



# SCAB – Data Mining Rebuttal

SCA management have data mined statistics to satisfy valuation delusions.

**February 15, 2024** – On January 25, 2024, Viceroy Research released “Fudging Your Lumbers”, our preliminary report on Svenska Cellulosa (**STO:SCA-B**). This report and subsequent work can be found in the link below:

<https://viceroyresearch.org/category/svenska-cellulosa-stosca-b/>

On February 7, 2024, SCA responded to our report with data mined statistics which serve to satisfy management’s valuation and harvesting delusions. This response can be found here:

<https://www.sca.com/en/media/news/2024/clarification-regarding-questions-relating-to-the-valuation-of-forest-assets-harvesting-forest-damage-and-accounting-related-matters/>

As usual: the majority of the sell side lapped up this response without taking a moment to verify any of managements claims. We will once again do our “high-school homework” for all of the analysts who haven’t done it themselves.

**This report will address managements response line by line.**

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# 1. Forest Assets

SCA claims that their growing stock volume is inline with, or even conservative in relation to, the Swedish National Forestry Inventory. The chart in SCA's rebuttal depicts approximately 130m3fo/ha, broadly inline with the value provided in the figure below.

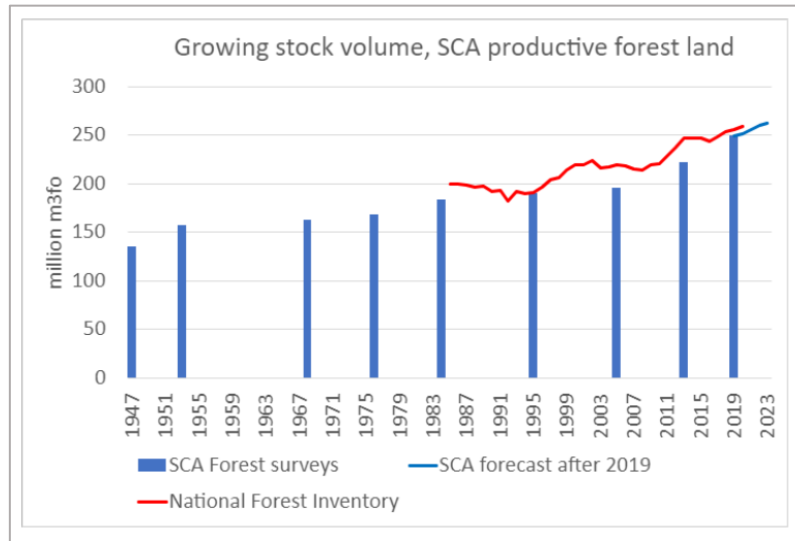


Figure 1 Excerpt from SCA Rebuttal

Viceroy’s analysis of the Swedish National Forestry Inventory data<sup>1</sup> weighted against SCA’s land holding again shows that SCA’s numbers are inflated.

SCA contends that their 2 million hectares of productive forest land are equivalent to private individual owned forest land. Skogsdata states that privately owned forest in the regions SCA holds land has a superior growing stock volume of around 130 m3fo/ha compared to 118m3fo/ha for company owned land, an ownership classification dominated by SCA in Norrland.

Ownership Class Forest Density Weighted to SCA Holdings 2022						
	2022 AB Land		2022 Private Land		2022 All	
	m3fo/ha	Wt Ave	m3fo/ha	Wt Avg	m3fo/ha	Wt Ave
Gävleborgs	138.00	21.15	154.00	23.60	144.00	22.06
Västernorr	141.00	24.65	152.00	26.57	148.00	25.87
Jämtlands	123.00	36.82	137.00	41.02	128.00	38.32
Västerbotte	107.00	19.27	120.00	21.62	112.00	20.17
Norrbotten:	87.00	16.75	101.00	19.44	92.00	17.71
<b>Total</b>		<b>118.63</b>		<b>132.24</b>		<b>124.14</b>
<b>3-year weighted average</b>		<b>118</b>		<b>131.30</b>		<b>123.22</b>

Figure 2 Ownership class forest density weighted to SCA holdings 2022

As seen in the table above this is an absurd assertion that the company makes no attempt to defend.

