



Glaston

Initial report

Growth through glass processing

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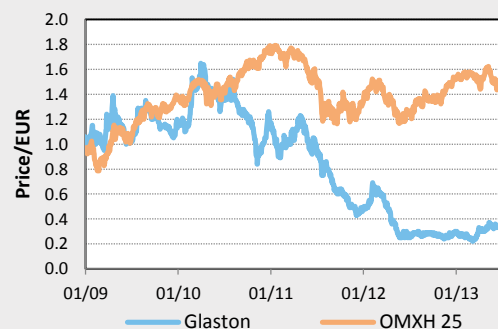
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Glaston Oyj

17.7.2013

Initial report

- During the past 12 months Glaston has transformed from a financially troubled company into a company with a healthy balance sheet and solid foundation for its business. It seems that the market demand has also bottomed out after many difficult years, and currently there's a healthy demand for modernizations. If the general economic situation doesn't weaken, we believe investments into new glass processing capacity will strengthen significantly in 2014. Improvement is driven mostly by the recovery of the US construction industry.
- Given the positive demand outlook for glass processing machinery, we are reasonable confident that Glaston can produce significant profit improvements in the coming years. Despite restructuring, company's cost-structure is still relatively fixed, giving it a large operational leverage when the net sales increase.
- While we believe in the turnaround of Glaston and the long-term outlook of the company is solid, the valuation is currently too high for us. Company's MCAP has risen from roughly 25 MEUR to 68 MEUR in less than six months. At the bottom Glaston was a bargain due to its financial trouble, but now the turnaround is already priced in. Given Glaston's poor track-record, we cannot price it with higher multiples than its peers without further evidence of profitable growth.



Target company: Glaston Oyj

Share price: 0.35 EUR
Target price 0.33 EUR
12m high / low EUR 0.37 / 0.22

Ticker GLA1V.HE
Number of shares (million) 193 708
Market cap 68 MEUR

Homepage glaston.net
Next interim report: 8.8.2013

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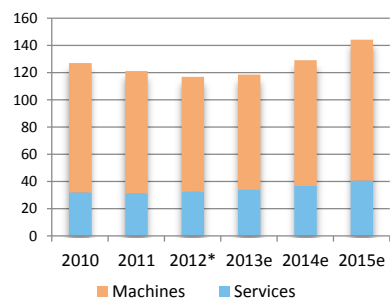
Key figures (MEUR)	2009	2010	2011	2012*	2013e	2014e	2015e	2016e
Net sales	151.8	149.4	119.7	115.6	117.0	127.4	142.4	159.7
Net sales growth-%	-44 %	-2 %	-20 %	-3 %	1 %	9 %	12 %	12 %
EBIT	-55.3	-24.9	-3.1	-8.8	4.9	5.0	7.6	9.9
EBIT-%	-36 %	-17 %	-3 %	-8 %	4 %	4 %	5 %	6 %
Pre-tax profit	-57.7	-31.8	-13.9	-17.4	5.7	3.9	6.4	8.7
Net earnings	-53.7	-32.0	-16.5	-22.4	4.7	3.3	5.5	7.1

Key valuation figures	2009	2010	2011	2012	2013e	2014e	2015e	2016e
Share price 0.35 EUR, EV=78 MEUR, P=68 MEUR								
EV/Sales	1.0	1.0	0.8	0.7	0.7	0.6	0.5	0.5
EV/EBITDA	neg.	neg.	19.7	neg.	7.9	8.3	6.2	5.0
EV/EBIT	neg.	neg.	neg.	neg.	16.2	15.4	10.1	7.7
P/E	neg.	neg.	neg.	neg.	14.6	20.5	12.4	9.5
Dividend-%	0 %	0 %	0 %	0 %	0 %	0 %	3 %	4 %

* Restated after the divestment of Software business, older figures are not comparable

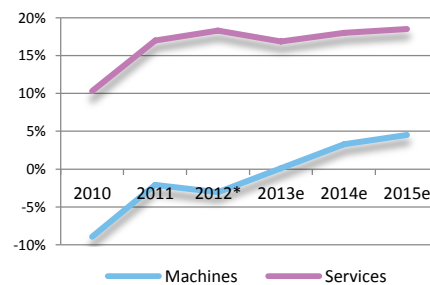
Performance metrics

Net sales 2010-2015e



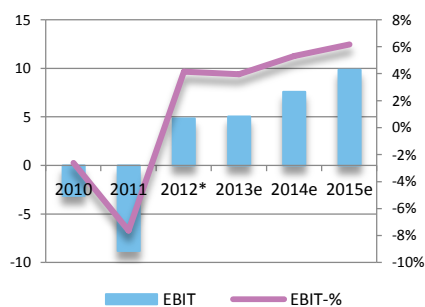
Source: Inderes

EBIT margin-% of divisions 2010-2015e



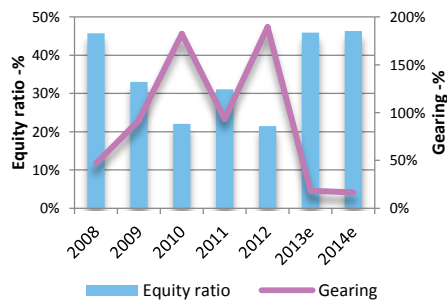
Source: Inderes

Group EBIT and EBIT-% 2010-2015e



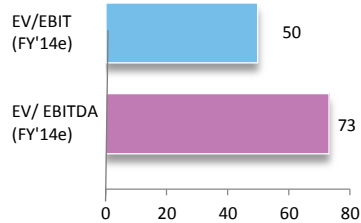
Source: Inderes

Equity ratio-% and gearing-%



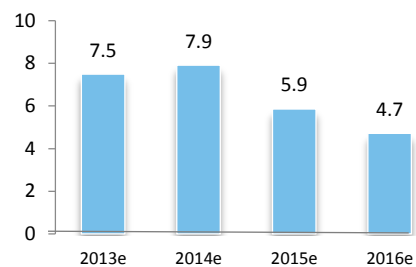
Source: Inderes

Value based on peer group analysis



Source: Inderes

Valuation with EV/EBITDA-multiples



Source: Inderes

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1. Investment case summary

Glaston is a global glass processing technology company focusing on pre-processing and heat treatment glass machines and services.

After the financial crisis Glaston has suffered from overcapacity and weak demand in the glass processing market. Especially investments into new machines have been very low.

Market situation has been poor for Glaston at least five years now (2007-2012). During this drought Glaston turned from almost net debt free company into debt-ridden.

"New Glaston" was born in Q1'13 after heavy financial and business restructuring. Company has now strong balance sheet, more focused business, healthy cost-structure and probably growing demand in the coming years.

With MCAP of 68 MEUR Glaston is the market and technology leader in glass processing machines.

We believe Glaston has increased its technology advantage with new products, which create a good opportunity to gain more market share when investments in

Glaston is a global company developing glass processing technology for architectural, solar, appliance and automotive applications. Company is focused on pre-processing and heat treatment glass machines as well as services. Glaston serves its customers worldwide in over 20 locations and has production in four countries (Finland, Italy, China and Brazil) on three continents. Glaston has two reporting segments: Machines and Services.

The years after the financial crisis were terrible for Glaston, when the new investments into glass processing machines practically stopped completely in the US. Boom years created overcapacity in the markets, and while the other industries recovered relatively quickly from the shock, the glass processing market remained extremely weak. While the US market situation was poor at best, Europe had its own problems, mainly the debt crisis. This environment didn't support new investments either. Asia, which pretty much means China for Glaston, was the only place where new investments were brisk. However, a large part of this focused in the lower-end glass processing, where Glaston isn't really competitive against the rising Chinese companies.

Overall, one could say that the market situation has been terrible for Glaston at least five years now. Glaston was somewhat reluctant to make dramatic changes, when the market situation changed, and it made some heavy losses. Company's balance sheet was almost net debt free in 2007 turned into debt-ridden by 2012 (net gearing 187 %), and Glaston desperately needed new financing. Glaston was driven "to the bottom" mostly by the external factors, but definitely not without also own mistakes. When the financial crisis hit the company, it had just made significant growth investments and its structure was completely too heavy. This was costly to the company.

After heavy financial and business restructuring, "new Glaston" was born in Q1'13. Company's balance sheet is again strong after a share issue and divestment of Software business and real estate, and perhaps more importantly, the cost-structure is again in-line with the level of demand. It's also critical that the market has bottomed out and is improving slowly but steadily. Demand for flat glass is estimated to be growing over 7 % a year and we believe that Glaston's potential market will grow even faster after the overcapacity has been melted away. The most interesting market is currently the US, where the housing market has been recovering clearly lately.

With a MCAP of roughly 68 MEUR Glaston is a small-cap company, but it's still the biggest company in the fragmented market of glass processing machines when it comes to net sales. Glaston is also a market leader in the selected niches e.g. in heat treatment. In addition to solid market position, Glaston is also a technological leader in this field. Company has continued its R&D investments, often first cost to be cut, through the difficult times. In 2012 the R&D expenditure was 5.3 MEUR, i.e. 4.6 % of net sales (in 2011: 5.0 MEUR and 4.2 %). We believe that company has been able to increase its technological advance over the past year, when company has launched new important products. Therefore Glaston should be in very good position to

glass processing start to normalize.

capture its share of the market, when the new investments of the glass processing manufacturers finally start to normalize.

