



# Talking clearly: private equity and debt in the flat glass industry

SPOT ON | GLASS PROCESSING & FINISHING | JULY 2021

“We have witnessed strong private equity interest in both buy and build strategies as well as financing management buy-outs and buy-ins, such as with Euroview Architectural Glass, Thermoglas Niederrhein and Glas Trienes, and Klaasimeister.”

**VALĒRIJA LIEĢE**

OAKLINS' GLASS PROCESSING & FINISHING  
SPECIALIST

## MARKET TRENDS

### PE leads the way

In the past five years, private equity buyers have completed 60% of transactions in the flat glass industry.

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## KEY DRIVERS FOR PE IN GLASS INDUSTRY

### Experts surveyed

Hear what private equity buyers and debt providers have to say about recent investments in the glass industry, and their expectations for the sector, based on our survey.

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## VALUATION TRENDS

### The right moves

Together the world's largest publicly listed flat glass producers are worth over US\$100 billion, while current valuation trends suggest optimism despite the effects of COVID-19.

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# Market trends

## Private equity and debt play an important role in the flat glass industry

Although the pandemic has created challenges for the global flat glass industry, the sector is benefitting from the attentions of private equity firms.

As a result of COVID-19, 2020 was difficult for the flat glass sector – around half of flat glass sites had to cease production while many more found themselves having to decrease production output and release workers. However, the arrival of COVID-19 vaccines and relatively quick vaccination rates in both the USA and Europe have allowed optimism to return. Momentum in M&A gathered pace at the end of 2020 and in the first quarter of 2021, with global M&A activity turning in a strong performance. This is being driven particularly by the strength of private equity (PE) and private debt, and its effects are visible in the flat glass market.

### PRIVATE EQUITY DURING COVID-19

For several years prior to 2020, analysts and followers of the financial markets noted the ever-increasing amount of capital available for investment – the so-called “dry powder” – held by private equity. More recently, the COVID-19 pandemic appears to have acted as another catalyst for funds, family offices, asset managers and other private equity market participants to deploy capital. In the first quarter of 2021, private equity buy-outs reached new heights, hitting US\$296.6 billion – making it one of the most active quarters since 2001. Since the third quarter of 2020, private equity has deployed nearly US\$700 billion in capital.

In Europe certain private equity firms remain the key driving force, buoyed by a healthy financing market. Sponsors spent a total of US\$75.5 billion in the first quarter of 2021.

### WHAT TO EXPECT IN 2021 AND BEYOND

According to a survey as part of Roland Berger’s “European Private Equity Outlook 2021”, four out of five experts expect an increase in M&A transactions involving private equity in 2021, and more than a third estimate that the rates of increase will be in the double digits.

In Europe, the highest M&A growth – over 2.5% – is expected in Germany, the Nordics and Benelux, and the most popular targets are family businesses. The Invest Europe Private Equity sentiment survey shows that the majority of private equity general partners expect most investment opportunities in the next six to 12 months to come from corporate spin-offs, as well as primary and secondary market deals.

Some experts believe that this rise in M&A activity will maintain its momentum well past 2021. The PE sector will continue to be well capitalized,

supported by a strong financing market, and in need of placing money. In addition, buy-side opportunities will increase as potential sellers who held off during 2020 and 2021 due to the recession and pandemic start approaching the market.

