

The Potential for Sustainable Biomass in the Romanian Energy Sector

Activity 6: Business intelligence report on biomass suppliers

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Description of the activity: Using big data and an advanced data processing algorithm we will analyze the business profiles of potential suppliers of sustainable biomass in Romania. We will contract the data mining services of a specialized provider of such services, with access to comprehensive company data at national level.

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(August 2023)

1. Disclaimer and appendix

The current study evaluates the potential for sustainable biomass in the Romanian energy sector, based on the appraisal of financial standings submitted by all the companies active in Romania within relevant sectors:

- NACE 1629 (Manufacture of other wooden products, manufacture of cork, straw and other woven plant materials) and
- NACE 1610 (Sawmills and planning of wood).

Conclusions are drawn based on all companies active in Romania according the principal NACE code, which submitted financials for 2019-2020-2021-2022 and 2022 - 2023 (the latest exercise currently available to the public). Sources and complete data is structured and available in “Appendix_1.xls” herewith enclosed to the present study, with the following structure:

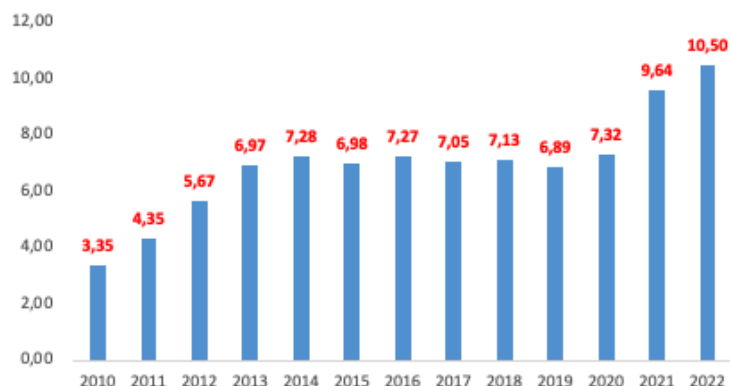
- Financial – Indicators: 25 complete financial indicators computed for the previous 5 years
- Legend: formula and interpretation for each financial indicator used
- Trends: evolution of revenues and number of companies in the past decade
- Financials 2022-2021-2020 in short format publicly available at Ministry of Finance for all the companies active in the sectors
- Administrators & Shareholders: for the relevant companies generating cumulated +95% of the market share (Trade Register)
- Working Points: geographical distribution of all working points of evaluated companies, by location and setup moment
- Other NACE codes used for the total furniture industry:
 - 1621 Manufacture of veneer sheets and panels of wood
 - 1624 Manufacture of wooden containers
 - 3101 Manufacture of office and shop furniture

- o 3102 Manufacture of kitchen furniture
- o 3109 Manufacture of furniture n.e.c.

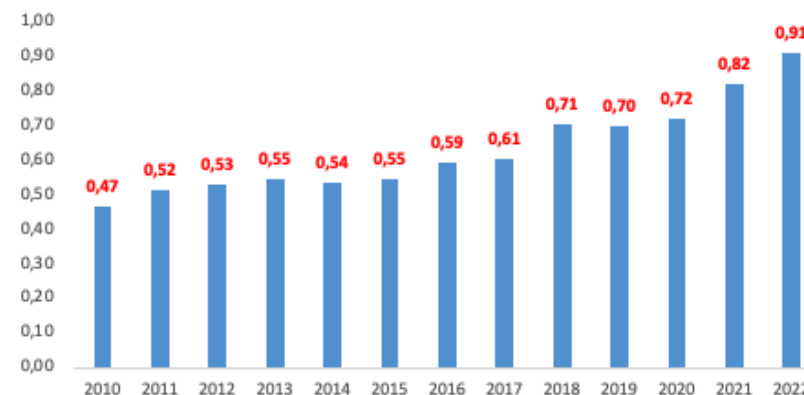
2. Introduction and trends

Revenues from wood harvest and timber processing increasing significantly in the past decade, due to both extensive exploitation and volatile prices. Hence, overall turnover from NACE 1610 - Sawmills and planning of wood increased from 3,32 bn RON in 2010 up to 10,5 bn RON in 2022 (+9% YoY). Despite the exponential revenues generated by forest exploitation and wood harvesting, the other related sectors increased at a slower pace. For example, revenues from NACE 1629 (Manufacture of other wooden products, manufacture of cork, straw, and other woven plant materials) are higher by only 77% in the past decade (close to cumulated inflation), from 0,47 bn RON (2010) up to 0,91 bn RON (2022).

