adjusted for:

- the effects of non-cash transactions such as provisions, impairment losses, mark to market, etc., and the variance in operating capital requirements.
- items of income or expense associated with investing or financing cash flows.

Thousands of Euros	2021	2022
Adjustments for non cash transactions		
Depreciation and amortisation	279,526	**285,907**
(Reversal) Impairment loss	48,504	**24,931**
Mark to market of inventories and commitments	19,764	**64,068**
Exchange difference on long-term loans	4,878	**(14,811)**
(Reversal) Impairment loss on other financial assets	-	**811**
Write-down on inventory and impairment of financial assets	10,747	**17,544**
Depreciation on government grants	(401)	**(2,401)**
Share-based payments	14,255	**11,824**
Change in provisions	22,662	**23,928**
Total	**399,936**	**411,803**
Adjustments for items to disclose separately or under investing and financing cash flows		
Income taxes of the period	179,043	**137,600**
Interest (income) charges	51,498	**76,954**
(Gain) loss on disposal of fixed assets	(1,759)	**(7,732)**
Dividend income	(210)	**(251)**
Total	**228,573**	**206,571**
Change in working capital requirement analysis		
Inventories	(150,979)	**(524,603)**
Trade and other receivables	(171,084)	**(28,658)**
Trade and other payables	449,647	**367,231**
As in the consolidated balance sheet	**127,584**	**(186,030)**
Non-cash items (*)	35,113	**(138,534)**
Items disclosed elsewhere (**)	(52,810)	**(29,508)**
Currency translation differences	57,269	**11,906**
As in the consolidated cash flow statement	**167,156**	**(342,166)**

(*) Non-cash items are mainly linked to mark to market of strategic and transactional hedging as well as impairments on inventories and receivables.

(**) Item disclosed elsewhere are mainly due to changes in interests, tax receivable and payable as well as government grants.

Thousands of Euros	Net cash and cash equivalent	Loans (w/o bank overdrafts)	Net financial debt
At the end of previous year	**1,166,315**	**2,126,762**	**960,447**
Cash flow of the period	55,020	198,143	**143,123**
AT THE END OF THE FINANCIAL YEAR	**1,221,335**	**2,324,905**	**1,103,570**

Net cash and cash equivalent includes bank overdrafts as disclosed in note F22.

34.2 Net cash flow generated by operating activities

Operating cash flow after tax is € 634 million. Net working capital for the Group increased by € 342 million compared to the end of 2021. While higher battery metal prices increased working capital in Energy & Surface Technologies, working capital needs remained stable in Catalysis and decreased in Recycling thanks to a temporary cut off effect.

34.3 Net cash flow used in investing activities

Net cash used in investing activities increased by € 9.3 million in 2022 compared to 2021. Capital expenditure reached € 469.9 million (compared to € 388.6 million in 2021), excluding capitalized R&D costs as per Umicore's definition of capital expenditures (refer to Glossary). Energy & Surface Technologies accounted for more than 60% of the Group's capital expenditure, driven by investments in the expansion of the Rechargeable Battery Materials business unit European's footprint. In the Catalysis and Recycling business segments capital expenditure slightly decreased. In Catalysis, the Automotive Catalysts business unit continued to focus on investments in production footprint optimization and targeted capacity expansions. In Recycling, the increase in capital expenditure was related to environmental and safety investments in the Precious Metals Refining business unit. Capitalized development expenses amounted to € 21.4 million, down versus 2021.

Thousands of Euros		2021	2022
Acquisition of tangible assets	a	379,572	**458,859**
Acquisition of intangible assets	b	36,854	**32,431**
Acquisitions of assets	**c=a+b**	**416,426**	**491,290**
Capitalized R&D	d	27,830	**21,412**
Capital expenditure	**e=c-d**	**388,596**	**469,878**

34.4 Net cash flow used in financing activities

The cash used in financing activities is mainly related to the purchase and use of own shares to cover the exercise of options (€ 43.2 million), the payment of dividends (€ 197.7 million), of interest (€ 70.2 million) and the reimbursement of the lease liability (€ 20.1 million).

