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List of abbreviations

IAS 38	Accounting standard for intangible assets
IAS 36	Accounting standard for impairments
NEC	US National Electrical Code
RSD	Rapid Shutdown Device
SDAX	German Small Cap Index

List of references

All citations, references, and sources are publicly available. Annual reports and other company documents were obtained through the respective issuer's website, regulatory filings, and commercial registries. Documents are cited as follows:

< url >, < page >

Some SEC filings were retrieved through direct URLs within the EDGAR system, and those filings are quoted directly.

The phrase "company data" indicates that we aggregated the specific metrics from one or several respective regulatory filings.

List of figures

If not stated otherwise, all figures are obtained through the quoted references in the footnotes and can be found in the respective source.

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Executive Summary

SMA Solar Technology AG	
Ticker:	S92
Market Cap:	EUR 1.96bn
Share Price:	EUR 58.00
Consensus:	EUR 74.10

We are short SMA Solar Technology AG (XETRA: S92) because, in our opinion, the company has been doctoring its financial statements for the past five years. **SMA unjust capitalized EUR 146 million in expenses which ultimately boosted SMA's profitability by the same amount.** Furthermore, SMA Solar misstated its financials by ignoring basic IFRS standards, inventing its own IFRS standards, and removing millions of euros from line items. **In our opinion, SMA Solar is not as profitable as it claims to be.**

Next to boosting its profitability, **the company's intellectual property is threatened by several lawsuits from competitors and annulments of patents for SMA's key technologies.**

In our opinion,

- **SMA Solar falsely capitalized development costs** and recorded them in a subaccount called 'Intangible assets in progress,' which is neither amortized nor tested annually for impairment. **This is not in accordance with IFRS.**
- **The subaccount grew by 1,100%** in three and a half years and amounted **to around EUR 71 million in mid-2023**, which corresponds to around 20% of SMA's non-current assets.
- **SMA Solar removed language on IAS 38** from its annual reports to disguise the fact that the subaccounts were not being amortized or tested for impairment. **The financial statements are not in accordance with IFRS.**
- **The incorrect capitalization boosted SMA Solar's profitability for years. The company is not as profitable as it is perceived by the public:**

Net income - in thousand EUR	9/30/2023	2022	2021	2020	2019
Reported (with capitalized expenses)	180,424	55,817	(23,167)	28,091	(8,626)
Estimated (without capitalized expenses)	150,069	25,306	(51,262)	13,802	(14,706)
Delta in %	-16.82%	-54.66%	-121.27%	-50.87%	-70.48%

EBIT - in thousand EUR	9/30/2023	2022	2021	2020	2019
Reported (with capitalized expenses)	201,582	31,887	(33,219)	27,906	(11,771)
Estimated (without capitalized expenses)	171,227	1,376	(61,314)	13,617	(17,851)
Delta in %	-15.06%	-95.68%	-84.58%	-51.20%	-51.65%

- **The company invented its own IFRS standards** to make investors believe that its fabricated non-GAAP FCF measure was in line with IFRS. However, that FCF metric was changed after it no longer fit SMA's narrative. For example, the company removed 38 million euros from FCF.
- **SMA Solar's auditor didn't notice anything**, and despite the high carrying value of the 'intangible asset in progress' subaccount, it is not a key audit matter.
- **SMA Solar's Audit Committee is no help either. Despite being the highest-paid board members, all four lack reportable experience in auditing and IFRS.** For example, the chairwoman runs a horse breeding farm and a tax advisory as a side hustle.
- **SMA Solar is threatened by the most recent invalidation of its intellectual property and is further under pressure from competitor lawsuits** – most recently by a patent lawsuit from its former investment Tigo Energy relating to RSD, a key component in any PV system.

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1. What happened?

SMA Solar has been capitalizing hundreds of millions in expenses for alleged development projects and accounts for it under 'Intangible assets in progress' in the balance sheet line item 'Intangible assets.'¹ A company can capitalize development costs, but this practice results in fewer expenses being reported in the income statement, which ultimately increases profits. **This practice is viewed very critically by investors and US GAAP prohibits any capitalization of R&D costs.**² IFRS imposes strict requirements on the capitalization of development costs, and if a company does so, it must disclose everything meticulously.³

At first, SMA's action seems plausible because the company is a large manufacturer of PV inverters and related electric equipment, so an investor could expect capitalizing developments for new products and technologies that have a future economic use. Such action would be in accordance with IAS 38.⁴ Paragraphs 20 and 21 of IAS 38 apply.⁵

However, we found that **the company has capitalized development costs in two different subaccounts in the 'Intangible assets' line item: 'Development projects' and 'Intangible assets in progress'** (see Figure 1).⁶ But oddly enough, SMA Solar neither discloses what's in 'Intangible assets in progress' except for the development projects, nor what's the finite useful life or amortization schedule. However, **the subaccount grew by more than 870 percent (!) from 2019 to 2022 and stood at 57 million euros.**⁷ **Just open the 2022 annual report on page 138 and see for yourself!**

Ultimately, SMA books costs regarding 'Development projects' in two different accounts. But, only one of them – the subaccount labeled 'Development projects' – is amortized.⁸ The larger one on a net carry basis, 'Intangible assets in progress,' is neither amortized nor tested for impairment.