<sup>1</sup> [https://www.slu.se/globalassets/ew/org/centrb/rt/dokument/skogsdata/skogsdata\\_2022\\_webb.pdf](https://www.slu.se/globalassets/ew/org/centrb/rt/dokument/skogsdata/skogsdata_2022_webb.pdf)

## 2. Forest Valuation

### Standing Timber Inventory

#### **SCA tacitly admits the value of its forest assets is materially overstated.**

SCA's claims their m<sup>3</sup>fo/ha (forest density- the key input into SCA's valuation formula) numbers are inline with Stora Enso and Holmen. This confirms the core argument of Viceroy's report that SCA is knowingly overstating its standing timber volume, its forest asset value, and inflating its non-cash earnings in the process.

In its 2022 Annual and Sustainability Report, SCA reported forest assets in Sweden amounting to a total of 260,000,000 cubic meters of forest on 2,011,000 hectares of productive forest land, that is, an average of approximately 129 cubic meters of forest per hectare (m<sup>3</sup>fo/ha).

The average is well in line with comparable reports that other Swedish forestry companies make in their annual reports<sup>2</sup>.

Company	Productive forest land	Growing stock volume 2022	
	(hectares)	(m <sup>3</sup> fo)	(m <sup>3</sup> fo/ha)
SCA	2,011,000	260,000,000	129
Stora Enso	1,142,000	150,500,000	132
Holmen	1,045,000	125,000,000	120

Figure 3 Excerpt from SCA Clarification

The majority of Stora Enso's holdings are in central Sweden and they have a far higher average m<sup>3</sup>fo/ha than Holmen who have 66% of their holdings in Norrland. Notably, if Holmen did not possess 8.8% of its forest holdings in Gotaland, which has marginally higher m<sup>3</sup>fo/ha than Svealand, this discrepancy would be slightly exacerbated.

SCA meanwhile has 100% of its holdings in Norrland, the lowest density (in m<sup>3</sup>fo/ha terms) forest region in Sweden. It is astonishing that SCA can reinforce this claim with a straight face.

Growing stock volume SCA & Peers all Sweden 2022			
	Productive forest land	Growing stock volume	
	ha ('000s)	m <sup>3</sup> fo (millions)	m <sup>3</sup> fo/ha
SCA	2,011.0	260.0	129.3
Stora Enso	1,142.0	150.5	132.0
Holmen	1,045.0	125.0	120.0

Figure 4 Viceroy Replication of SCA Growing stock volume table, including standard deviation

Land Holdings by Traditional Land						
	SCA		Holmen		Stora Enso	
	Ha ('000s)	%	Ha ('000s)	%	Ha ('000s)	%
Norrland	2,000	100.0%	690	66.0%	191	16.7%
Svealand	–	–	264	25.2%	950	83.3%
Gotaland	–	–	92	8.8%	–	–
Total	2,000		1,046		1,141	

Figure 5 Forest land holdings by traditional Swedish Land, 2022. Source: Company Annual Reports.



The approach taken by SCA overlooks critical disparities. SCA's concentration in Norrland, unlike its peers' holdings in the higher-density regions of Svealand and Gotaland, significantly impacts valuation due to meters of forest per hectare, driven by regional climate and environmental differences.

Ludvig Average m3fo/ha by Traditional Land 2022	
Norrland	104.56
Svealand	149.75
Gotaland	159.20
Source Ludvig & Co H2 2022 Forest Report	

Figure 6 Ludvig & Co m3fo/ha figures 2022

SCA's response is misleading and serves only to reinforce the points made in Viceroy's first report.