The effect of exchange rate fluctuations in the statement of cash flow includes the effect of exchange rate fluctuations on cash held on one hand and the currency translation effect on the intercompany loan eliminations on the other hand.

F35 Off-balance sheet rights and commitments

Thousands of Euros	2021	2022
Guarantees constituted by third parties on behalf of the Group	38,112	**64,139**
Guarantees constituted by the Group on behalf of third parties	3,112	**3,625**
Guarantees received	81,102	**58,563**
Goods and titles held by third parties in their own names but at the Group's risk	1,643,975	**1,988,971**
Commitments to acquire and sell fixed assets	4,278	**25,783**
Commercial commitments for commodities purchased (to be received)	910,182	**1,106,973**
Commercial commitments for commodities sold (to be delivered)	1,930,639	**2,346,619**
Goods and titles of third parties held by the Group	5,447,836	**6,676,091**
TOTAL	**10,059,236**	**12,270,764**

35.1 Guarantees constituted by third parties on behalf of the Group

These are secured and unsecured guarantees given by third parties to the creditors of the Group guaranteeing that the Group's debts and commitments, actual and potential, will be satisfactorily discharged.

35.2 Guarantees constituted by the Group on behalf of third parties

These are guarantees or irrevocable undertakings given by the Group in favor of third parties guaranteeing the satisfactory discharge of debts or of existing or potential commitments by the third party to its creditors.

There are no loan commitments given to third parties.

35.3 Guarantees received

These are pledges and guarantees received guaranteeing the satisfactory discharge of debts and existing and potential commitments of third parties towards the Group, with the exception of guarantees and security in cash.

The guarantees received are mainly related to supplier guarantees backed by bank institutions. Those guarantees are set up to cover the good execution of work by the supplier.

Some guarantees received are related to customer guarantees, received mainly from a customer's mother company on behalf of one of its subsidiaries. A minor part of the received guarantees is related to rent guarantees.

All guarantees are taken at normal market conditions and their fair value is equivalent to the carrying amount. No re-pledge has been done on any of those guarantees.

35.4 Goods and titles held by third parties in their own names but at the Group's risk

These represent goods and titles included in the Group balance sheet for which the Group bears the risk and takes the profit, but where these goods and titles are not present on the premises of the Group. It concerns mainly inventories leased out to third parties or held under consignment or under tolling agreement by third parties.

35.5 Commercial commitments

These are firm commitments to deliver or receive metals to customers or from suppliers at fixed prices.

35.6 Goods and titles of third parties held by the Group

These are goods and titles held by the Group, but which are not owned by the Group. It concerns mainly third-party inventories leased in or held under consignment or tolling agreements with third parties. It also includes in a much lesser extent some non-metal leases that are not in the scope of IFRS 16 because of lower values or short-term.

The Group leases metals (particularly gold, silver, platinum and palladium) from and to banks and other third parties for specified, mostly short term, periods and for which the Group pays or receives fees. As at 31 December 2022, there was a net lease-in position of € 1,444 million vs. € 1,005 million at end of 2021. This increase is mainly caused by higher volumes. As detailed in Note F2.8, those metal leases are not under the scope of IFRS 16.

F36 Contingencies

As previously disclosed, the Group had at 31 December 2021 a pending file that can be qualified as a contingent liability according to the definition of IFRS. A subsidiary of Element Six Abrasives had received notice of a local tax assessment for € 24.9 million to be grossed up with statutory interests, estimated at 31 December 2021 at € 14.5 million. On 8 March 2022, a court determination was issued ruling in favour of the company's appeal. No appeal was made by the tax authorities and therefore the case is closed.

The Group is the also subject of a number of other claims and legal proceedings incidental to the normal conduct of its business. Management does not believe that such claims and proceedings are likely to have a material adverse effect on the financial condition of Umicore.