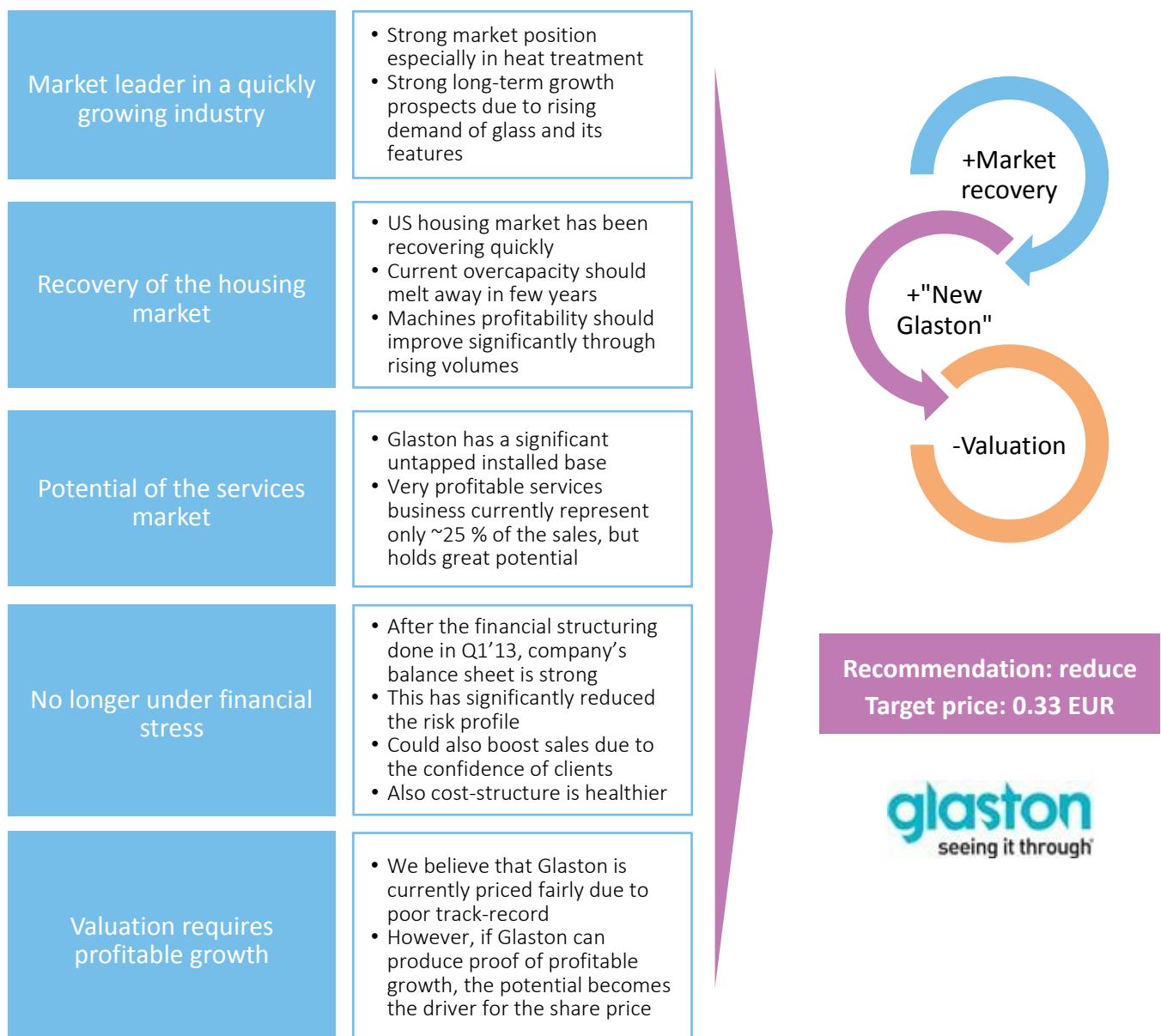
Glaston has huge potential in the services market, where it has been able to capture only a minor share of the potential market.

Company also has huge potential in the services market, where it has captured only a minor share (perhaps ~5 %) of the potential market. It's difficult to understand why Glaston hasn't been more focused on growing this business, which clearly offers a huge potential due to installed base of Glaston and has been very profitable even during the difficult years.

We see Glaston's future positive, but the current valuation of the share is challenging. There is a large upside potential through earnings growth, but we do not see upside in the valuation multiples.

While we are positive about the future development of Glaston, we find the valuation of the share currently very challenging when we look at earnings multiples. We see the huge potential in the net sales and the earnings growth for Glaston, but the due to the poor track-record we require proof of profitable growth. While many in the peer group are probably close to the peak, Glaston is probably close to the bottom. Therefore higher multiples can be justified, but it's important to understand that the turnaround is already priced in and results are needed in order to justify current share price.

Investment case key points



2. “New Glaston” in a nutshell

Glaston is a global company developing glass processing technology with a portfolio ranging from pre-processing and safety glass machines to services.

Glaston is a global company developing glass processing technology for architectural, solar, appliance and automotive applications. Company's portfolio ranges from pre-processing and safety glass machines to services. Glaston serves its customers worldwide in over 20 locations. Glaston has production in four countries (Finland, Italy, China and Brazil) on three continents. Currently company has around 600 employees.

Glaston has been going through a heavy restructuring since the financial crisis, while its net sales have dropped from 270 MEUR to 120 MEUR.

Glaston has been going through a heavy restructuring period since the financial crisis. While company's net sales dropped from the level of 270 MEUR in 2008 to current level of around 120 MEUR it goes without saying the structure has also changed a lot. The latest major change was the divestment of Software solutions business, which was sold in Q1'13 to Constellation Software. Since 2007 there have been many other divestments also: in 2007 former Glaston Kyro sold its energy business area to M-real, in 2009 corporation's subsidiary Tamglass Glass Processing sold its insulated and architectural glass processing operations to INTERPANE Glass and in 2010 Glaston's joint venture, the glass processing company INTERPANE Glass, was sold to Rakla Finland.

Glaston has made several divestments, including its Software solutions business in Q1'13.

The major reason for the drastic sales decrease has been the terrible market environment, which led to heavy losses and surviving battle.

Despite the many divestments, the biggest sales decrease was due to the terrible market environment after the financial crisis. This means that Glaston had to scale down its operations significantly in order to survive through market slump. This was an agonizingly slow process, and company suffered heavy losses during the period. While company was almost debt free (very little net debt) and had 140 MEUR of equity in the balance sheet still at the end of 2007, by the end of 2010 company's equity had shrunk to ~39 MEUR to its gearing-% was in a crisis level of 182 %. In the end of 2012 company's gearing-% was 188 % and equity ratio little more than 20 %, leaving company very little room for any financial maneuvers. At this point the financial situation was tough and the huge amount of debt was very expensive to maintain. Company's profitability was still poor, and even if there would have been significant results, they would have been eaten by interest expenses. For shareholders the situation was unacceptable.

Glaston's financial situation was tough and company suffered from huge amount of debt in the end of 2012 with gearing of 188 % and equity ratio of 20 %.

Perhaps the most important restructuring was the “financial restructuring”, which was finalized in Q1'13

Therefore perhaps the most important of the restructurings of the past years were the “financial restructuring” that was finalized in Q1'13. After many actions taken by the management, including new issue of shares, converting debt holders into shareholders as well as selling assets such as Software business and real estate in Tampere, company's balance sheet is again solid. This is crucial for Glaston, since its risk profile was clearly too high before the balance sheet strengthening both in the eyes of investors and probably many of its (potential) customers. At the end of Q1'13 company's balance sheet was healthy again: gearing-% was pushed down to ~20 % and equity ratio-% was ~45 %. This means that Glaston can focus on serving its clients from now on, not just its debtors.

At the end of Q1'13 Glaston's balance sheet was healthy again with gearing of 20 % and equity ratio of 45 %.

We believe that the divestment of the Software business in Q1'13 was a smart

The Software business segment, which was acquired back in 2007 with a hefty sum of 20.3 MEUR, was a part of the plan to become a stop place for the

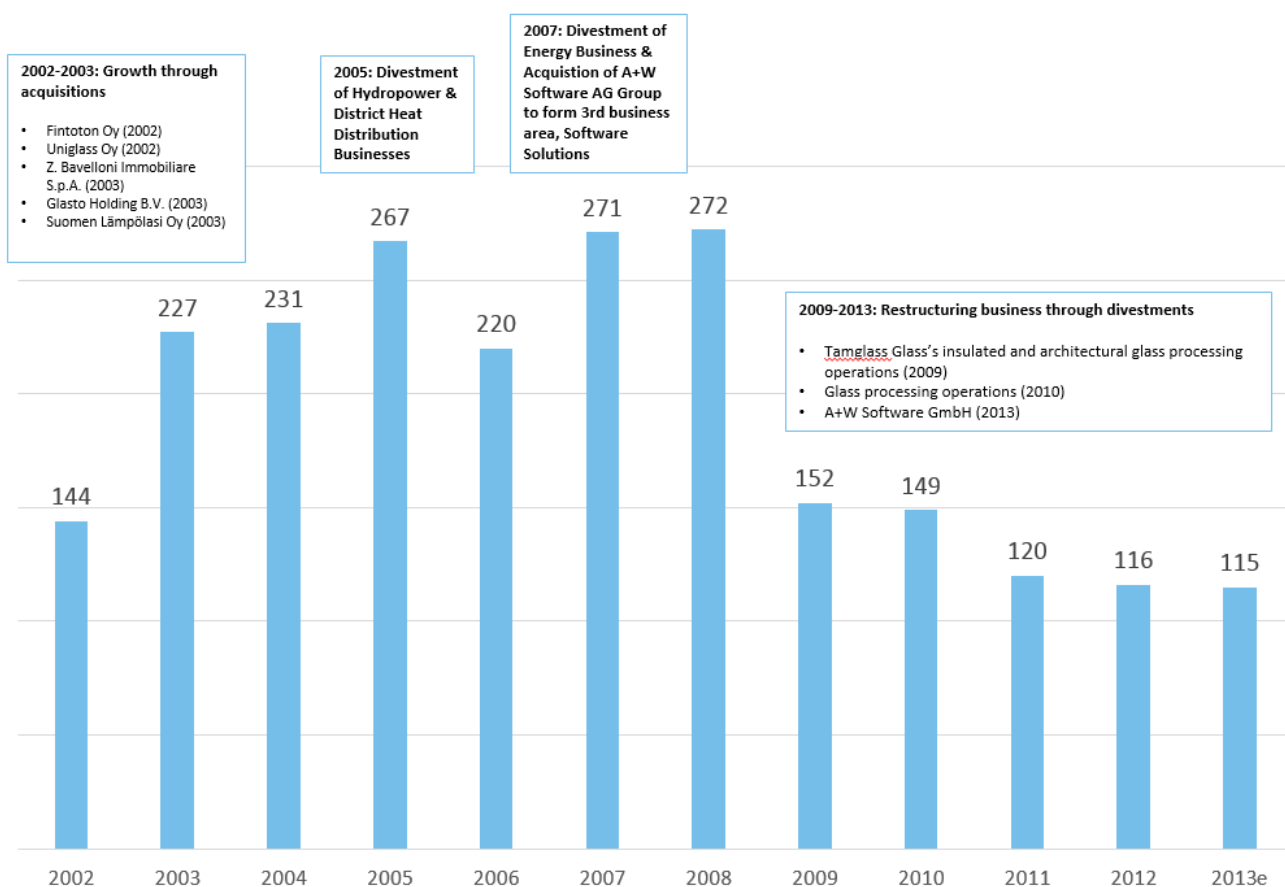
choice, and the price was good considering Glaston's position at the time. Now Glaston is more focused in its core business.

clients. There were little synergies with the software business with the other businesses, since it made mainly ERP software for whole factories and lines instead of focusing in machinery, but it was a profitable business nevertheless. However, considering the acquisition price, investment and profit contribution of Software business segment, one cannot say that the proceeds created shareholder value. The value of the Software divestment was estimated at 18 MEUR after five years of being part of Glaston group. Glaston had to write a 5.2 impairment loss from the goodwill of Software business due to the transaction, which concludes that the story was far from success. Still we believe that the divestment of the business was a smart choice, and the price was good considering Glaston's position at the time of the divestment. Now Glaston is more focused in its core business.