**How can SCA report an m3fo/ha of 129 with 100% of its land in the least product forestry region in Sweden?**

**How can SCA claim an m3fo/ha in line with and above peers who have swathes of forest land in dramatically more productive regions?**

SCA should have isolated the northern holdings of Holmen and Stora Enso to facilitate a like-for-like comparison; something that Viceroy did in its initial report. As a service to investors Viceroy includes a restated table of growing stock volume for only those peers referenced by SCA in its rebuttal<sup>2</sup> in the table below.

Growing stock volume SCA & Peers Norrland 2022			
	Productive forest land	Growing stock volume	
	ha ('000s)	m3fo (millions)	m3fo/ha
<b>SCA</b>	2,011.00	260.00	129.29
<b>Stora Enso</b>	191.00	17.50	91.62
<b>Holmen</b>	690.00	75.00	108.70

Figure 7 Growing stock volumes - Norrland only

This more accurately represents the reported m3fo/ha values of SCA and its peers on a like-for-like basis. All data is included for the regions in which SCA owns forest land. SCA themselves agree that the location of land is important in determining its value, stating as much in its 2022 annual report:

**Forest value**  
SCA bases the valuation of the company's forest assets on transactions in areas where SCA owns forest land in Sweden.

Figure 8 Excerpt from SCA Annual Report 2022 pg 29

<sup>2</sup> <https://www.sca.com/siteassets/investors/reports-and-presentations/other-presentations/sca-pm-clarification.pdf>



## Ludvig & Co Market Data

SCA also provided some new data from Ludvig and Co to support their valuations, going to the effort of commissioning both Ludvig & Co and Svefa to write letters outlining their valuation methodology, something we find interesting given SCA's previous claims of a transparent valuation process<sup>3</sup>.

**Ludvig & Co's numbers show that SCA's forest asset value is overstated by 24 billion SEK.**

Ludvig data from SCA Rebuttal					
County	# Transactions	Area (ha)	Purchase price	SEK/ha	
Gävleborg County	NA	NA	NA	NA	NA
Jämtland County		123	11,579	590,024,950	50,956
Västernorrland County		59	5,745	320,471,000	55,783
Västerbotten County		128	10,295	338,585,300	32,888
Norrbottn County		54	6,856	150,331,500	21,927
Total		364	34,475	1,399,412,750	41,511 <sup>(1)</sup>

*Weighted to SCA holdings<sup>(1)</sup>*  
 Source: [SCA Rebuttal Attachment](#)

Figure 9 Ludvig Data Provided in SCA Rebuttal, Average price SEK/ha weighted to SCA holdings.

SCA reports and values its forest assets in SEK/m<sup>3</sup>fo. Ludvig & Co produce biannual reports valuing land in both SEK/m<sup>3</sup>fo and SEK/ha. We believe SCA presented the new data prices in SEK/ha specifically to hinder comparison to its previous disclosures.

The total carrying amount of SCA's forest assets continued to increase and amounted to SEK 107.5bn (97.9) at the end of the year. SCA bases its valuation of forest assets on completed forest transactions in the areas where SCA owns forest. The three-year average market price used in valuation of SCA's Swedish forest assets was SEK 395/m<sup>3</sup>fo at December 31, 2023, up 8% compared with the preceding year (SEK 366/m<sup>3</sup>fo).