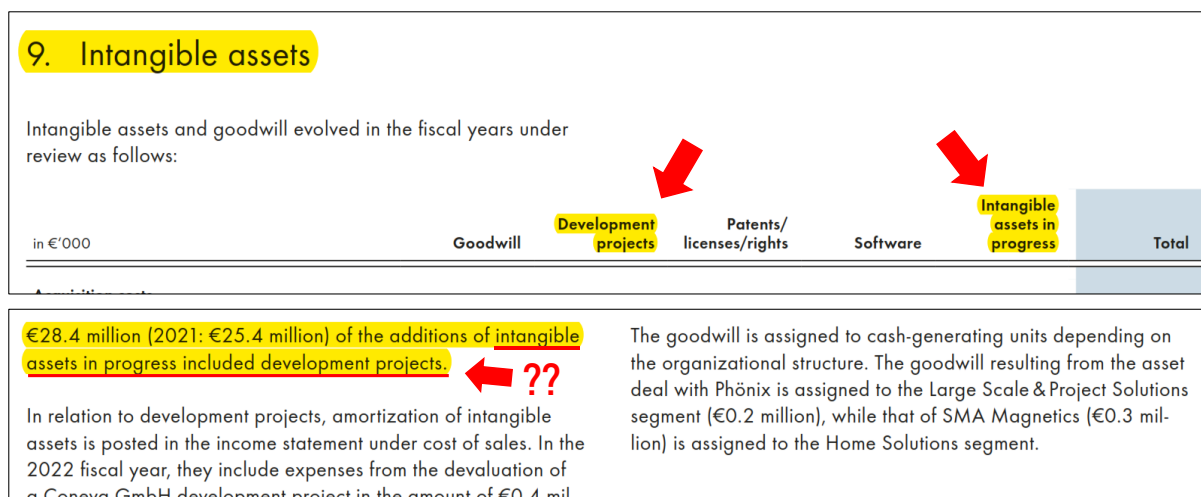


Figure 1 'Intangible assets in progress' mentioned in SMA Solar's 2022 annual report, source: NINGI Research, company filings

¹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 138

² Except for the capitalization of software development costs.

³ <https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>

⁴ *Ibid.*

⁵ *Ibid.*

⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 138

⁷ *Ibid.*, pg. 138

⁸ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 125

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We checked previous annual reports and from 2019 on, SMA Solar stopped amortizing the 'Intangible assets in progress.'^{9 10 11 12} Because the last effective change of IAS 38 was in 2014, there is no indication that the amortization stop of 'Intangible assets in progress' was related to a change in generally accepted accounting standards but to a discretionary decision by SMA Solar's management.¹³ In addition, the subaccount used to be tested for impairment annually and that led to an impairment loss of 2.7 million in 2016, 6 million euros in 2015, 8.6 million euros in 2014, and 8 million euros in 2013.^{14 15 16} The last large impairment of SMA Solar's intangible assets was reported in 2018: 29.5 million euros.¹⁷ **Since 2018, the company has not reported any impairment on its intangible assets.**

2016 annual report, page 118:

Research and development expenses include all expenses that can be attributed directly to research or development activities. Expenditure on research is recognized as expenditure in the period in which it is incurred. The development costs of a project are capitalized as an intangible asset only after the SMA Group can demonstrate both the technical feasibility of completing the intangible asset so that it will be available for internal use or sale and the intention to complete the intangible asset and either use or sell it. In addition, the SMA Group must demonstrate how the intangible asset will generate future economic benefits, the availability of resources to complete the intangible asset and the ability to reliably measure the expenditure attributable to the intangible asset during its development. Development costs are recognized at cost pursuant to IAS 38.66, less accumulated amortization and impairment losses. Amortization commences at the end of the development phase and from the moment the asset can be used. Amortization is effected over the period during which future benefit will be expected. **Incomplete development projects are tested annually for impairment.** When the reasons that have resulted in impairment cease to exist, a corresponding addition is made.

2017 annual report, page 87:

Research and development expenses include all expenses that can be attributed directly to research or development activities. Expenditure on research is recognized as expenditure in the period in which it is incurred. The development costs of a project are capitalized as an intangible asset only after SMA can demonstrate both the technical and economic feasibility of the intangible asset so that it will be available for internal use or sale and has the intention to complete the intangible asset and either use or sell it. Development costs are recognized at cost pursuant to IAS 38.66, less accumulated amortization and impairment. Amortization commences at the end of the development phase and from the moment the asset can be used. Amortization is effected over the period during which future benefit will be expected. **No borrowing costs** are capitalized in connection with the activation of development costs. In addition, there are currently no qualifying assets for which borrowing costs are capitalized.