"New Glaston" has two reporting segments: Machines and Services.

"New Glaston" has two reporting segments: Machines and Services. Like already mentioned, the third business segment Software Solutions was divested in Q1'13. Company no longer provides information about the development of different product groups like pre-processing and heat treatment, but it's safe to assume that company's best areas are heat treatment and services. In heat treatment company has a solid market share and technologically superior products, while pre-processing machines group has fierce price-competition.

Glaston has gone through massive changes in the 21st century



Source: Company materials / Inderes

2.1. Machines business segment

Machines segment offers an extensive range of glass processing machinery and associated tools in its focus areas that are pre-processing and heat treatment.

Segment's 2012 net sales were 84.7 MEUR, 73 % of group's total sales, and EBIT -2.6 MEUR. Outlook is positive in the long-term, but in the short-term the overcapacity remains a problem.

The Machines business segment offers glass processing machinery for everything from cutting and drilling to edge grinding and polishing, including tempering, bending, bent tempering and lamination. This segment offers an extensive, high-quality range of glass processing machinery and associated tools in its focus areas that are pre-processing and heat treatment.

In 2012 segment's net sales were 84.7 MEUR, which is roughly 73 % of group's total sales. However, segment's profitability has been unsatisfactory for a long time. In 2012 its EBIT was -2.6 MEUR (-3.1 % of net sales), while the market environment continued to be challenging. Even though the long-term outlook of glass producing industry is positive, glass producers still have significant amount of overcapacity in many market areas, which means that there are still very few new investments to capacity. However, this overcapacity should be melting due to rising demand of glass in general, which gives also this segment a solid foundation for growth in the future. Still, the starting level is hardly satisfactory.

2.2. Services business segment

Services segment includes maintenance services for glass processing machinery, spare parts and accessories, machine upgrades and modernizations, as well as training and consulting.

Segment's 2012 net sales were 32.3 MEUR, 27 % of group's total sales, and EBIT 5.9 MEUR (18.3 EBIT-%).

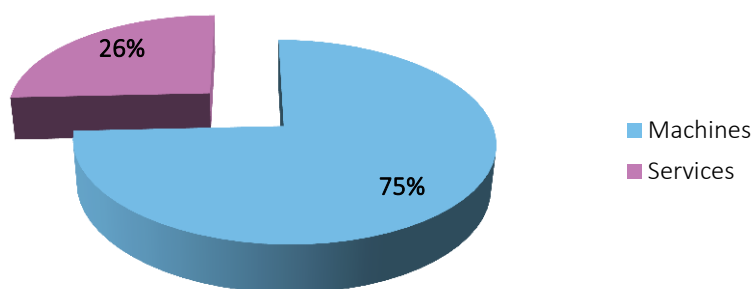
Outlook of Services is solid, since machine upgrades and modernizations will probably have a healthy demand in the coming years.

Services segment includes maintenance services for glass processing machinery, sales of spare parts and accessories, machine upgrades and modernizations, and training and consulting. Glaston's offering is aimed at ensuring uninterrupted production capacity for its customers and efficient usage throughout a machine's lifecycle. Company has a relatively comprehensive global service network, which is one of the most important factors in company's competitiveness.

In 2012 segment's net sales were 32.3 MEUR, which is roughly 27 % of group's total sales. Even though relatively low volumes, segment still managed to make an EBIT of 5.9 MEUR meaning that is EBIT-% was over 18 %. This is a good level for any company, though it's worth noting that Glaston announces the group expenses outside the segments. If the group expenses would be allocated into segments, EBIT-% would be clearly lower.

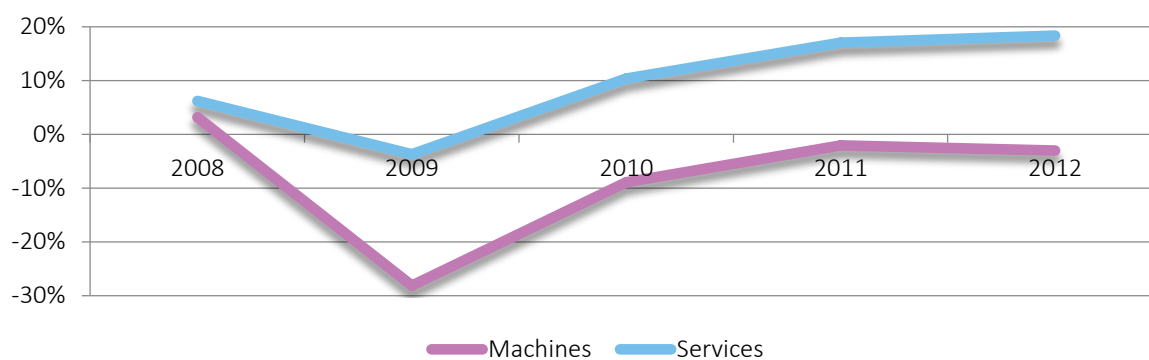
Also the outlook of Services is good: Glaston has a huge amount of installed capacity at the market, which holds a great potential for services offerings. Company should be able to penetrate this market further with its relatively wide service network. The modernization market is currently giving strong positive signals, meaning that client's capacity utilization rates are on the rise. Glaston is aiming to grow its Services business further, and looking at the profitability level this seems like a no-brainer. We expect that the company will focus more in the services business in the future. Only downside is that these machines do not have compulsory maintenance like elevators or cranes. Therefore the value added has to be clear for all the customers.

Glaston's net sales divided to reporting segments (FY'12)



Source: Inderes

EBIT-% of the reporting segments (2008-2012)



Source: Inderes

3. Glaston in the global glass processing market

Glaston is a glass processing machine manufacturers that focuses on pre-processing and heat treatment in the glass processing industry. Glaston isn't involved in float processing, off-line coating or insulating.

Before we move further into Glaston and its business model, we open up the basics of the glass processing industry in general. Glaston is a glass processing machine manufacturer that is focused on pre-processing as well as heat treatment. Company has no presence in glass machines (float processing), where the actual glass is made. It also isn't in the first processing step, which is off-line coating.

Company has a variety of solutions to pre-processing of glass, but clearly the strongest area for Glaston is the heat treatment that includes thermal processing as well as laminating of the glass. Glaston isn't involved with insulating, the final step of the glass processing, but that's an area that it considers as an interesting opportunity for the company. Company also offers a variety of services in the selected areas mentioned above.

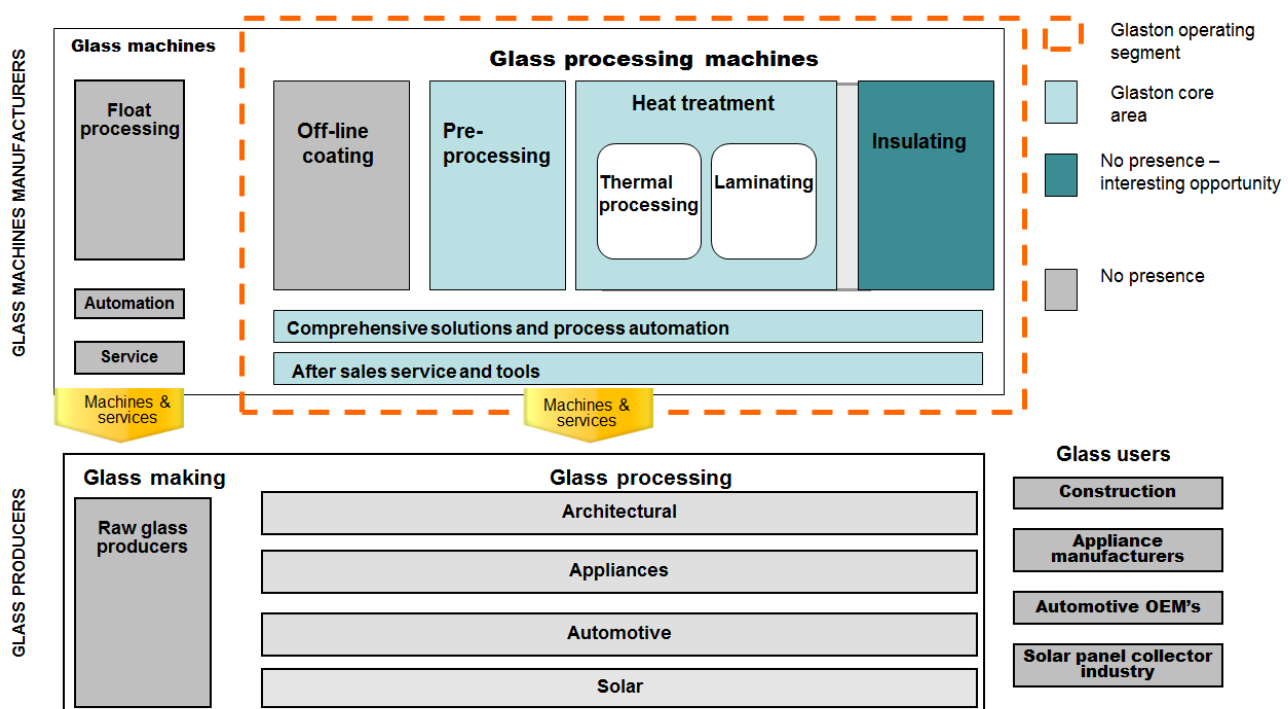
Glaston's market position is clearly the strongest in the technologically most advanced heat processing segment.

When thinking about the production chain of the high-quality glass, the heat processing is the part that adds most value and technologically the most advanced. This could be also considered the core business of Glaston.

The lower entry barriers of pre-processing segment have brought lots of price competition especially from Asia.

While pre-processing is also in the portfolio, there Glaston's market share is clearly lower and the competition is fierce. Pre-processing is an easier market to entry and lots of small companies, mostly Asian, have entered this market. At the same time they have pushed the prices down, making it challenging to Glaston to make solid earnings in this field.

Production of flat glass and Glaston's offering in the process



Source: Glaston investor materials

3.1. Basics of glass processing and future trends

The basic production process of flat glass was demonstrated in the picture above. We are not going to go into details, but we would like to point out some important factors that investors should understand.

The quality of glass varies significantly due to different types of glass and their end usages.

First of all, it's important to notice that there are a lot of differences in the quality of the end-product: not all the glass is the same. There are lots of differences between different types of glass and their end usages. To mention few important factors, there are a significant difference in the strength of the glass, its optical properties and behavior of glass when broken (safety). Also things like the environment effects and insulating features are becoming clearly more important.

The required functionality of the glass varies greatly depending on the usage of it, for example glass in skyscrapers vs. glass in third world countries.

Naturally the required functionality of the glass varies greatly depending on the usage of it. To give an example, there's a huge different between the architectural glass used in the world's tallest skyscrapers and the glass used in the third world countries, where pretty much anything goes. Of course the prices of these products are completely different.