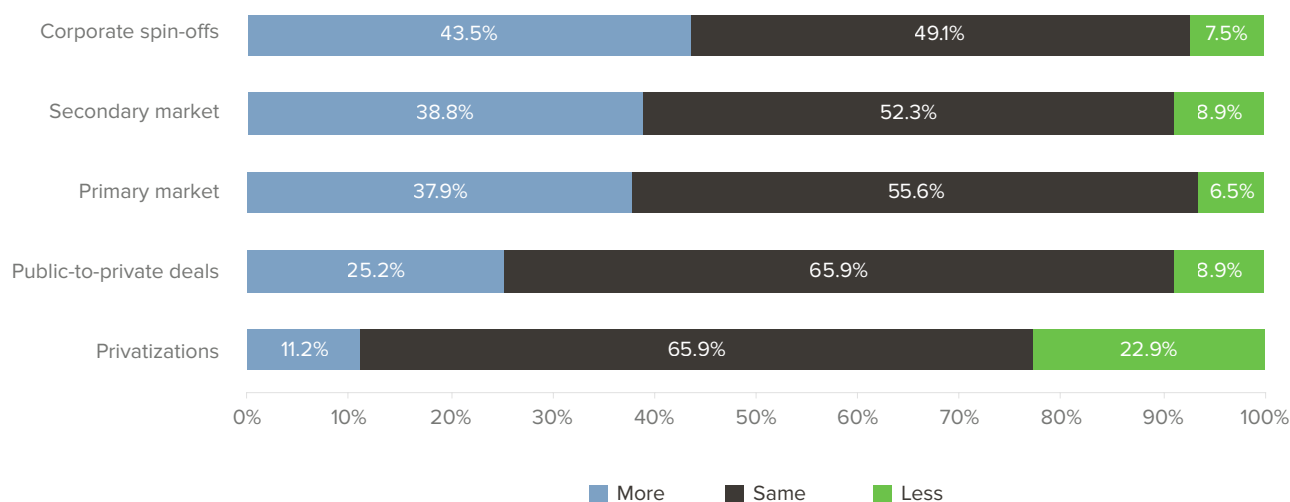
### PRIVATE EQUITY IN THE FLAT GLASS INDUSTRY

The global flat glass industry has attracted more and more PE interest since the early 2010s. At Oaklins, we have seen Consolidated Glass Holdings, a portfolio company of Grey Mountain Partners, completing nine deals since Gray Mountain Partners acquired Consolidated Glass Holdings in 2011. These included J.E. Berkowitz in November 2016, when one of

Oaklins’ teams in the USA served as the exclusive financial advisor to J.E. Berkowitz.

Over the years, PE funds have acquired companies in wide-ranging glass segments in glass segments, but the primary goal has been to build regional and national consolidation platforms in a fragmented marketplace.

### Expected deal nature



Source: Arthur D. Little Analysis, Invest Europe Private Equity survey

“We are experiencing increasing private equity buyer activity in the flat glass industry, especially with high margin, value-added glass processors.”

**VALĒRIJA LIEĢE**

OAKLINS’ GLASS PROCESSING & FINISHING SPECIALIST



# Survey: Key drivers for private equity in glass industry

Hear what private equity buyers and debt providers have to say about recent investments in the glass industry, and their expectations for the sector, based on our survey.

## KEY REASONS AND CONSIDERATIONS FOR PURSUING AN INVESTMENT IN GLASS PROCESSING & FINISHING INDUSTRY:

- **Use and complexity** of glass solutions continue to increase in both facades and interior projects
- **Positive regulatory trends** that influence energy efficiency requirements (e.g. in the insulated glass segment), environmental requirements (glass is a recyclable material), and safety requirements (e.g. fire safety and anti-burglary requirements)
- There is **automation potential in the production process** that would make it possible to reduce not only labor costs but also raw material loss (e.g. during cutting) while increasing quality, allowing the labor force to focus on more value-added activities and tailor-made products
- **Local and regional consolidation potential**, as there is a wide range of small and mid-sized independent glass processors & finishers, especially in Europe

### QUOTES FROM DOVESCO, EUROGLAS-DE LANDTSHEER – INVESTMENT MADE IN 2016



“We believe in the positive trend in market growth, as offices and homes move towards using more transparent materials and glass solutions, both inside (e.g. doors and separation walls) and outside (e.g. balconies).”



“We believe that tailor-made work could be further automated to a certain extent – we are investing in that direction.”

“We believe in further strategic consolidation in the Belgian market – we have acquired one player in the north of Belgium and successfully integrated this business.”

### QUOTES FROM DIK, CALEOGLAS – INVESTMENT MADE IN 2020



“The German locations of Glassolutions, which we acquired from Saint-Gobain and that became caleoglas, are an excellent platform for further Europe-wide growth.”



“The focus on regional business can be better implemented in a medium-sized and entrepreneurial environment.”

“The acquired sites have a high level of technical competence, an excellent reputation and long-term customer relationships.”