Figure 10 SCA's revaluation of forest year end 2023

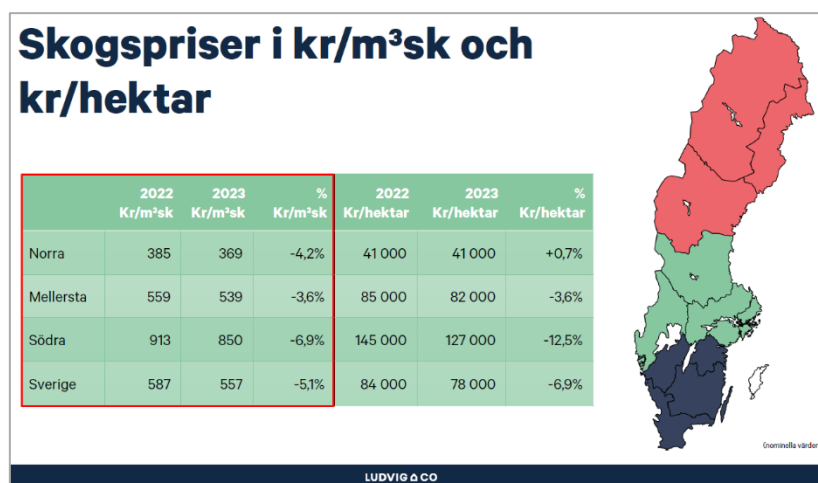


Figure 11 Ludvig & Co 2023 forest report providing pricing per m<sup>3</sup>fo

<sup>3</sup> <https://www.sca.com/siteassets/investors/reports-and-presentations/other-presentations/ludvig--co-forest-land-sales-statistics-eng.pdf>



A weighted average of SEK/ha prices given by Ludvig & Co against SCA's landholdings provides a market valuation for SCA's productive forest land of ~SEK41,511/ha. Taking the value of SCA's forest assets from its 2023 year end report<sup>4</sup> and dividing it by its number of productive hectares gives us the carrying value per hectare of SCA's forest assets.

<b>SCA Forest Assets Adjusted to Ludvig</b>	
SCA Forest Value 2023	107,500,000,000
<b>Hectares</b>	<b>2,011,000</b>
SCA SEK/ha	53,456
Ludvig & Co SEK/ha <sup>1</sup>	41,511
<b>Delta SEK/ha</b>	<b>(11,945)</b>
<b>Delta SCA Forest Value</b>	<b>(24,021,851,254)</b>
Weighted to SCA holdings <sup>(1)</sup>	

Figure 12 SCA Forest Assets carrying value SEK/ha

If SCA's assets were valued with like-for-like land transacted in the market (as shareholders should expect if market to market valuation is being used), SCA's carrying value per hectare would be expected to reasonably align with that of the broader market. In reality, SCA's land is valued over 25% higher per hectare than Ludvig and Co's market data, data that it uses for its valuations.

In what is either a staggering coincidence or a colossal management oversight, this discrepancy is almost entirely eliminated when adding SCA's ~600,000ha of unproductive forest land to the same calculation.

<b>SCA Forest Assets (incl non-productive) Adjusted to Ludvig</b>	
SCA Forest Value 2023	107,500,000,000
<b>Hectares</b>	<b>2,600,000</b>
SCA SEK/ha	41,346
Ludvig & Co SEK/ha <sup>1</sup>	41,511
<b>Delta SEK/ha</b>	<b>165</b>
<b>Delta SCA Forest Value</b>	<b>427,989,428</b>
Weighted to SCA holdings <sup>(1)</sup>	

Figure 13 SCA Forest Assets including non-productive carrying value SEK/ha

SCA may respond in their next rebuttal that this is because company owned forest land is more productive, however private individual owned land is ~11% more productive than company owned land in the same region.

<b>Ownership Class Forest Density Weighted to SCA Holdings 2022</b>						
	<b>2022 AB Land</b>		<b>2022 Private Land</b>		<b>2022 All</b>	
	<b>m3fo/ha</b>	<b>Wt Ave</b>	<b>m3fo/ha</b>	<b>Wt Avg</b>	<b>m3fo/ha</b>	<b>Wt Ave</b>
Gävleborg	138.00	21.15	154.00	23.60	144.00	22.06
Västernorrland	141.00	24.65	152.00	26.57	148.00	25.87
Jämtland	123.00	36.82	137.00	41.02	128.00	38.32
Västerbotten	107.00	19.27	120.00	21.62	112.00	20.17
Norrbottn	87.00	16.75	101.00	19.44	92.00	17.71
Total		118.63		132.24		124.14
<b>Three year weighted average</b>		<b>118</b>		<b>131.30</b>		<b>123.22</b>