Figure 2 Annual impairment testing was removed from the annual report, source: NINGI Research, company filings

⁹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2018/en/SMA-Annual-Report-2018.pdf?v=1653306294, pg. 97

¹⁰ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2016/en/2017-03-30-SMA_Annual_Report_2016.pdf?v=1653306385, pg. 101

¹¹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2015/en/2016-03-30_SMA_Annual_Report_2015_incl_Image_web.pdf?v=1653306429, pg. 138

¹² https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2019/en/SMA-Annual-Report-2019-2020-03-26.pdf?v=1653306245, pg. 99

¹³ <https://www.iasplus.com/en/standards/ias/ias38>

¹⁴ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2014/en/2015-03-26_SMA_Annual_Report_2014_web.pdf?v=1653306476, pg. 141

¹⁵ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2016/en/2017-03-30-SMA_Annual_Report_2016.pdf?v=1653306385, pg. 101

¹⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2015/en/2016-03-30_SMA_Annual_Report_2015_incl_Image_web.pdf?v=1653306429, pg. 139

¹⁷ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2018/en/SMA-Annual-Report-2018.pdf?v=1653306294, pg. 98

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Furthermore, SMA Solar removed the disclosure about annual impairment testing in 2017 (see Figure 2).^{18 19} **However, an annual impairment test is required by IAS 36:10 and IAS 36:11.**²⁰ We highlighted with a red bar where the phrase would have been in the 2017 annual report, see Figure 2 above. **If SMA applies IAS 36 and 38, why remove the language from its annual reports?**

SMA Solar meticulously tries to obfuscate anything around its intangible assets as indicated by the fact that the company specifically exempted IAS38:118(e) in its UK financial statements from 2019 onward.^{21 22} Paragraph 118(e) requires a company to disclose a detailed reconciliation of intangible assets, including impairment and amortization.²³ **Why does SMA go to such lengths to hide it?**

The mysterious ‘Intangible assets in progress’ subaccount grew from 5 million euros in 2019 to 71 million euros in Mid-2023 (see Figure 3). The fact that about 71 million euros, or about 68% of the ‘Intangible assets in progress’ subaccount for the line item ‘Intangible assets’ leads to the question if **the company has been capitalizing expenses to boost its profitability.** R&D costs are stuck in an opaque subaccount that is not amortized or tested for annual impairment. EBIT, operating profit, operating cash flow, net income, and earnings per share are therefore artificially high.

Intangible assets - in thousand EUR	Goodwill	Development projects	Patents/licenses/rights	Software	Intangible assets in progress	Total
Net value 2018/12/31	482	16,878	3,673	2,198	13,120	36,351
Net value 2019/12/31	482	25,187	3,397	2,258	5,903	37,227
Net value 2020/12/31	482	21,296	3,061	3,904	15,520	44,263
Net value 2021/12/31	482	15,698	2,715	3,100	40,705	62,700
Net value 2022/12/31	482	27,264	2,357	1,588	57,241	88,932
Net value 2023/06/30	482	29,321	2,182	2,064	71,013	105,062

Figure 3 Intangible assets in progress grew from EUR 5m to EUR 71m, source: NINGI Research, company data

For comparison, the subaccount grew by more than 1,100 percent (!) from 2019 to mid-2023, while the net value of the ‘development costs’ subaccount grew by only 16.4 percent over the same period (see Figure 4). At the same time, the R&D headcount declined by 13.5 percent (see Figure 4). **All of a sudden, fewer R&D employees have been doing more and more expensive internal developments than ever before? We doubt that.**

	2019 to 2022		2019 to H1/2023	
	unadjusted	PPI-adjusted	unadjusted	PPI-adjusted
R&D head count	-13.5%	-13.5%	-13.5%	-13.5%
Annual R&D expenses	37.6%	-5.4%	62.3%	83.7%
Annual R&D costs expensed in income statement	-1.1%	-32.0%	-0.6%	12.5%
Annual R&D costs capitalized	222.9%	122.1%	265.1%	313.3%
Intangible assets in progress subaccount	869.7%	567.0%	1103.0%	1261.8%
Development projects subaccount	8.2%	-25.5%	16.4%	31.8%

Figure 4 Growth in SMA Solar's R&D costs, source: NINGI Research, company data

In addition, R&D costs expensed in the income statement stayed almost flat for 3.5 years (see Figure 4). **In our opinion, this was possible because SMA Solar shifted expenses from the income statement to the balance sheet.** Even when adjusted for PPI, the subaccount growth over that period was less than the PPI growth (see Figure 4).