## MOST OF THE PE FUNDS SURVEYED ARE CONSIDERING FURTHER M&A TO ACHIEVE FASTER GROWTH:

- **Horizontal add-on acquisitions are being extensively considered**, especially to expand geographic reach and/or to increase production capacity
- Another underlying reason for horizontal add-ons is to **expand product range**
- Some PE investors remain open to **vertical add-ons**, primarily by acquiring distributors, resellers and installers with an aim to perform a forward integration

### QUOTES FROM CONNECTION CAPITAL, ESG – INVESTMENT MADE IN 2016

connec+ion  
CAPITAL

“Bolt-on M&A certainly presents exciting non-organic growth opportunities.”

ESG

“Strategic fit is paramount; in particular, any potential target has to be able to demonstrate the same high levels of operational quality and service that ESG customers expect.”

“Attractive targets for ESG are companies that offer us the ability to expand geographically and service a greater proportion of the UK efficiently and effectively, as well as companies that present opportunities for acquiring new manufacturing capability that in turn enables entry into new markets.”

### QUOTES FROM LIVONIA PARTNERS, KLAASIMEISTER – INVESTMENT MADE IN 2019

LIVONIA  
PARTNERS

“When deciding on the investment in Klaasimeister, we saw that the industry is ripe for consolidation.”

“We are currently evaluating opportunities with glass processors & finishers similar to Klaasimeister. The goal here is to increase our capacity, product range and geographic reach.”

KLAASIMEISTER

“Meanwhile, we are also looking to get closer to the end-customer by teaming up with or acquiring a reseller. We have already seen and talked with several very interesting resellers with strong market positions and profitability, which is what we would be looking for.”

“We are not looking at backward integration (e.g. float glass producers) – this is an industry where several big and powerful companies are present and we do not see added value from M&A in this field.”

## CAPITAL INVESTMENTS HAVE BEEN FOCUSED ON OPTIMIZATION OF PRODUCTION FACILITIES, RENEWAL OF MACHINERY AND AUTOMATION:

- Most of the acquirors are **focusing on completing improvements within existing premises** rather than building completely new production sites
- The key investment goal is **automation and increasing the productivity** of the production sites, as well as an increase in both capacity and quality by replacing outdated machinery
- Several PE owners have worked to **reorganize production facilities**. For many companies these have historically been split across several premises, and investments have been made to consolidate the locations under one roof
- Building completely new greenfield sites **has not been widespread** among PE owners due to the long-term framework of such high-scale projects

DiK Deutsche  
IndustrieKapital

### QUOTES FROM DIK, CALEOGLAS – INVESTMENT MADE IN 2020

caleoglas

“Following a successful carve-out, we have already adopted an extensive investment plan and are currently implementing it. Reasons for investment are replacement investments, capacity increases and productivity enhancements.”

#### QUOTES FROM CONNECTION CAPITAL, ESG – INVESTMENT MADE IN 2016



“At the start of 2020, Connection Capital provided investment to undertake a site consolidation to rationalize three old manufacturing sites into one new, larger, fit for purpose, state-of-the-art facility.”



“As part of the investment, new automated manufacturing lines were installed.”

“The new site and automated manufacturing lines have increased manufacturing capacity and quality, and have expanded manufacturing capabilities thereby enabling ESG to enter new markets.”

#### CURRENT CHALLENGES AND UNCERTAINTIES IN THE INDUSTRY ARE RELATED TO RAW MATERIAL AVAILABILITY AND LONG-TERM COVID-19 EFFECTS:

- COVID-19 and the resulting **trend towards working from home could negatively impact demand for new office spaces**. However, it is premature to say if this trend will continue in the long term. Currently, demand remains high and existing office building projects are going ahead
- General **sentiment for market growth remains strong** as glass becomes an increasingly important element in both private and public architecture and interiors
- In the short term, and also partly driven by COVID-19, **there is a raw material shortage and subsequent increase in prices** that is putting pressure on margins. However, as glass processors & finishers are moving to more value-added products, most of the companies surveyed have been able to pass the price increase to their customers



#### QUOTES FROM DOVESCO, EUROGLAS-DE LANDTSHEER – INVESTMENT MADE IN 2016

“The main challenge for Euroglas–De Landtsheer is the state of the construction industry in the Benelux. As long as demand in construction is high, our factories will be busy.”



“A recent concern is, of course, the impact of COVID-19 and how the market for office space will react once restrictions are behind us.”