F37 Related parties

Thousands of Euros	2021	2022
Transactions with joint ventures and associates		
Operating income	196,699	**301,109**
Operating expenses	(232,041)	**(346,673)**
Dividends received	(4,808)	**(11,902)**

Thousands of Euros	2021	2022
Outstanding balances with joint ventures and associates		
Current trade and other receivables	39,774	**46,036**
Current trade and other payables	79,573	**124,061**

The transactions with associates and joint ventures are mainly commercial transactions, sales and purchases of goods and services.

Besides its equity share in its associates, Umicore has no other commitments, guarantees or obligations arising from its involvement in those.

There are no transaction with entities held by key management personnel.

Thousands of Euros	2021	2022
Supervisory Board		
Salaries and other compensation	1,262	**1,185**
Fixed portion	296	**362**
Variable portion (based on attended meetings)	467	**428**
Value of the share grant	497	**393**
Benefit in kind company car chairman	3	**2**

No variable or other compensation element (apart from attendance-related fees) is associated with directorship. No loan or guarantees have been granted by the company to members of the supervisory board.

Thousands of Euros	2021	2022
Management Board		
Salaries and other benefits	18,814	**13,410**
Short-term employee benefits	11,021	**5,509**
Post-employment benefits	1,044	**1,077**
Other long-term benefits	2,027	**1,909**
Share-based payments	4,721	**4,914**

The data above shows the accounting view of the supervisory board and management board remuneration and slightly differs from the information provided in the remuneration report in the Corporate Governance section.

In the tables above, the employer social security contributions, if applicable, are included in the short-term employee benefits. These do not feature in the remuneration report.

With regards to share-based incentives the share grant figures included in share-based payments above represent the value of the shares granted in 2022 for services rendered in 2021. The remuneration report shows the value of the shares granted in 2023 for services rendered in the reporting year 2022.

The figures related to the annual variable remuneration linked to the reference year 2022, included in short-term employee benefits, represent the level of accruals at balance sheet date. The remuneration report features the actual amounts paid with respect to the reference year 2022.

Accruals booked for the long-term variable remuneration (2022 PSU Plan) for the reference year 2022 are included in the other long-term benefits. The award level for vesting in 2025 will depend on long-term performance measures and the exact award levels will be included in the remuneration report of 2024.

F38 Events after the reporting period

The Supervisory Board will propose a gross annual dividend of € 0.80 per share at the Annual General Meeting on 27 April 2023. This compares to a full dividend of € 0.80 per share paid out for the financial year 2021. Taking into account the interim dividend of € 0.25 per share paid out on 23 August 2022 and subject to shareholder approval, a gross amount of € 0.55 per share will be paid out on 4 May 2023.

The sustainability linked US Private Placement Notes, issued in November 2022, has been drawn in January 2023 as disclosed in Note F24.

F39 Earnings per share

Earnings per share

(EUR)	2021	2022
EPS - basic	2.57	**2.37**
EPS - diluted	2.56	**2.37**
Basic adjusted EPS	2.77	**2.47**

The following earnings figures have been used as the numerator in the calculation of basic and diluted earnings per share:

Numerator elements

Thousands of Euros	Notes	2021	2022
Net consolidated profit, Group share	F9		
From continuing operations		618,959	**569,878**
Adjusted net consolidated profit, Group share	F9	667,492	**593,059**

The following numbers of shares have been used as the denominator in the calculation of basic and diluted earnings per share:

Denominator elements

	2021	2022
Total shares issued as at 31 December	**246,400,000**	**246,400,000**
of which treasury shares	5,200,995	**6,199,341**
of which shares outstanding	241,199,005	**240,200,659**
Weighted average number of outstanding shares	**240,868,119**	**240,340,705**
Potential dilution due to stock option plans	1,112,044	**345,226**
Adjusted weighted average number of outstanding shares	241,980,163	**240,685,931**

Total outstanding shares are after deduction of treasury shares, which are held to cover existing stock option plans or are available for resale. The denominator for the calculation of diluted earnings per share takes into account an adjustment for stock options.

During 2022, no new shares were created as a result of the exercise of stock options with linked subscriptions rights. During the year Umicore used 198,050 of its treasury shares following the exercise of stock options and 103,604 for shares granted. In the course of 2022, Umicore bought back 1,300,000 own shares. On 31 December 2022, Umicore owned 6,199,341 of its own shares representing 2.52 % of the total number of shares issued as at that date.