¹⁸ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2016/en/2017-03-30-SMA_Annual_Report_2016.pdf?v=1653306385, pg. 118

¹⁹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2017/en/SMA_Annual_Report_2017.pdf?v=1653306319, pg. 86

²⁰ <https://www.ifrs.org/issued-standards/list-of-standards/ias-36-impairment-of-assets.html/content/dam/ifrs/publications/html-standards/english/2023/issued/ias36/>

²¹ <https://find-and-update.company-information.service.gov.uk/company/07445403/filing-history/MzI0MzE3MTYyNWwFkaXF6a2N4/document?format=pdf&download=0>, pg. 4

²² <https://find-and-update.company-information.service.gov.uk/company/07445403/filing-history/MzI4MDg3ODAwN2FkaXF6a2N4/document?format=pdf&download=0>, pg. 4

²³ <https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>

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Further, it appears that SMA Solar ignores four of the six criteria required by IAS 38:57 for capitalizing development costs (see Figure 5).^{24 25} If you read Figure 2 closely and compare it with IAS 38:57 in Figure 5, you can see that the company used to incorporate parts (c) to (f) of IAS 38:57. However, SMA Solar has removed the specific accounting language from 2017.

Why would a company remove specific accounting disclosures from its annual report if it complies with them?

2022 annual report, p. 124:	IAS 38:57 standard:
<p>Research and development expenses include all expenses that can be attributed directly to research or development activities. Research expenses are recognized as expenditure in the period in which it is incurred. Development expenses of a project are capitalized as an intangible asset, only after the SMA group can demonstrate both the technical and economic feasibility of the intangible asset so that it will be available for internal use or sale and has the intention to complete the intangible asset and either use or sell it. Development expenses are recognized at cost pursuant to IAS 36.66, less accumulated amortization and impairment. Amortization commences at the end of the development phase and from the moment the asset can be used. Amortization is effected over the period during which future benefit will be expected. No borrowing costs are capitalized in connection with the activation of development expenses. In addition, there are currently no qualifying assets for which borrowing costs are capitalized.</p>	<p>An intangible asset arising from development (or from the development phase of an internal project) shall be recognised if, and only if, an entity can demonstrate all of the following:</p> <ul style="list-style-type: none"> (a) the technical feasibility of completing the intangible asset so that it will be available for use or sale. (b) its intention to complete the intangible asset and use or sell it. (c) its ability to use or sell the intangible asset. Does SMA Solar ignore the rest? (d) how the intangible asset will generate probable future economic benefits. Among other things, the entity can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset. (e) the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset. (f) its ability to measure reliably the expenditure attributable to the intangible asset during its development.

Figure 5 Comparison of SMA's accounting standards and IFRS, source: NINGI Research, IFRS Foundation, company filings

But SMA Solar goes even further and makes up IFRS standards.²⁶ The company invented its own free cash flow metric and claimed it as in accordance with IFRS, see Figure 6 below.^{27 28} To be clear, it is no small blunder to claim a fabricated metric is in accordance with IFRS. That's a lie of commission! Especially when the calculation differs from what is commonly used by investment professionals.

IFRS Foundation:	SMA Solar's investor presentation:																											
<p>'Free cash flow' is not defined in IFRS Standards. In most cases, this measure (let's call this version FCF1) is calculated as cash flow from operating activities (CFO) less capital expenditure (or capex).</p>	<table border="1"> <thead> <tr> <th></th> <th>Q1-Q3 2021</th> <th>Q1-Q3 2022</th> </tr> </thead> <tbody> <tr> <td>Net Income</td> <td>15</td> <td>11</td> </tr> <tr> <td>Gross Cash Flow</td> <td>48</td> <td>21</td> </tr> <tr> <td>Cash Flow from Operating Activities</td> <td>22</td> <td>10</td> </tr> <tr> <td>Net Capex</td> <td>-29</td> <td>-42</td> </tr> <tr> <td>Free Cash Flow (Adj.)</td> <td>-7</td> <td>-32</td> </tr> <tr> <td>Cash inflow from divestments</td> <td>0</td> <td>38¹</td> </tr> <tr> <td>Net Investments from Securities and Other Financial Assets</td> <td>21</td> <td>62²</td> </tr> <tr> <td>Free Cash Flow (IFRS) ??</td> <td>14</td> <td>68</td> </tr> </tbody> </table>		Q1-Q3 2021	Q1-Q3 2022	Net Income	15	11	Gross Cash Flow	48	21	Cash Flow from Operating Activities	22	10	Net Capex	-29	-42	Free Cash Flow (Adj.)	-7	-32	Cash inflow from divestments	0	38 ¹	Net Investments from Securities and Other Financial Assets	21	62 ²	Free Cash Flow (IFRS) ??	14	68
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Figure 6 FCF is not defined by IFRS Standards but SMA Solar claims IFRS compliance, source: NINGI Research, IFRS Foundation, company filings

In addition, we have found that SMA Solar changes the FCF metric when it no longer fits the company's narrative and removes millions of euros with the stroke of a pen (see Figure 7).²⁹ SMA changed cash flow from divestments from 38 million in 3Q22 to 0 in 3Q23 (see Figure 7).^{30 31}

In our opinion, SMA Solar's financial statements are misstated and cannot be relied upon!