NACE 1610 - Turnover (bn RON)



NACE 1629 - Turnover (bn RON)

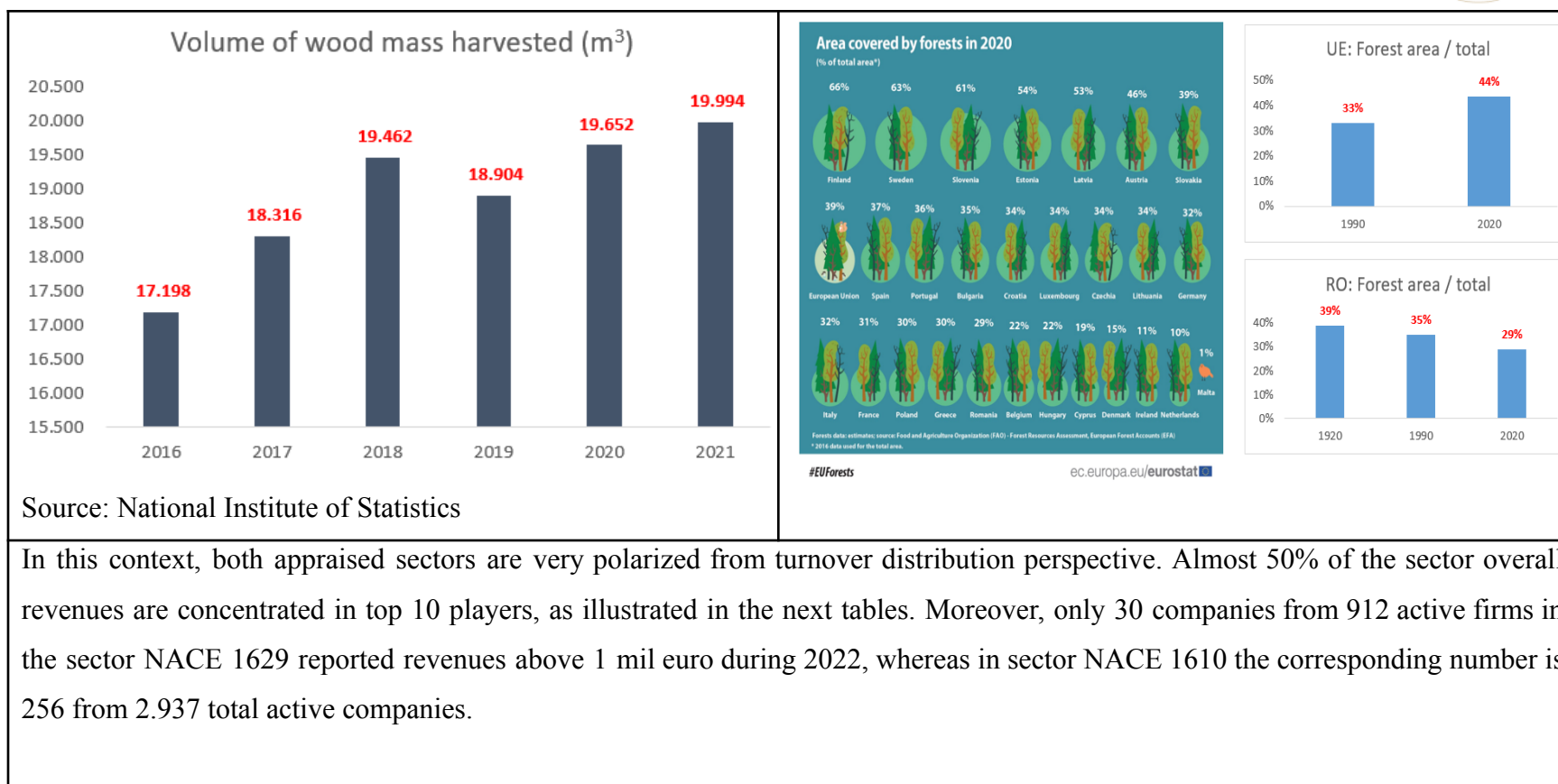


Source: financial data of companies from Ministry of Finance

Figures related to all furniture and wood related sectors indicate the Romania didn't manage to exploit the full potential of wood processing, as raw material is more oriented to exports and intermediary / final products are imported (furniture, wood panels etc.). As we can see from the below table, total revenues from wood industry are two times higher compared to manufacture of furniture. If Romania would have been more intensive among production of final products activities, the weight of furniture and other wooden products would have been above 50% from the industry, as the higher added value is observable within the final stages of the production chain.