#### QUOTES FROM CONNECTION CAPITAL, ESG – INVESTMENT MADE IN 2016



“We have certainly seen raw material constraints and pricing pressure creep into the market. Due to this, supply issues will create challenges in the short term as manufacturers seek to manage requirements and customer expectations.”



“The speed at which glass technology is evolving will create challenges for companies not investing in their product development and manufacturing capabilities. Customer requirements are getting increasingly more sophisticated, and there is pressure on flat glass manufacturers to innovate.”

#### TRADE SALE TO A LARGER STRATEGIC PLAYER OR A PE-BACKED CONSOLIDATOR ARE THE MOST POPULAR EXIT OPTIONS:

- Among the funds planning for exit, **traditional trade sale through M&A** is clearly the anticipated exit scenario
- The **funds are not considering IPOs** due to lack of size and the current sentiment among public markets, which seems to be driven primarily towards IT-heavy companies
- Some of the PE funds, primarily those backed by private family funds, **are not currently planning an exit** from the investment. They are in the process of establishing an industrial holding company that would further consolidate the market and generate positive cash flow for the owners in the long term

**QUOTE FROM LIVONIA PARTNERS, KLAASIMEISTER – INVESTMENT MADE IN 2019**

LIVONIA  
PARTNERS

KLAASIMEISTER

“We acquired the company in 2019, therefore we are not looking for an exit right now. Especially as last year was partly devoted to dealing with COVID-19, rather than implementing our growth vision.”

“However, if thinking about the exit strategy, we are not ruling out any options. There are several interesting strategies, namely in Southern and Western Europe, that we see as realistic buyers, but exit to another PE is also highly likely. We see that the market can be consolidated even further and that cash flow is good. If we manage to reach the size necessary for it to be of interest, an IPO is also probable, but less likely than a trade sale.”

DOVESCO

EUROGLAS  
de landtsheer

**QUOTES FROM DOVESCO, EUROGLAS-DE LANDTSHEER – INVESTMENT MADE IN 2016**

“We have a flexible exit horizon.”




“Both a sale to a strategic partner that wants to add a leading position in Belgium to its portfolio or further consolidate, and/or a PE-backed group that wants to use Euroglas-De Landtsheer to create a platform are options. An IPO is less likely due to lack of size.”

**PRIVATE EQUITY AND DEBT FUNDS WITH EXPOSURE TO THE FLAT GLASS INDUSTRY**

|              |              |              |  |              |              |
|--------------|--------------|--------------|--|--------------|--------------|
| <br>2020<br> | <br>2020<br> | <br>2020<br> | <br>2020<br>   | <br>2020<br> | <br>2019<br> |
| <br>2019<br> | <br>2019<br> | <br>2019<br> | <br>2019<br>   | <br>2019<br> | <br>2019<br> |
| <br>2018<br> | <br>2018<br> | <br>2018<br> | <br>2017<br>   | <br>2016<br> | <br>2016<br> |
| <br>2016<br> | <br>2015<br> | <br>2014<br> | <p><b>PE'S, VC'S AND DEBT FUNDS HAVE CLOSED OVER 60 DEALS IN GLASS PROCESSING &amp; FINISHING SINCE 2015</b></p> |              |              |