²⁴ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 124

²⁵ <https://www.ifrs.org/issued-standards/list-of-standards/ias-38-intangible-assets/>

²⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Praesentationen/2022/20221110_Analyst-Investor-Presentation-Quarterly-Financial-Statement-Q3-2022.pdf, pg. 8

²⁷ *ibid.*, pg. 8

²⁸ <https://www.ifrs.org/content/dam/ifrs/resources-for/investors/the-essentials/the-essentials-feb-2019.pdf>, pg. 3

²⁹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Praesentationen/2023/20231109_Analyst-Investor-Presentation_Quarterly-Financial-Statement-Q3-2023.pdf, pg. 8

³⁰ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Praesentationen/2022/20221110_Analyst-Investor-Presentation-Quarterly-Financial-Statement-Q3-2022.pdf, pg. 8

³¹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Praesentationen/2023/20231109_Analyst-Investor-Presentation_Quarterly-Financial-Statement-Q3-2023.pdf, pg. 8

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SMA Solar's 3Q22 investor presentation:

Cash Flow (in € million)	Q1-Q3 2021		Q1-Q3 2022	
Net Income		15		11
Gross Cash Flow		48		21
Cash Flow from Operating Activities		22		10
Net Capex		-29		-42
Free Cash Flow (Adj.)		-7		-32
Cash inflow from divestments		0		38 ¹
Net Investments from Securities and Other Financial Assets		21		62 ²
Free Cash Flow (IFRS)		14		68

SMA Solar's 3Q23 investor presentation:

Cash Flow (in € million)	9M 2022		9M 2023	
Net Income		11		180
Gross Cash Flow		21		253
Cash Flow from Operating Activities		10		130
Net Capex		-42		-51
Cash inflow from divestments		0		0
Free Cash Flow¹		-32		79

Figure 7 FCF breakdown for 9M 2022 and 2023, source: NINGI Research, company filings

Even though SMA Solar claims to comply with IFRS, we believe the company has abandoned basic IFRS standards such as IAS 1, 36, and 38 to hide expenses in opaque subaccounts, fabricated IFRS standards to claim compliance with these standards, and changed financial statements when it suited SMA.

2. Why does it matter?

Since the sell-off in solar stocks this year, SMA Solar has been favored by investors as the company is seen as more profitable than its US peers and less threatened by Chinese competitors. However, as we have shown, **SMA's profitability is only a sham**. For the last five years, SMA capitalized 146 million euros, meaning the company sugarcoated its earnings by that amount (see Figure 8 and Figure 9).

Accumulated payments - in thousand EUR	Payments for investments in intangible assets	In % of annual revenue
12/31/2018	20,091	2.64%
12/31/2019	12,101	1.32%
12/31/2020	18,546	1.81%
12/31/2021	29,490	3.00%
12/31/2022	35,926	3.37%
9/30/2023	30,355	2.27%
Total	146,509	

Figure 8 Capitalized costs in percent of annual revenue, source: NINGI Research, company data

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The percentage of capitalized expenses relative to annual sales grew from 1.32% in 2019 to 3.37% in 2022 (see Figure 8).

In our opinion, **SMA has increased its profitability by capitalizing expenses in the opaque sub-account 'Intangible assets in progress.'** We believe that these expenses should not be capitalized in accordance with IAS 38 (see Figure 8 and Figure 9). In addition, the company has no extraordinary losses to report without proper impairment testing.

Net income - in thousand EUR	9/30/2023	2022	2021	2020	2019
Reported (with capitalized expenses)	180,424	55,817	(23,167)	28,091	(8,626)
Estimated (without capitalized expenses)	150,069	25,306	(51,262)	13,802	(14,706)
Delta in %	-16.82%	-54.66%	-121.27%	-50.87%	-70.48%

EBIT - in thousand EUR	9/30/2023	2022	2021	2020	2019
Reported (with capitalized expenses)	201,582	31,887	(33,219)	27,906	(11,771)
Estimated (without capitalized expenses)	171,227	1,376	(61,314)	13,617	(17,851)
Delta in %	-15.06%	-95.68%	-84.58%	-51.20%	-51.65%

EBITDA - in thousand EUR	9/30/2023	2022	2021	2020	2019
Reported (with capitalized expenses)	231,200	70,013	8,455	71,484	34,192
Estimated (without capitalized expenses)	200,845	39,502	(19,640)	57,195	28,112
Delta in %	-13.13%	-43.58%	-332.29%	-19.99%	-17.78%

Figure 9 Capitalized costs boosted SMA Solar's profitability, source: NINGI Research, company data

We believe that investors were more inclined to hold on to their investment in SMA Solar due to the misrepresented profitability. In our opinion, a fatal assumption based on misstated financials.

SMA Solar's 2022 net income is 54% lower than reported, the EBIT is even 95% lower, and in prior years the company would slide into the red (see Figure 9). Even its 2023 profits are 13% to 16% percent lower than reported (see Figure 9). In our opinion, SMA Solar has faked its profitability for years by turning away from IFRS standards and capitalizing millions.