Sector	INDEX 22-2010	Delta (mil lei)	Turnover 2022 (mil lei)	TO RON 2010
Manufacture of wooden packaging	-11%	- 122	980	1.102
Manufacture of veneer and wood panels	38%	1.844	6.676	4.832
Manufacture of furniture	80%	4.727	10.615	5.888
Total furniture industry	98%	15.981	32.360	16.379
Intermediaries in the furniture trade	98%	384	776	392
Manufacture of office and shop furniture	178%	1.025	1.600	575
Sawmills and planing of wood	213%	7.152	10.504	3.352
Manufacture of other wooden products	450%	746	912	166
Manufacture of furniture for kitchens	1211%	899	973	74

The volume of wood mass harvested in Romania constantly increased in the past years, from 17k m³ during 2016 to almost 20k m³ in 2021, according to the National Institute of Statistics (INS). This is visible in the lower forest area coverage from the total national surface, down in Romania from 39% (1920) to 29% (2020), as compared to UE average of 44% (2020), according to Eurostat. There are not public data available from INS regarding 2022.



TOP 10 Companii (NACE 1629)			
No	Company name	Fiscal code	Turnover (2022)
1	SMART WOOD ROMANIA S.R.L.	21687048	198.916.983
2	CH INDUSTRIAL PROD S.R.L.	29228059	81.025.456
3	FRAICOM SRL	4903117	29.696.212
4	TREFOREX SRL	16035706	23.259.428
5	TECLEM PROD SRL	10807130	21.642.774
6	EURO SANGIFT SRL	21687048	20.660.392
7	COSECO WASTE S.R.L.	40460997	19.781.040
8	BIOBUILDS S.R.L.	30040678	19.281.357
9	UNIPROD MANAGEMENT SRL	18835659	18.108.147
10	LINS & WEINZIERL EXPORTPACKAGING S.R.L.	28272218	16.913.890
TOTAL Turnover (top 10 companies)			449
Top 10 % sector revenues			49%

TOP 10 Companii (NACE 1610)			
No	Company name	Fiscal code	Turnover (2022)
1	HS TIMBER PRODUCTIONS S.R.L.	14554103	2.159.412.708
2	HS TIMBER PRODUCTIONS RECI S.R.L.	35369656	1.186.158.023
3	KASTAMONU ROMANIA SA	1235668	868.575.473
4	BARLINEK ROMÂNIA SA	5444241	293.433.943
5	KARELIA - UPOFLOOR SRL	19062454	215.736.432
6	XILOBAIA SRL	14554103	137.714.050
7	R.G.HOLZ COMPANY SRL	12178568	115.030.112
8	SILVANIA INTERNATIONAL PROD SRL	6694408	101.349.520
9	VIRIX PROD SRL	6681637	88.510.480
10	DML INVEST SRL	23110878	76.236.254
TOTAL Turnover (top 10 companies)			5.242
Top 10 % sector revenues			50%

There has been fluctuation in the number of companies, with an increase from 2018 to 2021, followed by a slight decrease in 2022 for NACE 1629, as can be seen below:

Indicator	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018
No of companies	1.213	1.552	1.557	1.217	1.033
Turover (mil RON)	912	823	723	701	708
Sector dynamic by turnover	11%	14%	3%	-1%	0%
Year	Year 2022	Year 2021	Year 2020	Year 2019	
No of registered companies (%)	16,9%	16,7%	15,9%	17,7%	
Number of exit companies (%)	21,8%	8,7%	12,5%	11,3%	
Raport OUT : IN	1,29	0,52	0,78	0,64	

For NACE 1610 the sector growth in 2022 remain strong (+9%) and the OUT:IN of companies decreased from 2,37 in 2021 to 1,50.