# M&A activity

## A selection of recent private transactions in the sector

























| Date   | Target  | Rationale   | Bidder   | Type                                   | Country   |
|--------|---|---|--|--|---|
| Jun-21 | <br>AGC<br>(North American architectural glass business)     | AGC Inc. sold three sites in USA – site with flat glass manufacturing furnace in Kansas, two flat glass manufacturing furnaces and coater in Tennessee, and a coating site in Virginia, to Cardinal Glass Industries. The three sites had sales of US\$254 million in 2020. |    | Strategic<br>Horizontal                |    |
| Apr-21 | <br>GLASSOLUTIONS<br>(two sites in Germany)                  | AEQUITA has acquired Saint-Gobain Glassolutions Objekt-Center GmbH, comprising the two glass processing sites in Radeburg and Berlin. AEQUITA-owned Glassolutions Nederland has strong synergies with the two new sites.  |    | PE<br>Buy & build<br>(2nd acquisition) |    |
| Apr-21 | <br>Metallityo<br>VALIMÄKI OY                                | Pihla Group has acquired a stake in Metallityo Valimäki, a Finnish manufacturer of steel and aluminum doors and windows and glass walls.  |    | Strategic<br>Horizontal                |    |
| Mar-21 | <br>LA ROCHÈRE<br>1875 FRANCE                                | Tourres & Cie has acquired La Rochere, SAS, a France-based manufacturer of glassworks products and specialist in pressed glass.   |    | Strategic<br>Horizontal                |    |
| Nov-20 | <br>euroview<br>ARCHITECTURAL GLASS                         | The management of Euroview Architectural Glass, the UK-based supplier of commercial insulated glass units and fire glass, has completed an MBO. BNP Paribas Asset Management provided a US\$4 million long-term loan.   | MBO backed by<br>  | PE<br>MBO                              |  |
| Nov-20 | <br>THERMO GLAS<br>TRIENES                                 | Local private equity firm S-UBG Gruppe supported the management buy-in to Thermoglas Niederrhein and Glas Trienes. Mathias Schlatt, an industry veteran, will acquire a majority stake in the businesses.   |    | PE<br>MBI                              |  |
| Nov-20 | <br>FLABEG<br>ADDED VALUE IN GLASS                         | CORDET has agreed to acquire the distressed automotive and technical glass producer FLABEG after it filed for insolvency in May 2020.   |    | PE<br>Special situation                |  |
| Jun-20 | <br>CG+<br>CONSOLIDATED GLASS HOLDINGS                     | Consolidated Glass Holdings has been acquired by new owners, including the CGH senior management team and minority investor Czech Asset Management.   | MBO backed by<br>  | PE<br>Buy & build                      |  |
| Mar-20 | <br>caleoglas<br>GLASSOLUTIONS<br>(seven sites in Germany) | Bidder acquired seven sites of Glassolutions Saint-Gobain Limited. The transaction is in line with Saint-Gobain's continued portfolio optimization strategy.  |    | PE<br>Buy & build<br>(1st acquisition) |  |
| Mar-20 | <br>INTER<br>FLOAT   | The Blue Minds Company (20% stake) and HS Timber Group (80%) agreed to acquire Interfloat Corporation, a manufacturer of solar glass for photovoltaic systems and greenhouses.  |   | Strategic<br>Horizontal                |  |
| Mar-20 | <br>Scheuten<br>see it. feel it                            | PE fund Value Enhancement Partners has agreed to sell its stake in Scheuten Glass Holding B.V., a manufacturer of glass and high-grade solar cells.   |    | Strategic<br>Vertical                  |  |
| Jan-20 | <br>LUKORA   | VC-backed Cevino Glass has acquired Lukora, a glass processing company.   |   | PE<br>Buy & build                      |  |