The standards in the glass industry are relatively loose, and quality mostly derives through buyer requirements. Quality requirements of glass are slowly increasing.

The standards in the glass industry are relatively loose. This means that while there are standards for flat glass, safety glass etc. they are relatively easy to fulfill and there aren't exact specifications that different classes of glass. Therefore producers have their own brands that represent the different qualities also. However, the different requirements imposed by the governments and other agencies controlling for example construction are becoming tighter. This trend can be expected to continue and slowly increase the quality requirements of glass. One of the most important trends behind glass market for Glaston is the increasing demand of safety glass.

For Glaston the tighter requirements create a growth opportunity through its high quality solutions.

From Glaston's point of view these trends are all positive: the higher the quality and more features, the more glass needs processing. This naturally creates more demand for Glaston's processing machines.

Glaston is not a glass producer.

It's worth noting that Glaston is not a glass producer and it has nothing to do with the glass production. Glaston is involved in the glass processing chain, where the raw glass is a raw material.

3.2. Different usages of glass

Most of the produced glass is used by the construction industry: building products account for 80-85 % of the glass market

Most of the produced glass is used by the construction industry like one can image. Building products account for 80 % to 85 % of the glass market. The use of glass has expanded from mere window solutions to a whole new level. At its best, glass is a building material that offers high-tech solutions for buildings and creates added value for a building's overall appearance, effectiveness and environmental impact. This means that the demand of glass is expected to outstrip the growth of construction industry clearly in the future. However, it's clear that glass has to compete against other building materials for its "share of the cubic meters" used in the construction industry. This is an important competition for the whole industry.

Different refurbishment of existing buildings accounts for 40 % of glass consumption worldwide.

It's interesting to note that different refurbishment of existing buildings accounts for around 40 % of glass consumption worldwide. According to Glass for Europe, this is largely driven by the need for increased energy efficiency, where newer technologies in windows and glass facades provide significant improvements over older products. These additional sales are further increased by the fact that the newer, higher-tech building glass technologies represent higher-value products. Also, in the case of double-glazed windows replacing single-glazed units, new methods use roughly double the amount of glass.

Automotive and transportation industry accounts 15-20 % of the total glass market.

Of course a lot of glass is also used in the automotive and transportation industry, which accounts around 15-20 % of the total market. The outlook of the car industry isn't currently very attractive, due to weak economic situation, but over the long-term this is also a growth market.

Otherwise the biggest consumers of glass are the appliances and solar. Demand for solar-energy glass is growing.

Otherwise the biggest consumers of glass are the appliances and solar. Although the solar-energy application for flat glass is still relatively small in volume (< 5 % of flat glass volume), it is expected to grow steadily in the years to come. Solar power has been struggling after the financial crisis, but based on long-term outlook the demand will grow quickly. Solar power technology is developing quickly and becoming more and more competitive with the traditional power generation options. In the long-term the renewables must be gaining share and if the technological development continues, the growth is inevitable. According to some projections, solar-energy glass could represent over 10% of flat glass volume in a couple of years (Glass for Europe).

Glaston focuses on the high-end glass that is used in architectural glass, appliances, automotive and solar power.

These are the key areas currently. However, different applications of glass are invented all the time that also drives the demand. Glaston is focused on the high-end glass that is used in the fields like architectural glass, different appliances, automotive sector and solar power. In this chapter we are focusing on these areas and their future prospects.

Some references of glass made with Glaston's processing machines - Marina Bay Sands in Singapore



Source: EC3global.com

Some references of glass made with Glaston's processing machines



Source: Glaston's annual report 2010

3.3. Current market situation of the glass producers

For Glaston the high-quality glass users, e.g. architecture, automotive, appliances, and solar are the most important ones.

When thinking about the demand for glass processing machines, naturally the critical component is the demand of the end-products, meaning glass. For Glaston, the most important group is the producers of high-quality glass used in architecture (such as skyscrapers), automotive industry (safety glass for example in windshields, side- and backlites), different appliances, as well as solar power industry.

The key for Glaston is the capacity of high-quality producers compared to the demand of end-products.

The key for Glaston is the capacity of these producers compared to the demand of the end-products. When the capacity utilization rates are low, naturally there's no need for new investment in new processing machines that Glaston offers. Also the demand for services of Glaston correlate with the utilizations rates of its clients, though the demand is naturally more stable than with the new capital investments.

After the financial crisis the new investments of the glass producers have been extremely low due to weak construction demand.

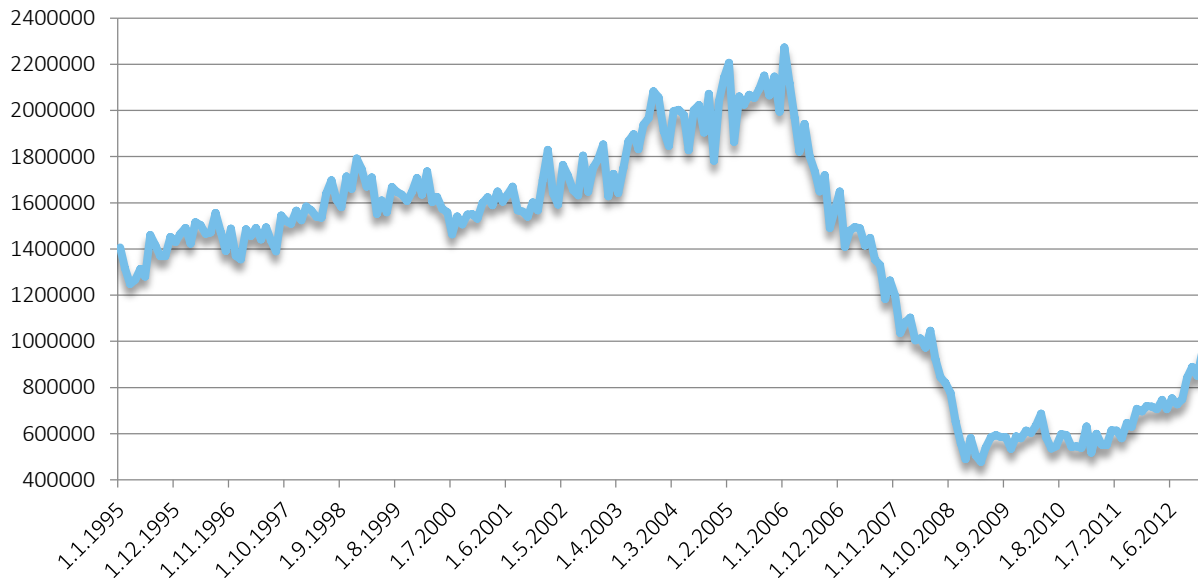
After the financial crisis the new investments of the glass producers have been extremely low especially in the Western markets. The biggest driver for the whole industry is the construction demand, and this sector was in horrible condition after the bubble in the real estate market in the United States was busted during the financial crises. Similarly the debt crisis hit the European market, and while the Asian market continued to support the global demand to some degree, the mass market there uses generally lower quality glass. Overall, the demand for Glaston's high-quality glass processing machines has been terrible in the past years.

Overall, the demand for Glaston's high-quality glass processing machines has been terrible in the past years.

Market condition is challenging but it's developing positively, especially in USA.

While the market condition still remains challenging, it seems that the market has bottomed out and demand seems to be picking up especially in the US. The real estate market there has been rising for few years with a moderate pace. Lately the momentum has been gathering speed and the activity of the construction industry is clearly picking up. Perhaps the best indicator for the increasing activity in the US housing market is the housing starts that have been trending up for two years now.

Housing starts in the US. give a good picture about the residential demand of construction industry



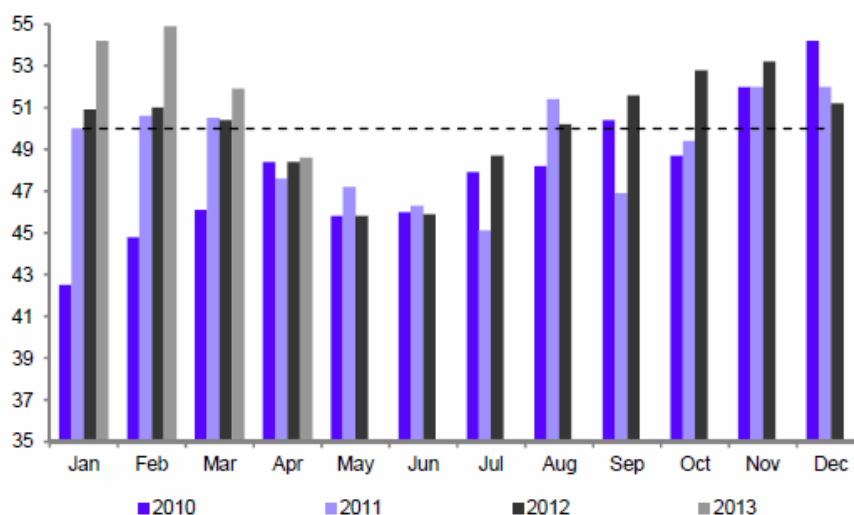
Source: Thomson Reuters

The demand of glass is reaching a satisfactory level. First the demand for services picked up in 2012 and currently we are seeing healthy demand for larger modernization projects. The next step should be capital investments to new machines.

While the boom years left a significant amount of overcapacity in the glass producing industry, the demand of glass seems to be reaching a level where the capacity utilization rates are at least satisfactory currently. This is also visible in the demand of Glaston: first the demand for services picked up in 2012 and currently we are seeing healthy demand for larger modernization projects (also reported in Services in Glaston). The next step would be capital investments to new machines. It's difficult to estimate when this level is reached, but currently the trend is clearly positive for Glaston.

The graph below, Architectural billings index, is giving a similar picture for the commercial buildings as the housing starts for the residential buildings. This market is even more important for Glaston, since generally higher quality glass is used more in the larger buildings.

Architectural billings index is a leading US economic indicator of demand for commercial and industrial building activity



Source: Deutsche Bank, AIA

3.4. Some of the biggest players in the industry

There are many giants in the glass producing industry, companies like Guardian, NSG Group, Saint-Gobain Glass and AGC Glass to name a few.

Unfortunately Glaston cannot name its clients directly, so it's impossible to know who their clients are or how significant they are for Glaston. However, all the large players are at least potential clients for Glaston.

The biggest and most important players in the glass producing industry are companies like Guardian, NSG Group, Saint-Gobain Glass and AGC Glass, just to name a few. Unfortunately Glaston cannot give information about its clients, so it's difficult to estimate the importance of specific companies for Glaston. However, following the leading companies one can get some kind of idea about the general development in the industry.

We believe that the companies mentioned above are a good place to start. Guardian is one of the world's largest manufacturers of float glass and fabricated glass products. Guardian employs 18,000 people and operates facilities throughout North America, Europe, South America, Asia, Africa and the Middle East.