F40 IFRS developments

There were no new standards, amendments and interpretation to standards issued, and **mandatory** for the first time for the financial year beginning 1 January 2022 with a material impact on the Group's consolidated financial statements .

In case of material, these are developed in the accounting policies section.

A fundamental reform of major interest rate benchmarks is being undertaken globally, including the replacement of some interbank offered rates (IBORs) with alternative nearly risk-free rates (referred to as 'IBOR reform'). The amendments to IFRS 9 and IAS 39 Financial Instruments: Recognition and Measurement provide a number of reliefs, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is affected if the reform gives rise to uncertainty about the timing and/or amount of benchmark-based cash flows of the hedged item or the hedging instrument. These amendments have no impact on the consolidated financial statements of the Umicore Group as it does not have any interest rate hedge relationships that are referenced to LIBOR. In 2021, Umicore set up a working group to monitor the IBOR reform and its potential effect across the Group on contracts.

For all other new interpretations and standards not yet mandatory as from 1 January 2022, management has no indications that this will result in a material impact on the Group's consolidated financial statements. In particular, the impact of IFRS 17 (Insurance contracts) and its amendments has been assessed and the transactions within the scope of IFRS 17 are unlikely to have a material impact on the financial statements of the Group.

F41 Auditors' remuneration

The worldwide remuneration for the statutory auditor and its affiliated companies totaled € 2.7 million, including an amount of € 2.3 million for the statutory audit missions (€ 0.6 million for the audit of the parent company) and € 0.4 million for non-statutory audit services including audit-related and other attestation services (€ 0.3 million) and non-audit services (€ 0.1 million).

Parent company separate summarized financial statements

The annual accounts of Umicore are given below in summarized form.

In accordance with the Companies code, the annual accounts of Umicore, together with the management report and the statutory auditor's report will be deposited with the National Bank of Belgium.

These documents are also available on request at:

UMICORE
Rue du Marais 31
B-1000 Brussels
(Belgium)

The statutory auditor did not express any reservations in respect of the annual accounts of Umicore.

The legal reserve of € 55.0 million which is included in the retained earnings is not available for distribution.

Thousands of Euros		31/12/2020	31/12/2021	31/12/2022
Summarized balance sheet at 31 December				
1. Assets				
Fixed assets		**3,172,625**	**3,296,290**	**3,543,162**
I.	Formation expenses	14,685	10,288	**6,228**
II.	Intangible assets	99,032	99,067	**114,396**
III.	Tangible assets	452,430	460,546	**461,517**
IV.	Financial assets	2,606,478	2,726,389	**2,961,021**
Current assets		**2,060,640**	**2,169,189**	**2,631,586**
V.	Amounts receivable after more than one year	476,214	584,998	**435,442**
VI.	Stocks and contracts in progress	617,346	503,271	**720,577**
VII.	Amounts receivable within one year	620,119	861,136	**1,173,296**
VIII.	Investments	290,395	185,936	**226,272**
IX.	Cash at bank and in hand	4,565	559	**4,603**
X.	Deferred charges and accrued income	52,001	33,289	**71,396**
TOTAL ASSETS		**5,233,265**	**5,465,479**	**6,174,748**
2. Liabilities and shareholders' equity				
Capital and reserves		2,177,834	2,428,079	**2,528,617**
I.	Capital	550,000	550,000	**550,000**
II.	Share premium account	848,130	848,130	**848,130**
III.	Revaluation surplus	91	91	**91**
IV.	Reserves	414,075	391,090	**417,915**
V.	Result carried forward	267,163	352,163	**492,586**
Vbis.	Result for the period	86,475	272,454	**209,830**
VI.	Investments grants	11,900	14,151	**10,065**
Provisions and deferred taxation				
VII.A.	Provisions for liabilities and charges	206,053	198,047	**180,279**
Creditors		**2,849,378**	**2,839,353**	**3,465,852**
VIII.	Amounts payable after more than one year	1,707,729	1,707,589	**1,619,444**
IX.	Amounts payable within one year	1,063,641	1,040,392	**1,697,439**
X.	Accrued charges and deferred income	78,008	91,372	**148,969**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**5,233,265**	**5,465,479**	**6,174,748**