In addition to fabricating its profitability, investors seem to be unaware that SMA Solar has lost various patents to competitors following legal disputes.^{32 33}

The company is sued by Tigo Energy for several infringements regarding SMA's 'Rapid Shutdown Devices' (RSD), a key component in any PV system.³⁴ RSDs are mandated by the NEC and several of SMA Solar's competitors like Goodwe, APSmart, and QC Solar have entered into license agreements with Tigo to be able to sell RSD in the US.³⁵ Long-time investors in SMA might be familiar with the name Tigo Energy. SMA bought a 28 percent stake in the company for 17.6 million euros in 2016.³⁶ However, the SMA sold that stake for about 1.7 million euros in 2020.^{37 38} **Within four years SMA Solar lost 90% of its investment in Tigo Energy and the company is now being sued by its former investment for patent infringement, see Figure 10 on the next page.**

³² <https://www.juve-patent.com/cases/solaredge-and-hogan-lovels-destroy-sma-solar-technology-patent/>

³³ <https://storage.courtlistener.com/recap/gov.uscourts.ded.79422/gov.uscourts.ded.79422.1.0.pdf>

³⁴ <https://storage.courtlistener.com/recap/gov.uscourts.ded.79422/gov.uscourts.ded.79422.1.0.pdf>

³⁵ <https://www.tigoenergy.com/rsdvirtualmarking>

³⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2016/en/2017-03-30-SMA_Annual_Report_2016.pdf?v=1653306385, pg. 117

³⁷ <https://www.marketscreener.com/quote/stock/SMA-SOLAR-TECHNOLOGY-AG-3690737/news/An-unknown-buyer-acquired-28-27-stake-in-Tigo-Energy-Inc-from-SMA-Solar-Technology-AG-for-2-million-33742614/>

³⁸ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2020/en/Annual-Financial-Report-SMA-Group-2020.pdf?v=1653306204, pg. 107

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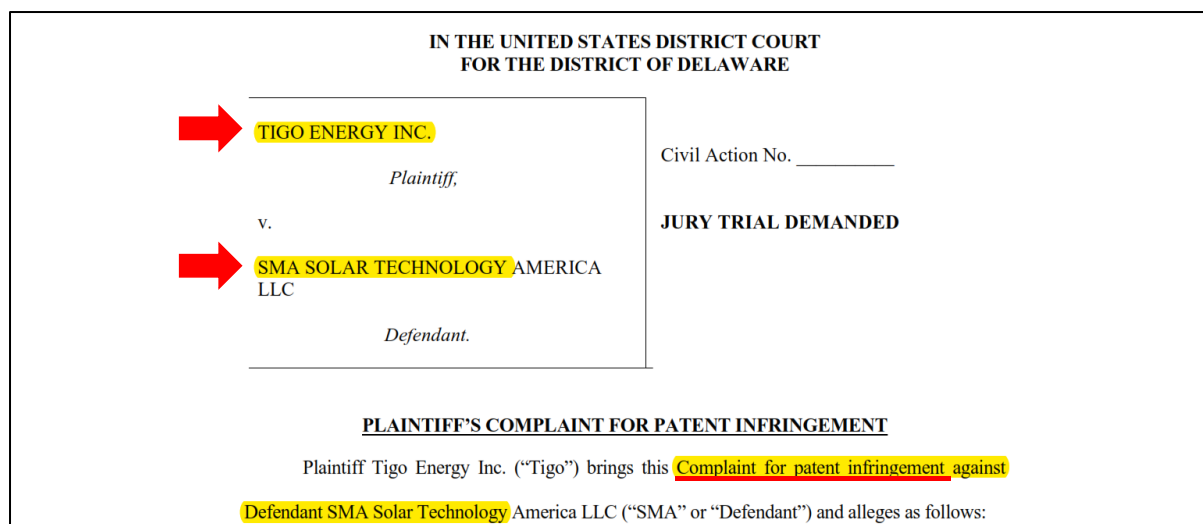


Figure 10 Patent infringement lawsuit against SMA Solar, source: NINGI Research, D. Del.

However, Tigo's patent lawsuit is not the only case of its kind. **In spring 2023, SMA Solar already lost two patent cases against its competitor SolarEdge** relating to SMA Solar's inverters.³⁹

Ultimately, it's not the competition from Chinese suppliers that threatens SMA Solar but the US competitors successfully getting SMA Solar's intellectual property annulled.

3. Who's profiting?

In our opinion, SMA Solar's executive management doesn't seem to care about the Chinese competition, declining market dynamics, overcapacity, or IP litigation. Sell-side analysts have reported that management was very upbeat despite order cancelations and declined backlog. In our opinion, management is still optimistic because SMA Solar can increase its profitability by capitalizing costs as in the past. **We think management even has an incentive to do so because the long-term variable compensation of SMA executives is based on a single target: An EBIT margin of 3 percent.**⁴⁰ Some investors may be familiar with the quote from the late Charlie Munger: "Show me the incentive, I'll show you the outcome." We believe that it should come as no surprise that **the company's EBIT margin was exactly 3.0% in 2022.**⁴¹

In addition, EBIT margin targets contribute 40% of the short-term variable compensation, so we think that the capitalization indirectly boosted the executive's compensation in the last four years. In particular, EBIT in 2020 would have been 50% lower than reported and management's variable compensation would have been significantly lower as the company did not achieve the target.⁴² Instead of 136% degree of target fulfillment, it would have been 66% degree of target fulfillment.