Japanese NSG Group is also one of the world's leading manufacturers of glass and glazing systems in three major business areas; Building Products, Automotive and Technical Glass. It's also listed on the Tokyo Stock Exchange, meaning that there's a lot of relevant information available. AGC Glass is also one of the world's largest producers of flat glass. Saint-Gobain Glass states that it is the leading manufacturer of flat glass in Europe. Anyway, these are all significant players in the glass producing industry.

Some selected references - Petronas Twin Towers and Burj Dubai, highest building in the world



Sources: famouswonders.com and www.dubai-architecture.info

4. Glass market is expected to grow quickly due to strong drivers

Current market situation of glass producers is difficult due to overcapacity, but the long-term outlook is very positive. Demand for flat glass is expected to grow 7.1 % annually through 2016.

Even though the current market situation of glass producers is still difficult due to the overcapacity in most of the markets, the longer-term outlook of the industry is very positive. According to Freedonia industry market research report on world flat glass, the global demand will rise 7.1 % annually through 2016 to 9.2 billion square meters. In a continuation of the trend seen overall the last couple of decades, demand will easily outpace real gains in the global economy.

Global market value of flat glass is forecasted to exceed \$90 billion in 2016. Glaston sees the biggest growth potential in architectural glass.

According to Freedonia, the gains in the dominant building construction market will be driven by a significant acceleration in building construction activity. If the forecasted scenario materializes, the global market value of flat glass is forecast to exceed \$90 billion in 2016. Also Glaston sees the biggest growth potential in architectural glass, and the company expects demand for the processing machines that serve this segment to continue to grow in the coming years.

Growth drivers in glass markets are: greater use of glass, growing demand for technologically demanding glass applications, increasing environmental awareness as well as safety and regulations.

Demand for Glaston's glass processing machines will be driven in the long term by greater use of glass, growth in demand for technologically demanding glass applications, increasing environmental awareness as well as tightening of energy-consumption and safety regulations. Due to current overcapacity one cannot make a direct equitation mark on the demand of Glaston's machinery and the growth of the end-demand, but after the overcapacity is consumed the relation should be relatively straightforward. Naturally here we are discussing the overall market for glass processing machines, not the specific growth of Glaston, which naturally depends on market share as well as the structure of end-demand.

The most significant changes in the operating environment are the growth in emerging markets and growing demand for higher-quality glass.

According to Glaston, the most significant changes in the operating environment are related to two factors: growth has shifted towards emerging markets and demand is increasingly geared towards production technology that enables the manufacture of even higher-quality glass.

Glaston's glass processing machines have a long life-cycle, therefore the capacity changes slowly. Glaston's machines can last up to 20 years in production.

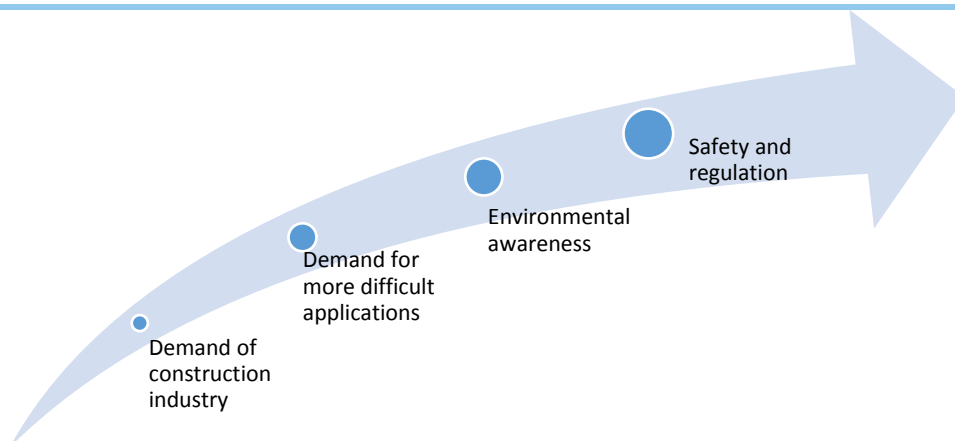
However, it's important to notice that the glass processing machines have a long life-cycle and Glaston's machines can last up to 20 years, which means the capacity changes slowly. Normal lifetime of a glass processing machine is naturally much less, but still relatively long. This makes the machines market somewhat smaller, unless there's a significant new innovation that brings the machinery into a new level. Naturally this is a rare occasion, and typically the development happens incrementally and takes time. In the other, the long-live cycle of glass processing machines offers possibilities to the services market in both maintenance and modernizations.

Expected growth of the glass processing market and its current situation (illustrative)



Source: Inderes

Drivers of the general glass market



Source: Inderes

4.1. Scattered market is facing consolidation pressure

The market of glass processing machines is very scattered, especially when it comes to pre-processing machines. Even the “large players” in the industry, such as Glaston, are relatively small.

One interesting and important factor regarding the glass processing machinery industry is that there are few larger players and a lot of really small ones. Even those “large players” such as Glaston are very small compared to the really large companies that generally dominate the industrial machinery markets. Especially the pre-processing market is scattered, and it’s very difficult to even determine what should be included in it and what part of the market is relevant for Glaston. We will look Glaston competitors in more detail later, but at this point it’s interesting to point out the sizes of these companies. Since there are plenty of players and most of them face profitability issues, there’s definitely consolidation pressure in the field.

Heat treatment is more like a typical developed market

Heat treatment machinery market is dominated by three larger players: Glaston (market share ~30 %), NorthGlass (~25 %) and LandGlass (~15 %).

Glaston has a market capitalization of around 66 MEUR with net sales of roughly 116 MEUR (FY'12). Since only Glaston and NorthGlass are listed, we'll use net sales to measure the size of a company. Glaston's worst competitor (in heat treatment) is NorthGlass, whose net sales in 2012 were around 85 MEUR, of which around 47 MEUR are derived from Glass tempering equipment business unit (comparable to heat treatment). LandGlass is already clearly smaller with the net sales of around 31 MEUR in 2011. These three companies basically dominate the heat treatment business area.

However, the rest is divided among many small players, meaning that roughly 25 % is in the hands of really small companies.

Glaston is the market leader with a market share of around 30 % (based on 2012 estimated figures). NorthGlass probably has around 25 % of the market and LandGlass probably has roughly 15 % share. Together these hold therefore hold around 70 % of the market, which makes heat treatment more like a typical market that is dominated by few larger players. After this there is Keraglass that probably has around 10 MEUR of net sales in this area. Based on this assumption, it would have a share of roughly 5 %. However, the rest is divided among many small players, meaning that roughly 25 % is in the hands of really small companies.

Pre-processing market is completely scattered

Pre-processing market is very difficult to analyze, because there's very little information available about the competitors as well as the market. This market is very scattered.

In pre-processing the situation is even more difficult to analyze, because competitors are typically parts of larger corporations or private companies where very little financial information is available. There are companies like Bystronic Glass, LiSEC, Bottero and Benteler Glass Processing, and naturally Glaston. But one thing is clear: the market is very scattered.

Glaston's market share in pre-processing is probably roughly 10 %. Bystronic Glass is estimated to be the market leader.

Glaston's market share in pre-processing is probably roughly 10 % with estimated net sales of 28 MEUR (FY'12). Bystronic Glass had net sales of 118 MEUR in 2012, but company's offering isn't only for this sector and it's difficult to say how much of the net sales are derived from pre-processing. However, we believe Bystronic to be a market leader and it's especially strong in European high-end market.

LiSEC is another key player in pre-processing. Company has a comprehensive portfolio of machines, software and services. Another strong competitor is Italian Bottero.

LiSEC is one of Glaston main competitors in pre-processing. Company has net sales of 136 MEUR (FY'11), but it has a comprehensive portfolio of machines, software and services. Since there's no detailed information about the net sales, it's challenging to assign a market share to LiSEC also. However, we believe it to be among the top names in pre-processing, most likely right after Bystronic. Another strong competitor is Italian Bottero, which has a wide selection in the pre-processing field. However, since Bottero is a private company, there's very little financial information available. Also there's Benteler Glass Processing that is also significant company especially in the high-end sector.

There is a huge amount of smaller players that together hold a significant share of the overall market.

While we have mentioned quite a few competitors and players in pre-processing, there is a huge amount of smaller players that together hold a significant share of the overall market.

Industry is in need of consolidation, but what will be Glaston role in it?

There's a huge amount of players in a relatively small market. Many of these companies have unsatisfactory profitability and there's definitely a significant pressure to consolidate in the sector. It's interesting to speculate what would be Glaston's role in the consolidation.

Glaston could make acquisition in pre-processing field, but we don't believe this to be an attractive area for the company.

We believe synergies between different business areas to be relatively small, though there's naturally some in the clientele. We believe that Glaston will first focus on improving its own competitiveness and profitability, but at the same time it's certainly keeping an eye for possible structural changes.

Another interesting possibility regarding M&A is the insulating segment. If a suitable target would appear with the right price, there could be an acquisition.

However, we believe that currently Glaston is focusing on improving its current portfolio and profitability. M&A activity will most likely increase again in the future.

Our point in this chapter is the following: there's a huge amount of players in a relatively small market. Many of these companies have unsatisfactory profitability, though there's little financial data available. While the scale-benefits aren't necessary massive in the industry, there's definitely a significant pressure to consolidate in the sector. Glaston's position is strong in heat treatment and the situation in this segment is generally more typical, meaning that there are few big players, like mentioned. Naturally this wouldn't exclude making small acquisitions in the area, but we don't believe this to be likely: Glaston should be able to grow organically in heat treatment, since it has the technological advantage, good position and brand. We believe that Glaston will continue to invest in its core asset, and develop it independently.

However, in pre-processing Glaston's position isn't a strong one. We believe that its market share in this segment is around 10 %, and while we cannot estimate the market shares of competitors with confidence, it's clear that Glaston is far from a market leader. There are probably at least three larger companies in this field, and there's a huge amount of smaller challengers. While this doesn't make the competitive situation attractive, it also opens up interesting opportunities in the M&A field.

Now that Glaston's balance sheet is on a solid foundation, we believe that company is also making strategic choices in the pre-processing field. When it comes to synergies between heat treatment and pre-processing, we believe them to be relatively small. We believe that Glaston will first focus on improving its own competitiveness and profitability, but at the same time it's certainly keeping an eye for possible structural changes. We wouldn't exclude either divestment of pre-processing, if a suitable buyer would come along, or acquisition to strengthen the position in pre-processing. One problem with the divestment is the significant goodwill associated with the pre-processing business; Glaston isn't excited about writing this down, so it might be difficult to agree on price of the business. Similarly on the acquisition side: since the outlook in this segment isn't that good-looking (fierce competition, low entry barrier and relatively small growth drivers), target should be very attractively priced to make acquisition a good option for Glaston.