Indicator	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018
No of companies	2.937	3.167	3.247	2.826	2.859
Turover (mil RON)	10.504	9.637	7.320	6.893	7.132
Sector dynamic by turnover	9%	32%	6%	-3%	0%
Year	Year 2022	Year 2021	Year 2020	Year 2019	
No of registered companies (%)	4,9%	4,8%	4,6%	5,1%	
Number of exit companies (%)	7,3%	11,4%	16,3%	14,8%	
Raport OUT : IN	1,50	2,37	3,56	2,91	

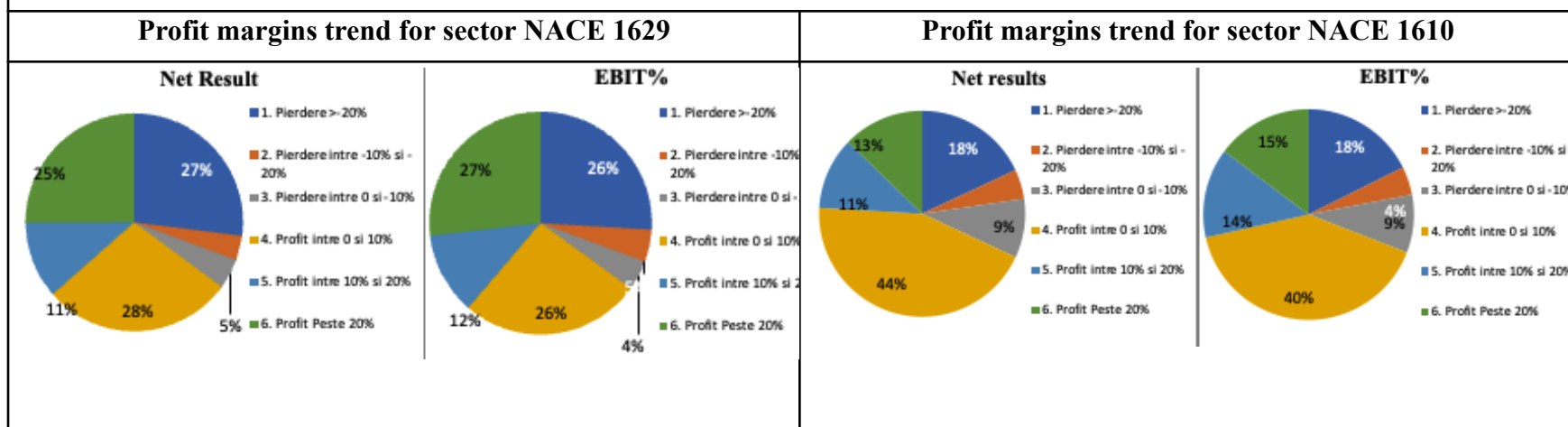
3. Profitability indicators

As mentioned, the higher profitability margins are reported in the higher end stages in the production and processing chain. As illustrated in the tables and figures below, profit margins for NACE 1629 (Manufacture of other wooden products, manufacture of cork, straw, and other woven plant materials) constantly increased from 3,9% (2017) up to 12,1% (2022) net margin, almost 2 times above the national average. In comparison, NACE 1610 (Sawmills and planning of wood) average profit rate was 6% in 2022, decreasing from 8,1% during 2021, compared to only 2,2% during 2018. In terms of profit distribution, both sectors reveal similar patterns, with only 24% of the active companies reporting losses during 2021, and almost half registering one digit net / operating profit (between 0% - 10%).

Return on equity is better for the NACE 1629, being stable and close to 30% during the past 5 years and increasing each year. Combined with large return on assets (significantly above the cost of capital), demonstrating together the business overall validity