Source: Mergermarket



# Selected listed players

## Selected flat and specialty glass industry players

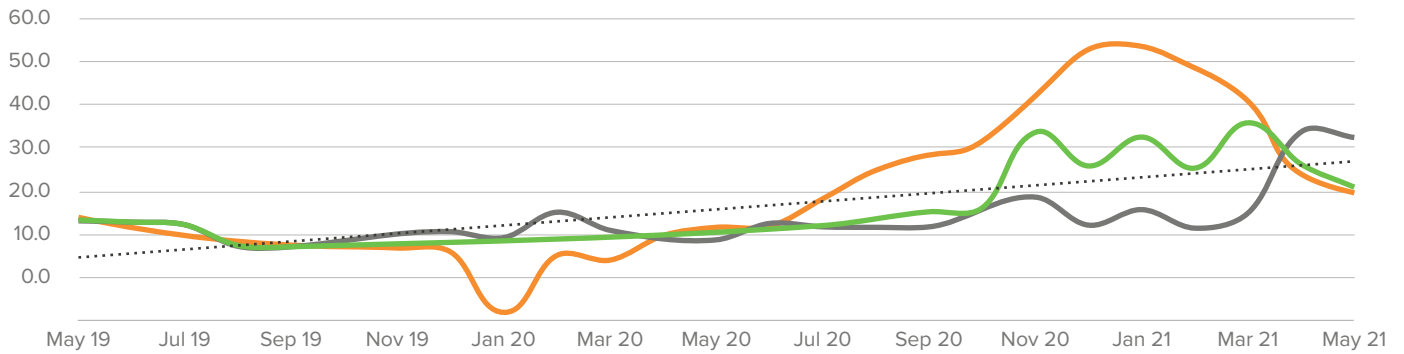
| Company   | Country   | Market cap (US\$m) | Enterprise value (US\$m) | Revenues | EBTIDA | EBITDA margin  | EV/ Revenue   | EV/ EBITDA   |               |
|---|---|--------------------|--------------------------|----------|--------|----------------|---------------|--------------|---------------|
|  SAINT-GOBAIN                                  |    | 37,087             | 46,239                   | 46,573   | 5,942  | 12.76%         | 1.00x         | 7.83x        |               |
|  福耀集团<br>FUYAO GROUP                           |    | 19,828             | 20,217                   | 2,978    | 771    | 25.89%         | 6.66x         | 25.75x       |               |
|    |    | 9,668              | 16,346                   | 13,671   | 2,031  | 14.86%         | 1.24x         | 8.37x        |               |
|    |    | 14,923             | 14,923                   | 2,400    | 1,001  | 41.71%         | 6.22x         | 14.91x       |               |
|    |    | 7,510              | 7,707                    | 1,442    | 493    | 34.19%         | 5.25x         | 15.32x       |               |
|    |    | 5,160              | 5,394                    | 944      | 382    | 40.47%         | 5.61x         | 13.87x       |               |
|  TAIWANGGLASS<br>台玻集團                        |  | 3,821              | 4,741                    | 1,489    | 295    | 19.81%         | 3.14x         | 15.88x       |               |
|    |  | 512                | 4,379                    | 4,508    | 477    | 10.58%         | 0.97x         | 9.17x        |               |
|    |  | 2,820              | 3,903                    | 2,858    | 639    | 22.36%         | 1.53x         | 6.85x        |               |
|  金晶集团<br>JINJING GROUP                       |  | 1,572              | 1,853                    | 692      | 159    | 22.98%         | 2.48x         | 11.68x       |               |
|    |  | 1,397              | 1,787                    | 1,603    | 417    | 26.01%         | 1.09x         | 4.21x        |               |
|    |  | 983                | 1,162                    | 1,231    | 137    | 11.13%         | 0.94x         | 8.39x        |               |
|  CENTRAL GLASS                               |  | 757                | 1,103                    | 1,722    | 153    | 8.89%          | 0.64x         | 6.99x        |               |
|  洛阳玻璃股份有限公司<br>LUOYANG GLASS COMPANY LIMITED |  | 719                | 1,053                    | 456      | 118    | 25.88%         | 2.28x         | 8.79x        |               |
|    |  | 579                | 961                      | 1,768    | 184    | 10.41%         | 0.54x         | 5.24x        |               |
|  CNG中玻                                       |  | 271                | 719                      | 458      | 78     | 17.03%         | 1.46x         | 6.77x        |               |
|   |   |                    |                          |          |        | <b>Average</b> | <b>21.56%</b> | <b>2.57x</b> | <b>10.63x</b> |
|   |   |                    |                          |          |        | <b>Median</b>  | <b>21.09%</b> | <b>1.50x</b> | <b>8.59x</b>  |