Figure 14 Ownership Class Forest Density Weighted to SCA Holdings

<sup>4</sup> <https://www.sca.com/siteassets/media/press-releases-and-reports/documents/2024/20240126-year-end-report-2023-en-0-4733636.pdf>



There are three distinct possibilities to explain this anomaly in the valuation of SCA's forest assets and the estimates of its standing timber inventories:

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***SCA's land genuinely has 25% more standing timber per hectare than the rest of forest land, including company owned forest land, in Norrland, or***

***SCA is systematically overestimating the standing timber per hectare (a direct input into its valuation formula) of its productive forest land, or***

***SCA is valuing its ~600,000 hectares of nonproductive and protected forest land as productive and commercially exploitable forest land.***

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### SCA Commentary on Market Data

SCA states that they use a three year average market price to ensure that an accurate picture of possible market value is attained, yet proceed to provide only two years of Ludvig's limited data set covering only transactions that Ludvig brokered. We question how useful this data is given it again hinders comparison.

SCA also only comments on, and provides data for, 4 of the 5 counties in which it owns land in its response, notably excluding Gävleborg, where SCA holds 15% of its gross forest land.

We question why Gävleborg was excluded from this data and request that management update the clarifying data it has provided shareholders to reflect this.

Market statistics are obtained from two independent suppliers, Ludvig & Co and Svefa. To ensure that the amount of transactions gives as an accurate picture as possible of market value, a three-year average market price is used.

Figure 15 SCA Rebuttal Excerpt

SCA's own forest land transactions constitute only a small proportion of the database that forms the basis of forest valuations. SCA's share as a buyer or seller in Ludvig & Co's database for the four northernmost counties of Sweden for 2022 and 2023 amounts to approximately four per cent of the total purchase price of forest land and approximately two per cent of the number of transactions, see [Ludvig & Co. share of transactions and share of purchase price](#). In the Svefa database, SCA's transactions constitute approximately two per cent of transactions during the same period, and as a share of total transaction value, SCA's share corresponds to approximately eight per cent, see [Svefa, regarding selection of local price material](#).

Figure 16 SCA Rebuttal Excerpt



SCA Land Holdings by County 2019		
County	Land ha (incl unproductive)	%
Gävleborg	407,030	15%
Jämtland	795,287	30%
Vasternorrland	464,311	17%
Västerbotten	478,487	18%
Norrbottn	511,285	19%
<b>Total</b>	<b>2,656,400</b>	<b>100%</b>

Source: SCA FM Report 2019 Public

Figure 17 SCA land holdings by county 2019

SCA has provided its shareholders with unaudited data for a timeframe that does not align with its valuation methodologies for counties that do not align fully with its forest holdings, in units that do not correspond with those stated in its annual reports.

This data is as useful to shareholders as a frog without legs, appears intentionally difficult to work with, and continues a disturbing pattern of deception by obfuscation.

### 3. Conclusion

SCA's response to our initial report is wholly inadequate and serves only to demonstrate the disregard it shows to its shareholders and ongoing obfuscation of critical factors to its business.

The key takeaways from SCA's rebuttal are as follows:

- SCA claims it wishes to "contribute to transparency" surrounding its forest assets, while failing to realize that providing transparency to their shareholders is their fiduciary duty.
- SCA's contention that their 2 million hectares of productive forest land are equivalent to private individual owned forest land is absurd and the company makes no attempt to substantiate this delusion.
- SCA's lackluster rebuttal is a tacit admission that the value of its forest assets is materially overstated. Ludvig & Co's recently presented numbers show that SCA's forest asset value is overstated by SEK24b.
  - In what is either a staggering coincidence or a colossal management oversight, this discrepancy is almost entirely eliminated when adding SCA's ~600,000ha of unproductive forest land to the same calculation.
- SCA provides unaudited data for a timeframe that does not align with its valuation methodologies, counties that do not align fully with its forest holdings, and in units that do not correspond with those stated in its annual reports.

More to come.