And even if an executive quits, they can profit anyway. According to SMA Solar, the company's long-standing CFO Ulrich Hadding left at his own request with two weeks' notice in mid-May 2022.⁴³ Even

³⁹ <https://www.juve-patent.com/cases/solaredge-and-hogan-lovels-destroy-sma-solar-technology-patent/>

⁴⁰ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 167

⁴¹ *Ibid.*, pg. 105

⁴² https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2021/en/Annual-Financial-Report-SMA-Group-2021.pdf?v=1666706901, pg. 149

⁴³ <https://www.sma.de/en/newsroom/news-details/change-in-smas-board-member-for-finance-1>

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though he resigned, he was given a severance package of 468,000 euros.⁴⁴ **Why does SMA pay severance to a quitter?**

In our opinion, it seems odd that the company has had three CFOs in the last two years while aggressively obfuscating accounting standards. The current CFO, Barbara Gregor, took office in December 2022.⁴⁵ Her predecessor Thomas Prixia, who was appointed following the departure of Ulrich Hadding, remained in office for six months. **In addition, SMA's long-standing auditor, Deloitte, was replaced by the second-tier firm BDO immediately after Hadding's departure.**

4. Who's watching?

To our surprise, **the before-mentioned capitalization and the net carrying value of the intangible assets are not key audit matters for SMA Solar's new auditor, BDO.**⁴⁶ As this item represents almost 20% of SMA Solar's fixed assets and the capitalization of these costs as intangible assets is highly subjective, an investor would expect this to be a key audit matter and for a new auditor to closely examine management's assumptions and rationale for capitalizing the development costs in the past. SMA Solar's new auditor does not.

In our opinion, SMA's Audit Committee isn't of any help either because all four members lack relevant experience in IFRS or supervising a public company.⁴⁷ The chairwoman currently runs a horse breeding business and does tax advisory as a side hustle.⁴⁸ In our opinion, she lacks reportable experience in supervising the audit of any company of SMA Solar's size and complexity.⁴⁹ The same applies to the deputy chairman, a managing partner of a family office.⁵⁰ To our astonishment, SMA Solar even states in the annual report that the other members of the Audit Committee have no auditing experience whatsoever.^{51 52 53}

Despite their lack of qualifications and experience, all four members of SMA's Audit Committee are among the best-paid members of SMA's Supervisory Board.⁵⁴ Only the Chairman of the Board receives a higher salary than the members of the Audit Committee.⁵⁵ Furthermore, the Audit Committee members' remuneration will increase by 100% from 2023 and include additional perks like D&O insurance coverage.⁵⁶ On top, from 2023 onward, SMA Solar will also cover the taxes board members would have to pay on their remuneration, meaning that, on a net basis, their fees will increase even more than 100%.⁵⁷ By the way, the management and the Supervisory Board review if each other's remuneration is appropriate.⁵⁸ **In hindsight, we believe that's a classic conflict of interest.**

⁴⁴ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 167

⁴⁵ <https://www.sma.de/en/company/managing-board-supervisory-board>

⁴⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 157

⁴⁷ <https://www.sma.de/en/investor-relations/corporate-governance>

⁴⁸ <http://neufriemen.de/>

⁴⁹ <https://cdn.sma.de/fileadmin/content/global/docs/company/managing-board-supervisory-board/CV/CV-Alexa-Hergenroether.pdf?v=1653391824>

⁵⁰ <https://cdn.sma.de/fileadmin/content/global/docs/company/managing-board-supervisory-board/CV/CV-Jan-Henrik-Supady.pdf?v=1653391824>

⁵¹ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 111

⁵² <https://cdn.sma.de/fileadmin/content/global/docs/company/managing-board-supervisory-board/CV/CV-Oliver-Dietzel.pdf?v=1653391825>

⁵³ <https://cdn.sma.de/fileadmin/content/global/docs/company/managing-board-supervisory-board/CV/CV-Johannes-Haede.pdf?v=1653391824>

⁵⁴ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/Publications/Finanzberichte/2022/Annual-Financial-Report-SMA-Group-2022.pdf?v=1684837490, pg. 176

⁵⁵ *ibid.*, pg. 176

⁵⁶ https://cdn.sma.de/fileadmin/content/global/Investor_Relations/Documents/HV/2023/en/2023_Remuneration_System_Members_Supervisory_Board.pdf, pg. 2

⁵⁷ *ibid.*, pg. 2

⁵⁸ *ibid.*, pg. 3

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We checked SMA Solar's peer's accounting standards but choosing a US competitor like Enphase for direct comparison wouldn't be reasonable because US GAAP doesn't allow for capitalization of development costs and all R&D costs have to be expensed in the year incurred.^{59 60} Rightly so.