Another interesting possibility regarding M&A is the insulating segment. Insulating has a solid growth driver in energy efficiency making its growth prospects quite attractive. We believe the synergies to be relatively small also here, but it would be an interesting addition to Glaston's offerings. Glaston has said that insulating is an "interesting opportunity", so if a suitable target would appear with the right price, there could be an acquisition. Glaston has been active in M&A historically and we believe this will continue, but currently company is probably focusing in "cleaning its own house" first. After a year or two, M&A activity will most likely increase again. Naturally there's also the price-component to consider, which might be relatively attractive in the current economic climate, but probably the best strategy is first get the "own house" in order.

5. Current size of Glaston's market

It is difficult to estimate the actual size of Glaston's market, but analyzing the annual investments glass manufacturers make into the manufacturing capacity (CAPEX) and maintenance and other services (OPEX) give a rough estimate.

When we are thinking about the size of Glaston's potential market, we have to look into the annual investments that glass manufacturers make into the manufacturing capacity. Naturally there's a new capacity investment market (CAPEX), which means practically new investments into machines that Glaston makes. Secondly there's naturally a services market, which means maintenance and other investments into maintaining the manufacturing capacity (OPEX). It's challenging to estimate the size of the either one of these, but it's extremely difficult when it comes to services market. Since majority of maintenance is done "in-house" by Glaston's clients, it's almost impossible to estimate how much money is used in it.

We believe the size of the market is around 1 billion euros annually. We believe that the CAPEX market of heat treatment of 200-300 MEUR and of pre-processing of 300 MEUR. The rest of the potential would be in services, though it's impossible to calculate.

We believe that the size of the market (both CAPEX and OPEX) is around 1 billion euros per annum, when it comes to the whole potential market of Glaston. This is naturally a very rough estimate, but should serve as a reasonable assumption. We'll focus on CAPEX market first. Glaston's strongest area is clearly the heat treatment segment. The size of this core market might be around 200-300 MEUR this year. Pre-processing, the other very important segment for Glaston, might be roughly 300 MEUR. Again, these are rough estimates, but we believe that they are in the right ball-park. In 2012, heat treatment market was probably around the lower end of the spectrum (roughly 200 MEUR) and also pre-processing was somewhat lower.

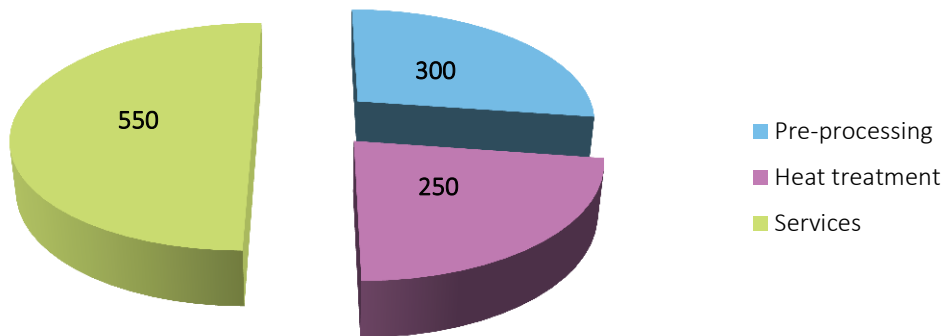
We estimate the potential services market to be a multiple of the CAPEX market, but this potential is impossible to reach.

While the typical analogy in industrial machinery is that the services market is roughly the same size than the capital expenditure, in Glaston's case it isn't the case. Since company's machines are generally very long-lasting and might work even 20 years if maintained properly, the potential services market might be a multiple of the CAPEX market. However, naturally this potential is impossible to reach fully.

In the following graph we have estimated the potential market size of services for Glaston to be around 550 MEUR.

While we believe that the theoretical services market is multiple times larger than the CAPEX market, in the following graph we have estimated the potential market size for services to be around 550 MEUR (same as the CAPEX market). There's a simple reasoning behind this: naturally capturing the whole theoretical market is impossible and even the potential market cannot be serviced by Glaston's resources. Therefore there's no point to overestimate the potential, which is great even if we consider the market size to be 550 MEUR. Anyway, it's important to understand that with services one shouldn't talk about market share when talking about the captured market. The market grows with company's own resources and capabilities, if a significant share is ever reached.

The size of Glaston's potential market (MEUR) – estimate 2012



Source: Inderes

5.1. Market share of Glaston

Glaston doesn't publish figures for pre-processing and heat treatment segments, hence we have to estimate them. As a foundation, we have used figures from 2008, when the segments were separate.

We estimate that heat treatment accounts 67 % of the net sales of Machines, and pre-processing 33 %. In Services the heat treatment is probably weighted even more due to the technological structure of the machines.

We estimate Glaston's market share to be 28 % in heat treatment, and 9 % in pre-processing. Since they are hardly conclusive, we believe they could be said roughly 30 % and 10 %. We estimate Glaston to capture 6 % of "the potential" services market.

We believe that Glaston has a huge opportunity in the Services segment.

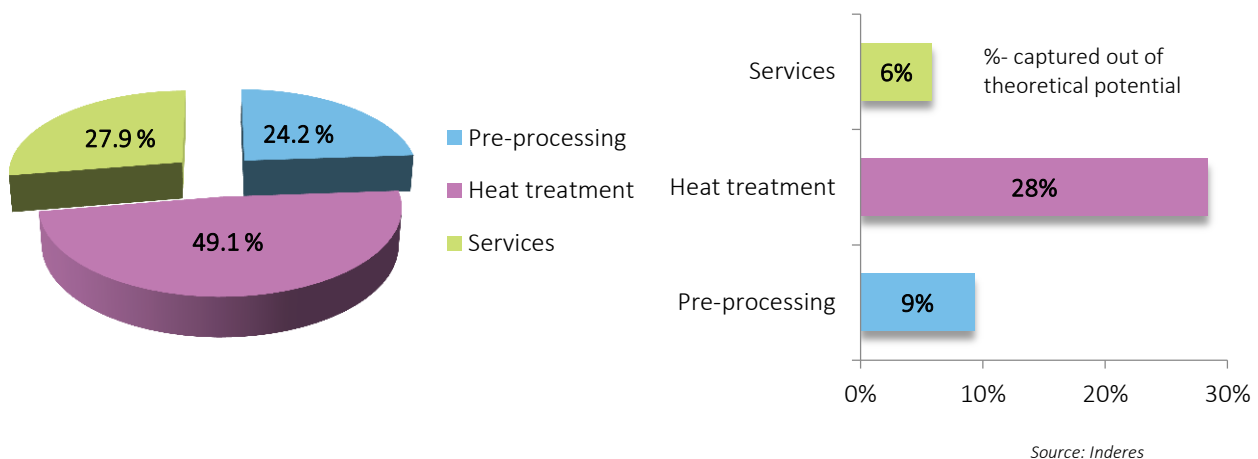
Glaston hasn't published any figures for pre-processing and heat treatment segments after it changed its reporting structure in 2009. Last full year figures were published for 2008. Therefore we have no knowledge about how the net sales divide to pre-processing or heat treatment machinery. However, we have attempted to give some rough figures for net sales, since there are big differences between these segments.

Since we don't have a better starting point, we have to go back to 2008 reporting. Back then the net sales of these divisions combined were 245 MEUR, of which pre-processing accounted for 37 % and heat treatment 63 %. Figures were similar also in 2007. We believe that Glaston's competitiveness is clearly better in heat treatment, and it might have been losing some of its share in the pre-processing market due to fierce competition arising from Asia. Based on these loose assumptions, we estimate that heat treatment might account for roughly 67 % (2/3) of the net sales of machines. Then pre-processing would be only 33 % (1/3). However, once again we must stress that these are estimates should be considered more as educated guesses than absolute truths.

If these figures are compared with the estimated market shares, Glaston's market share would be around 28 % in heat treatment and roughly 9 % in pre-processing. Since these are rough figures anyway, we would say that Glaston's market share are about 30 % and 10 %. When it comes to services, one cannot really discuss market share. Therefore it's better to talk about the amount that has been captured from the potential market, since the "competition" is mostly in-house. This would be only 6 % with the assumptions presented above.

Even though there's a great deal of uncertainty regarding the market sizes as well as the market shares, one thing is pretty clear: Glaston has a huge possibility in the Services segment. Currently only around 28 % of Glaston's net sales comes from services, even though company has a very large installed base. This is a major opportunity for the company.

Glaston's net sales divided in the segments and (theoretical) market share (MEUR)



5.2. Glaston's growth potential is even larger than the general market

The demand is shifting towards higher quality glass, where Glaston is at its best.

With the economic growth, the demand will most likely shift slowly towards higher quality (more processed) glass, which is positive for Glaston. Growth in the relative proportion of safety glass is also important drivers for Glaston. Safety glass use is expected to grow in future by several per cent per year. The main areas of use for safety glass are construction, the automotive industry, and the furnishing and appliance industry.

Demand for technologically demanding glass applications and energy glass is growing due to increased environmental awareness and tighter regulation.

Demand for technologically demanding glass applications is growing, and bigger sizes, bendability and thinness are being required of architectural glass. This naturally means more demand for the high-end machines that is the most important segment for Glaston. In addition, increasing environmental awareness and tighter regulations means that energy-saving targets are growing; this impacts on the demand of energy glass. Various safety regulations in construction are also contributing to growing use of safety and laminated glass.

Fabricated flat glass demand benefits from rapid growth in sales of energy efficient products. Flat glass market in solar energy applications is still a niche market when looking at the big picture.

Freedonia's latest report forecasts that the fabricated flat glass demand will benefit from rapid growth in sales of energy efficient products such as solar control, insulation, and low-E glass. The solar energy market, which was hurt by recent global economic weaknesses, will take off briskly once again. It should be noted, however, that demand for flat glass used in solar energy applications totaled just around 120 million square meters in 2011, so this is a niche market for now.

Glaston expects solar energy glass applications to offer significant growth opportunity.