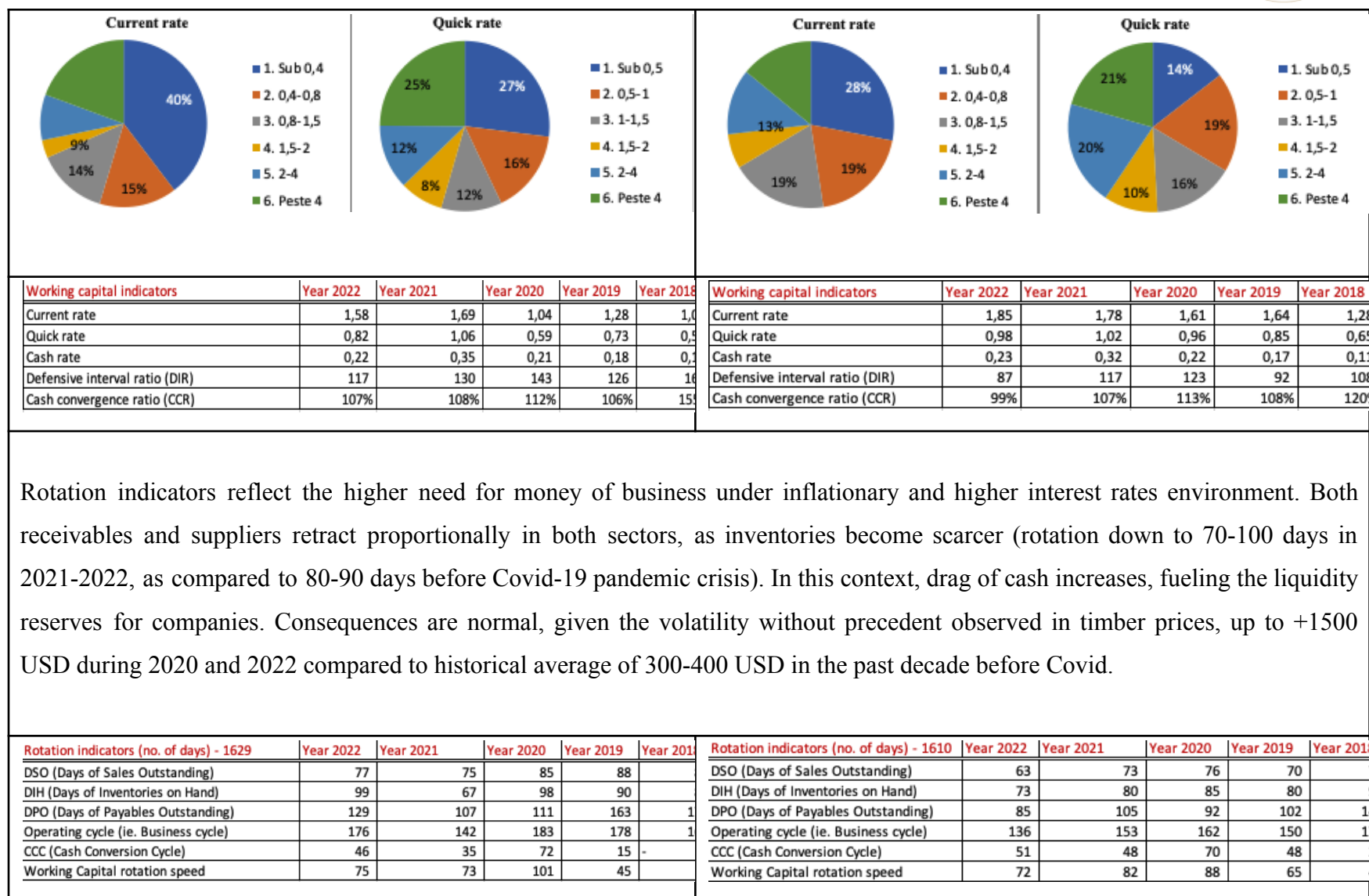
from financial golden rule perspective: $ROE > ROA > \text{Cost of Capital} > \text{Inflation Rate}$ (5%-6% average in Romania in the last five years). The equation is more intensively visible as compared to NACE 1610, where the lower added value and profit margin diminish return on equity down to 16,1% during 2022, from 20% in 2021. Of course, behind the return ratios stand also different capital structure and liquidities requirements depending on the activity profile.

To summarize, we believe there is significant potential for growth in wood processing and higher value-added activities related to biomass development in Romania's energy sector. This aligns with a broader trend in various industries: shifting from a model of exporting raw materials and importing finished products, Romania should move towards more industrialized and higher value-added production. This shift would not only reduce external trade deficits, inflationary pressures, and local currency depreciation, but also foster a more competitive economy driven by increased investments and production. This, in turn, would lead to higher value-added output, greater capital formation, and rising wages due to improved productivity without inflationary pressures. In essence, this would drive an economy centered on increased investment and exports.