Thousands of Euros		31/12/2020	31/12/2021	31/12/2022
Income statement				
I.	Operating income	4,459,290	6,229,378	**7,093,132**
II.	Operating charges	(4,481,338)	(5,947,989)	**(6,932,583)**
III.	**Operating result**	**(22,048)**	**281,389**	**160,549**
IV.	Financial income	201,457	213,675	**292,050**
V.	Financial charges	(85,500)	(133,578)	**(142,949)**
VI.	**Result on ordinary activities before taxes**	**93,908**	**361,486**	**309,650**
X.	Income taxes	(7,433)	(51,736)	**(12,969)**
XI.	**Result for the period**	**86,475**	**309,750**	**296,681**
XIII.	**Result for the period available**	**86,475**	**309,750**	**296,681**

Thousands of Euros		2020	2021	2022
Appropriation account				
A.	**Profit (loss) to be appropriated**	**558,337**	**661,913**	**789,267**
1.	Profit (loss) for the financial year	86,475	309,750	**296,681**
2.	Profit (loss) carried forward	471,862	352,163	**492,586**
C.	**Appropriation to equity**	**(24,220)**	**22,985**	**(26,826)**
3.	To the reserve for own shares	(24,220)	22,985	**(26,826)**
D.	**Profit (loss) to be carried forward (1)**	**352,163**	**492,586**	**570,305**
2.	Profit (loss) to be carried forward	352,163	492,586	**570,305**
F.	**Profit to be distributed (1)**	**(181,954)**	**(192,312)**	**(192,136)**
1.	Dividends			
	ordinary shares	(180,395)	(192,312)	**(192,136)**
2.	Profit sharing to personnel	(1,559)	-	**-**

(1) The total amount of these two items will be amended to allow for the amount of the company's own shares held by Umicore on the date of the Annual General Meeting of Shareholders on 27 April 2023 ; the gross dividend of EUR 0.80 will be proposed.

Thousands of Euros				Number of shares
Statement of capital				
A.	**Share capital**			
1.	Issued capital			
	At the end of the preceding financial year		550,000	246,400,000
	At the end of the financial year		550,000	246,400,000
2.	Structure of the capital			
	2.1.	Categories of shares		
		Ordinary shares	550,000	246,400,000
	2.2.	Registered shares or bearer shares		
		Registered		45,645,027
		Bearer		200,754,973
E.	**Authorized unissued capital**		55,000	

		% capital	Number of shares	Notification date
G.	**Shareholder base (1)**			
	Family Trust Desmarais, Albert Frère and Groupe Bruxelles Lambert S.A.	15.98	39,363,737	29/06/2021
	BlackRock Investment Management	5.06	12,463,608	28/11/2022
	Norges Bank	5.30	13,054,028	12/08/2022
	Baillie Gifford & Co and Baillie Gifford Overseas Ltd.	9.91	24,420,971	06/09/2022
	APG Asset Management (*)	2.73	6,728,778	21/10/2016
	Others	58.51	144,169,537	31/12/2021
	Own shares held by Umicore	2.52	6,199,341	31/12/2021
		100.00	246,400,000	
	of which free float	100.00	246,400,000	

(1) At 31 December 2022, 5.201.500 options on Umicore shares are still to be exercized. This amount includes 5.201.500 acquisition rights of existing shares held by Umicore.

(*) Transparency notification received prior to the 2018 capital increase – according to the information we received, the actual participation would still reach 3%

Management responsibility statement

We hereby certify that, to the best of our knowledge, the Consolidated Financial Statements as of 31 December 2022, prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, and with legal requirements applicable in Belgium, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and the undertakings included in the consolidation taken as a whole, and that the management report includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

10 March 2023,

MATHIAS MIEDREICH
CHIEF EXECUTIVE OFFICER