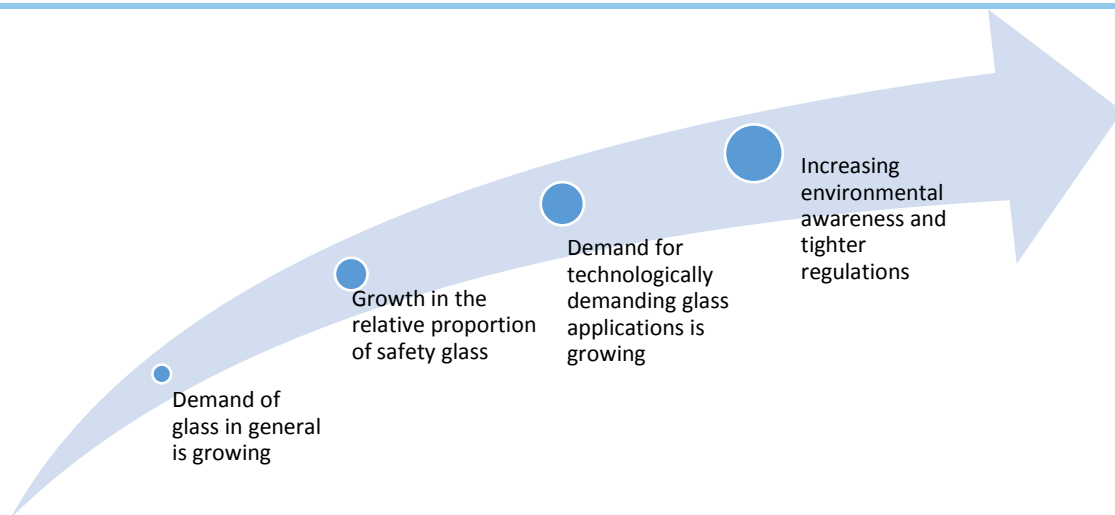
Glaston expects the demand for glass used in solar energy glass applications, and therefore demand for glass processing machines serving the solar energy segment, to offer significant growth potential for the company in the future. Greater use of solar energy is being supported by growing environmental awareness, the effort to reduce dependence on non-renewable energy sources, and by technological development that leads to cost factors. The

price level of solar energy relative to non-renewable energy sources will play an important role in spreading solar energy use and, in this, the development of technology used in the production of solar energy will also be important.

Production of flat glass is projected to reach 75.4 million metric tons in 2016 of which 70 million metric tons is high-quality float glass.

Production of flat glass is projected to reach 75.4 million metric tons in 2016, of which close to 70 million metric tons will be high-quality float glass. The remainder will consist of low-quality float glass produced primarily in China, as well as sheet glass and rolled glass. In general the following is true: the higher processing value of the product, the better for Glaston. Due to this, one might expect Glaston demand to grow faster than the market in general, provided that company will be able to maintain its market share.

Key market drivers for Glaston



Source: Inderes

5.3. Geographical markets

Glaston divides its market areas into EMEA, America and Asia. Since transporting glass is uneconomical, glass processing is usually centralized close to its market.

Glaston has divided its market areas into EMEA, America, and Asia. Though all the areas have their own individual factors, Glaston offering is pretty similar in all the areas. It's important to notice that glass products are difficult to transport, since they are both easy to break and relatively heavy. Since transporting glass is uneconomical, glass processing is usually centralized close to its market, which makes the following of different areas also important. Glaston has production in three different continents, and it's truly a global company, which is visible in the relatively equal distribution of its net sales.

EMEA

Glaston has strong market position in Europe, and EMEA generates 42 % of Glaston's net sales. Demand for flat glass is growing slightly in Western Europe.

Glaston's market area EMEA consists of Western, Central and Eastern Europe, Africa, the Middle East, Russia and other CIS countries. The company's market position in Europe is strong, and EMEA is still Glaston's most significant market area. In 2012, it generated approximately 42 % of Glaston's net sales. Even though EMEA's situation is currently poor at least considering new investments to capacity, demand growth in the area is expected to be boosted in the longer term by larger glass sizes used in buildings and a tightening of energy efficiency requirements as well as by stricter building regulations and higher production efficiency requirements.

Demand for flat glass in Western Europe is expected to experience modest gains according to Freedonia. A slow growing population, combined with a stagnant motor vehicle industry, will limit growth. A number of float glass plants in the region closed in 2012, suggesting that major glassmakers are shifting focus elsewhere.

America - North America

America represents 36 % of total revenue.

America's share of the company's total revenue was approximately 36 % in 2012. America's can be divided into two parts: North and South.

Sales drivers in the USA and Canada are energy efficiency, safety and local building regulations in public construction.

The North American area consists of the USA, Canada and Mexico. As markets, the USA and Canada do not really differ from each other, but Mexico is still behind them in terms of economic development. In the USA and Canada, the most significant factors driving sales are energy efficiency, safety and local building regulations in public construction. Due to production efficiency requirements, Glaston's maintenance and service offering occupies a key position in the area. In 2012, there were indications of a revival of the North American market, with particular growth of demand for machine upgrade and modernization products. In 2013 these positive indicators are getting stronger and we are expecting also some capacity orders from the area during the year.

US market is expected to recover strongly due to improvements in outlook of

Freedonia expects the US market for flat glass to recover strongly based on a healthy rebound in the country's building construction sector, which we

building construction sector.

already shortly discussed. Building construction spending in the US in 2011 was just a little over one half of levels seen in 2006. Despite positive economic growth in 2010 and 2011 after a major recession, US building construction witnessed further declines in both those years. However, some recovery occurred in 2012, and it appears that the worst is over.

America - South America

South American business is divided into three subareas with different features and outlook. Overall South America's rapidly developing market provides growth opportunities.

Glaston's South America area is divided into three subareas: in Brazil the market is well developed and competitive; old, less developed markets (Argentina, Chile, Colombia, Peru, Venezuela and Ecuador) together represent great market potential for Glaston; Paraguay, Bolivia, Uruguay and other smaller countries as well as the Caribbean market, on the other hand, as still rather undeveloped. South America is a rapidly developing market area. Stable inflation and an improvement in end-customers' financing possibilities have promoted economic growth in South America, which also supports development of the glass processing sector. The significance of service and maintenance business is continually growing in South America.

Asia's key is China

Glaston's focus in Asia is on China, which consumes more than 50 % of all glass produced. Asia generates 22 % of Glaston's total revenue.

The use of glass and particularly high quality, processed glass is expanding in developing markets, such as Asia. China is clearly the most significant market in North Asia, where companies are also building new production capacity the most. China is also the only market that Glaston really focuses in Asia, through the area consumes more than half of all glass produced. Asia's share of the company's total revenue was 22 % in 2012.

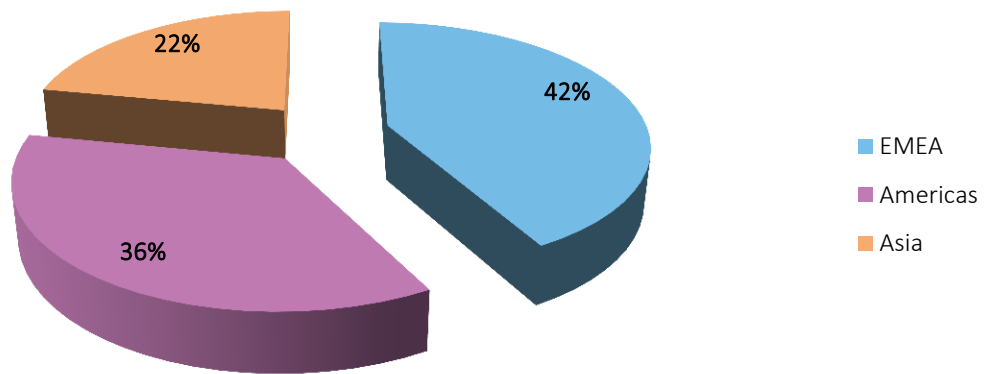
The growth potential is significant in Asia, but the competition is tough. Local competitors are very cost-effective, making Asia a challenging market for Glaston especially in the low-and mid-segments.

Significant growth potential lies in Asia, where the need for glass is increasing more rapidly due to booming construction, the increased use of solar power, and the recovery of the automotive industry. The Asia/Pacific region, which accounted for 60 % of global flat glass demand (on a square meter basis) in 2011, will continue to post the fastest gains through 2016 according to Freedonia. Gains in China, the region's dominant national market, will slow in comparison to the pace of the 2006-2011 period, but remain well above the world average.

Demand in Japan is expected to improve significantly, based on recovering domestic building construction and motor vehicle markets. While Japan holds some potential, Glaston has only limited operations in the country currently - Glaston has an "APAC" office taking care of the rest of the area excluding China. However, if the demand increases, a sales office is relatively easy to setup.

Glaston's production facility in China enables the production of competitive products for the local market, but the competition in China and Asia is generally very tough. Local competitors are very cost-effective, making Asia a challenging market for Glaston especially in the low-and mid-segments.

Glaston's geographical sales mix



Source: Company reports / Inderes

6. Strategy and competitive edge

Growing demand of processed glass gives a solid foundation for Glaston.

Like discussed above, the demand of processed glass is expected to grow with a fast pace in the future and the sectors overall outlook is solid. Naturally this gives a solid foundation for Glaston, but eventually everything comes down to the competitiveness of Glaston's products and services. In this chapter we are focusing on Glaston's strategy and competitive edge against the competitors.

Glaston's strategy is to be the most esteemed partner for lifecycle solutions in glass processing.

In its strategy Glaston seeks to be the most esteemed partner for lifecycle solutions in glass processing. According to Glaston, continuous product and operational development, which seek to create a sustainable competitive edge for the company and added value for the customers, form the heart of company's strategy.

Glaston's competitive advantages are technological expertise, global presence, extensive product range and comprehensive service network.

Glaston says that its competitive advantages are technological expertise, global presence, extensive product range and comprehensive service network close to the customer. Company also aims to utilize its strong market position and expertise. We will be cautious when talking about the technological advantage that company has, because this could be lost through innovations of competitors. However, when we combine the current strengths with the scale of the company, we believe they should be relatively sustainable over the mid-term. We have concluded our view of the competitive edge later.

Glaston's competitive edge is built around superior technology

Competitive edge is built around superior technology and continuing investments into R&D.

Glaston competitive edge is largely build around the technological leadership and continues R&D investments. While we acknowledge Glaston as the technological leader in the business area, especially in heat treatment, we don't believe that this is a really sustainable competitive edge. However, it might be maintainable competitive advantage, if competitive situation doesn't significantly change. After all, Glaston's R&D investments are larger than competitors, so if they are efficiently used, it might give a reasonable advantage to Glaston.

R&D investments have been continuing despite the crisis, and they have been around 5 MEUR in recent years.

Company has been investing roughly 5 million euros annually into R&D even through the crisis, which gives company a significant edge over the competitors. In 2012 R&D expenditure was 5.3 MEUR (continuing operations) and in 2011 it was 5.0 MEUR. Here Glaston deserves some credit, because R&D activity is often one of the first places to cut when company faces financial distress. Glaston was able to invest into R&D through the crisis, and currently its offering is more competitive than going into the crisis.

It is very difficult to compare R&D spending between competitors.

Unfortunately it's almost impossible to conclusive compare Glaston's R&D spending to its competitors. First of all, very few figures are available from the competitors. Secondly, companies operate in different areas and allocating R&D investments into relevant segments cannot be done. Still, we believe that is relatively safe to assume that Glaston's R&D spending is at least one of the biggest ones in the industry. This scale makes the advantage meaningful, even though it cannot be called sustainable.