Profitability indicators	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018
ROA (Return on Assets)	12,9%	15,9%	7,2%	8,5%	4,1%
OROA (Operating Return on Assets)	17,1%	20,7%	10,0%	11,2%	3,1%
ROE (Return on Equity)	34,1%	33,0%	29,0%	23,6%	18,1%
EAT (Earnings After Tax : Revenues)	12,1%	13,5%	9,0%	9,1%	4,1%
EBIT : Turnover (Operating Margin)	14,7%	15,5%	11,2%	11,1%	3,1%

<h4>4. Liquidity indicators</h4> <p>Given the extremely volatile price of lumber and general wood material prices during 2020 (amid Covid-19 pandemic) and 2022 (amid regional conflict in Ukraine started by Russia), coupled with the disruption of international supply chain patterns, all working capital and rotation indicators significantly inflated during 2021 and 2022, compared with the pre-pandemic period. Hence, current assets coverage ratio to short term debt increased from 100% - 120% levels during 2017-2019, to almost 160%-180% during 2021-2022. This was caused by a mix of higher speculative inventories (cushion for supply continuation) and lower exposure from suppliers (amid higher risk in business). Further risk can be inflated from the increasing interest rates given higher inflationary pressures in 2022 and 2023, increasing the challenges to finance large working capital levels. In this context, better profit margins are very favorable, but must be reinvested to cope with larger financing needs of the companies active in both sectors.</p>					
Working capital indicators for sector NACE 1629			Working capital indicators for sector NACE 1610		



Timber futures prices long term trend (USD dollars)

419,90 USD

CME: LBSW00

+179,00 (74,30 %) ↑ tot timpul

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5. Solvency indicators

Investment and capital structure patterns vary across the two sectors, in line the profit margin cap

- Companies active in NACE 1629 (Manufacture of other wooden products, manufacture of cork, straw and other woven plant materials) show better profit margin levels, increasing the potential to reinvest in equity to finance investments and growth. As illustrated in the next tables, debt ratio constantly decreased from 72% in 2018 down to 55% in 2022 for sector average. Given higher working capital requirements, short term debt weight increased from 59% up to 69%, with overall solvency very comfortable. The mix of lower debt and higher equity represented the principal source to finance increasing long term investments in plant, machinery and equipment, as capex (capital expenditures) were three times above depreciation during 2022, and +37% during 2020, more aggressive compared to pre-pandemic period.
- Companies active in NACE 1610 (Sawmills and planning of wood) show more modest trend in capital structure and investments. Debt ratio marginally increased from 46% (2020) and 51% (2021) and than decreased to 46% in 2022 (this is an acceptable level). Nevertheless, only during 2020 long term capex investments exceeded depreciation by 21%, with negative gap for all the other years in the appraised period.

Solvency indicators - NACE 1629	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018	Solvency indicators - NACE 1610	Year 2022	Year 2021	Year 2020	Year 2019	Year 2018
Debt ratio (Debt : Assets)	55%	47%	69%	54%	72%	Debt ratio (Debt : Assets)	46%	51%	46%	45%	46%
Short Term Debt : Total Debt	69%	74%	70%	77%	59%	Short Term Debt : Total Debt	68%	64%	68%	63%	63%
Capex / Fixed Assets	41%	29%	15%	7%	1%	Capex / Fixed Assets	60%	15%	14%	7%	7%
Depreciation rate	14%	14%	11%	13%	13%	Depreciation rate	19%	16%	12%	12%	12%
Capex / Depreciation	304%	202%	137%	55%	16%	Capex / Depreciation	323%	95%	121%	59%	59%

This is supporting again the principal conclusion of the study: the significant upside development potential observed for the wood processing and higher added values activities related to biomass development in the energy sector in Romania. That

would be on the key strategic development trends in this sector, likewise to similar other industries: from exporting raw material economy and importing final products, Romania should converge to a more industrialized and higher added value production activities.

6. Limitations of this financial analysis:

The NACE coding system may not encompass all relevant economic activities associated with the biomass activities. It doesn't support information regarding energy producers from biomass or agricultural companies that derive a significant portion of their revenue from selling biomass byproducts. This could lead to an incomplete representation of the sector.

NACE 1629 encompasses a wide range of products including wooden items, cork, straw, and woven plant materials. This diversity could mask significant differences in financial performance and dynamics among subcategories. Treating them as a single entity may not provide detailed insights into the individual components.

The study may not account for regional variations in economic conditions and market dynamics. Certain areas may have different demand patterns, cost structures, or competitive landscapes that impact the financial performance of businesses in these NACE codes.

Availability of historical financial data could be limited, especially for smaller or newer businesses within these NACE codes. This could make it challenging to conduct robust trend analysis or assess long-term financial stability.

Access to financial data for private companies, especially smaller enterprises, might be restricted. This could lead to a skewed representation of the sector, as smaller businesses may not be as well-represented in publicly available datasets.

These limitations should be taken into consideration when interpreting the results of a financial study focusing on NACE codes 1629 and 1610.