Ultimately, we found Meyer Burger Technology AG, a Swiss-listed but Germany-based solar manufacturer. Meyer Burger doesn't have a similar intangible asset like SMA's 'intangible asset in progress' but all intangible assets at Meyer Burger are measured at cost after amortization and impairment anyway.⁶¹ In addition, Meyer Burger's auditor made it a key audit matter to check if any capitalized costs are correctly recognized and accounted for.⁶²

To better assess what the best practices are in Germany, we randomly selected German manufacturing companies from the SDAX stock market index (which included SMA Solar until May 2023) and analyzed the financial statements of the following manufacturing companies: Bilfinger SE, Drägerwerk AG, Deutz AG, and DMG Mori AG.

- Bilfinger doesn't have an 'Intangible assets in progress' subaccount and the company does not capitalize its development costs because Bilfinger reports that the costs don't meet all criteria in accordance with IAS 38 and can't be capitalized.^{63 64}
- Drägerwerk does have a subaccount for internally generated intangible assets but the company has amortized all, resulting in a net carrying value of zero.⁶⁵
- Deutz does report internally generated intangible assets and breaks down the subaccount into 'completed' and 'in development.'⁶⁶ However, the company discloses extensively that the 'internally generated intangible assets in development' relate to Deutz's development of a new engine series and it can be observed that the company transfers the capitalized expenses/intangible assets to the 'completed' subaccount as soon as applicable, resulting in amortization of such intangible assets.^{67 68}
- DMG Mori has 'intangible assets arising from development' of about 13 million euros but at the same time expensed 77 million euros for research.^{69 70} The subaccount 'Intangible assets arising from development' has a reported gross value of 133 million but in contrast to SMA, DMG Mori has amortized most of these capitalized costs – resulting in a net carrying value of about the mentioned 13 million euros, or about 5.5 percent of intangible assets.⁷¹

We suggest you look at other listed German manufacturers for comparison. **We doubt that anyone is doing it the way SMA Solar is: non-IFRS compliant, unsupervised, and unprecedented.**

In our opinion, it is obvious that neither SMA Solar's auditor nor the Audit Committee is paying attention.

⁵⁹ <https://dart.deloitte.com/USDART/home/codification/expenses/asc730>

⁶⁰ Except for capitalization of software development costs

⁶¹ https://www.meyerburger.com/fileadmin/user_upload/Downloads/Geschaeftsberichte/2022_Meyer_Burger_Annual_Report.pdf, pg. 109

⁶² [Ibid.](#), pg. 128

⁶³ https://www.bilfinger.com/fileadmin/One_Global_Website/Investors/publications/GB_2022_e_screen_verlinkt.pdf, pg. 315

⁶⁴ [Ibid.](#), pg. 294

⁶⁵ <https://www.draeger.com/Content/Documents/Content/annual-report-2022-ydx4t7aTQ6.pdf>, pg. 126

⁶⁶ <https://geschaeftsbericht.deutz.com/downloads-new/Consolidated-Financial-Statements.pdf>, pg. 169

⁶⁷ [Ibid.](#), pg. 170

⁶⁸ [Ibid.](#), pg. 169

⁶⁹ <https://en.dmgmori-ag.com/resource/blob/699126/5bcd69469aba6777944ceb55390b7fd7/dmgmori22e-data.pdf>, pg. 122

⁷⁰ [Ibid.](#), pg. 102

⁷¹ [Ibid.](#), pg. 123

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Conclusion

In our opinion, SMA Solar capitalized millions in expenses to increase its profitability. The company abandoned IFRS standards and invented its own IFRS standards to disguise the fact that SMA Solar's financial statements were misrepresented. As a result, the company was seen as more resilient and profitable than its US competitors, and SMA's executives also benefited through their compensation. Neither the company's auditor nor the Audit Committee closely monitored and scrutinized SMA Solar's practices. **Ultimately, insiders benefited from this scheme and investors will be left holding the bag.**

For all information herein, we are short SMA Solar Technology AG.

Questions for SMA Solar and its management that are of interest to the public:

- Why did SMA Solar discontinue amortization and impairment testing of the subaccount "Intangible assets in progress" from 2019?
- Why does SMA Solar capitalize development costs in a separate subaccount instead of in the "Development projects" subaccount?
- What was the reason to remove the wording related to the impairment testing?
- What was the reason to remove several subparagraphs of IAS 38 from SMA Solar's annual reports?
- Why does BDO not examine management's assumptions and rationale for capitalizing development costs?
- Why is the long-term variable remuneration of SMA executives based on a single target?
- Why was an EBIT margin of 3% chosen as the target?
- Why did SMA sell its stake in Tigo even though SMA relies on Tigo's intellectual property?
- If SMA Solar applies IAS 36 and 38, why did the company remove certain wording from its annual reports?
- Why did SMA Solar exempt its UK subsidiary from disclosing the reconciliation based on IAS 38:118(e)?