Source: Infincials

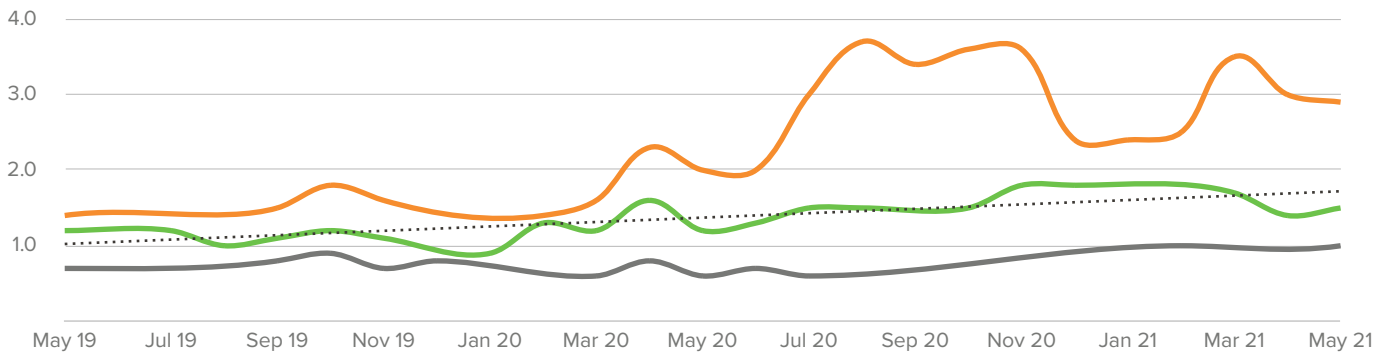
# Valuation trends

We have experienced increased volatility in the valuation of all listed peers due to COVID-19. This trend shows rising trade multiples as revenues, EBITDA and earnings have been negatively affected by the pandemic, while market valuations have been stable or even increasing. This is explained by the fact that investors see limited changes to the underlying economy and no change in expected demand for glass products going forward. Another important aspect to highlight is that China- and Taiwan-based companies trade at significantly higher multiples, backed by their notably higher EBITDA margins – often above 30-35%.

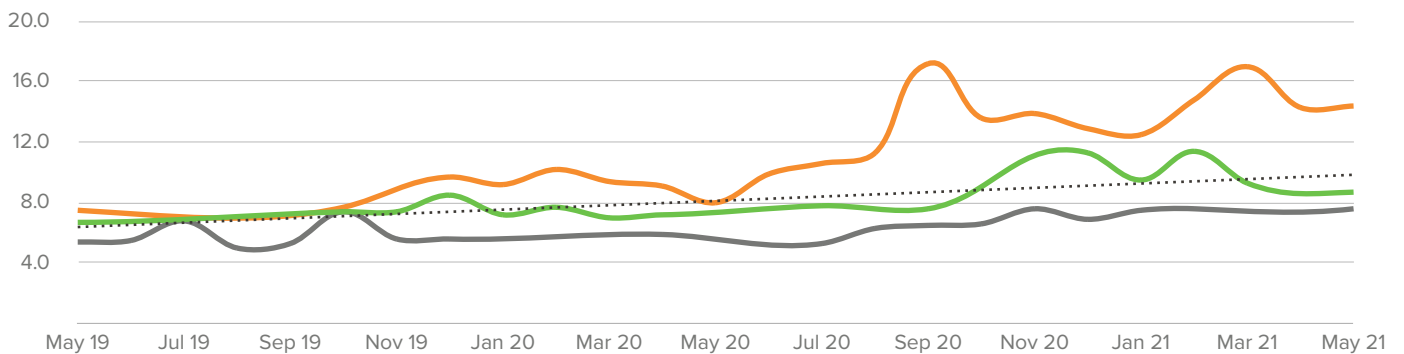
Price/Earnings LTM (last 24 months)



EV/Sales LTM (last 24 months)



EV/EBITDA LTM (last 24 months)



— Selected listed peers    
 — Selected listed peers based in China and Taiwan    
 — Selected listed peers outside of China and Taiwan

Source: InFront Analytics  
Valuation data is as of 18 May 2021

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Oaklins brings you opportunities from across the world and we meet you with our expertise wherever you are

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- M&A advisory (buy-side and sell-side)
- Growth equity and equity capital markets advisory
- Debt advisory
- Corporate finance services

Glass processing & finishing is one of our focus areas. Combining comprehensive sector knowledge with global execution has led Oaklins to become one of the most experienced M&A advisors in the glass processing & finishing sector, with a large network of relevant market players worldwide. This results in the best possible merger, acquisition and divestment opportunities for glass processing & finishing companies.

If mergers, acquisitions or divestitures of businesses or business units are part of your strategy, we would welcome the opportunity to exchange ideas with you.



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Valērija leads Oaklins' Glass Processing & Finishing team and is a partner at Oaklins Baltics in Riga. As part of her sector focus, Valērija continuously follows developments, attends the major events and maintains regular contact with the key players in the industry. Recently, she advised NCH Capital on the sale of GroGlass, one of the world's leading developers and manufacturers of anti-reflective coatings on glass and acrylic.

Oaklins is the world's most experienced mid-market M&A advisor, with over 850 professionals globally and dedicated industry teams in more than 45 countries. We have closed 1,700 transactions in the past five years.

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