Glaston's products are top class in quality and reliability

Glaston has launched new products with a reasonable good success. Products launched during the last two years accounted for more than 50 % of Glaston's sales in 2012. There have been very interesting new innovations coming to markets.

Glaston has been able to launch new products with a reasonable good success, which means that the investment into R&D have also been paying off. Products launched during the last two years accounted for more than 50% of Glaston's sales in 2012. It's very interesting to see how the flagship machines like Glaston FC500, RC200 and the completely new RC350 succeed, when the demand for new capacity rises back to normalized levels. With few capacity investments, it's difficult to estimate how customers eventually value the new machines, their features and especially how willing they are to pay for them. In 2012 company introduced also two interesting innovations to the market: GlastonAir and IriControl.

Glaston's machines are top of the class both technologically and in reliability

Owing to Glaston's long-term experience, company's machines are top of the class both technologically and in terms of reliability. Glaston's products are very competitive in these areas. However, it's important to understand that the best available technology isn't necessary always a lucrative business model. Glaston also has to be competitive in pricing that might be its weakness especially against the Chinese competitors. The key issues to understand here are the customers value added, the critical factors in their decision making as well as the willingness to pay.

Key drivers of glass processing machine product development are: increasing energy efficiency, requirements for glass processing, optical quality, and increasing size of glass surfaces.

Glaston's customers operate in markets where the special requirements and characteristics of glass are continually developing and the production efficiency requirements are growing. According to Glaston, the key drivers of glass processing machine product development are 1) increasing the energy efficiency of glass, 2) the requirements for glass processing set by various coatings, 3) improving the optical quality of glass, and 4) the increasing size of glass surfaces. At the same time, it is essential for Glaston's clients that glass can be processed faster and more cost-effectively than before. In addition, enhancing the energy consumption of glass processing machines is one of the factors influencing Glaston's product development.

Through R&D Glaston also develops existing features of machines.

Glaston's objective through the R&D investments, in addition to new product launches, is to develop existing features of machines. Company's goal is to make products more reliable and to facilitate the addition of new features to machines already delivered. Glass processing machines have a long life-cycle of up to 20 years, which means that the possibility of adding new features is essential for maintaining the customer's competitiveness: advanced features can be used to increase, in an energy efficient way, a machine's capacity and newest technological features, ensure trouble-free process control, and even promote the machine's maintenance and serviceability according to Glaston.

Big fish in a small pond – Glaston is strong in the selected areas

Despite its relatively small size, Glaston is a leader in many of its niches.

Glaston is a relatively small for a listed company, but it's still a leader in many of its niches. It is large enough to have a global presence, extensive product range and comprehensive service network close to the customer, which is rare in the fragmented glass processing machines market. Due to this, Glaston's size distinguishes it from the other operators in the sector. Glaston

has long traditions in the field and strong expertise – one of the key factors in the success of the Glaston is how well company can utilize these advantages.

We emphasize that the technological leadership can be maintained only through the scale and size benefits, and efficient R&D investments.

In the following graph we have summarized the key aspects of Glaston competitive edge as we see them. We like to stress once more that the technological leadership can be maintained only through the scale and size benefits, that Glaston currently has over its competitors, and efficient R&D investments. It also requires defending the patents aggressively against competitors, one factor that we'll talk more in chapter Risks.

Brand of Glaston

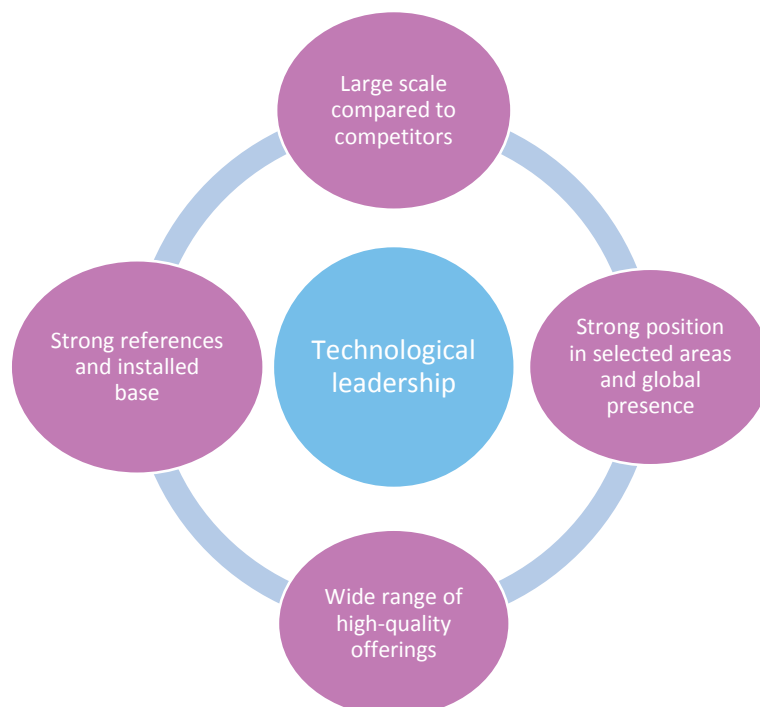
Glaston's brand is appreciated and well-known among the industry.

For an average investor Glaston's brand probably isn't well-known, but it is appreciated in the glass processing business. In 2012 Glaston made a survey, which showed that the Glaston brand is both appreciated as well as well-known among the industry. This also played a part in focusing solely in the Glaston brand. Before 2012 Glaston still had also brands Bavelloni, Tamglass and Uniglass in different product groups.

We don't consider brand as a relevant competitive edge since the role of brand is small in professional procurement.

Now all the products are sold under the Glaston brand. Naturally a strong brand is important for any company, and Glaston brand gives company some advantage in the competition. However, the role of brand is completely different between professional procurement and consumer purchasing. When the buyers are professionals, eventually the role of brand is relatively small, which is why we don't consider this to be a very relevant competitive edge. The best test for the strength of a brand, in the eyes of investors, is the pricing power of a company. In Glaston's case we don't see this to be very strong.

Competitive edge of Glaston – view of Inderes



Source: Inderes

7. Machines business segment

Glaston focuses on pre-processing and heat treatment in glass processing industry.

Glaston focuses on pre-processing and heat treatment in the glass processing industry. In order to analyze company's situation further, we have to separate these two segments. This is necessary since both the machinery, competition and Glaston's competitiveness is very different in the two segments. However, there are naturally some similarities also, and first we will go through them.

Machines business is a volume business, since the amount of fixed costs is high.

Machines business is very much a volume business: even though Glaston has been transforming its production towards more flexibility, there will always be a significant amount of fixed costs. The gross margin cannot rise significantly over 30 % without a significant competitive edge, which practically means that there has to be healthy volumes in order to make money. After the financial crisis the volumes have been low and Machines business has been lossmaking ever since 2008. Now Glaston has finally been able to reduce its cost-structure to match the demand. This means that if the volumes do pickup, the operational leverage of machines business should be significant. The graph on the next clearly demonstrated that the sector is operationally geared and Glaston's leverage is one of the highest.

Machines business has been lossmaking since 2008 but Glaston has been able to improve its cost-structure recently.

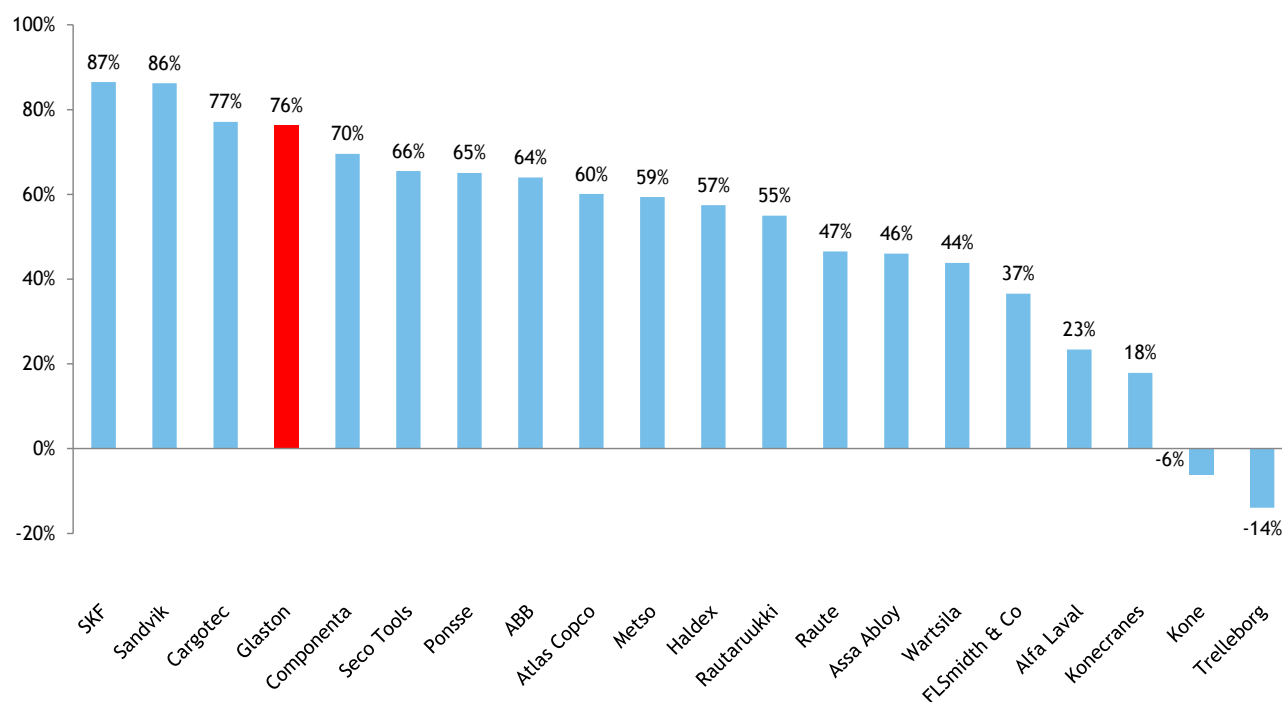
Order backlog is relatively low: 39.4 MEUR in the end of Q1'13.

Machines business naturally has an order book, which is relatively short when it comes to Glaston. For example in the end of Q1'13 Glaston's order backlog was 39.4 MEUR, while company annual net sales are around 115 MEUR. This means that order book currently gives a buffer of only little more than one quarter. Of course, in real life there are some longer projects while some of the sales turnaround already inside one quarter (especially in services). This means that the current order backlog gives reasonable good visibility for the next half a year, but after that the visibility is poor and uncertainty high.

Glaston has succeeded in shortening the delivery time of basic tempering machines.

It's also worth noting that in the summer of 2012, Glaston initiated production line development work which, by the end of the year, succeeded in shortening the delivery time of basic tempering machines from around six months to around 15 weeks. This gives Glaston an important advantage, when the demand eventually increases.

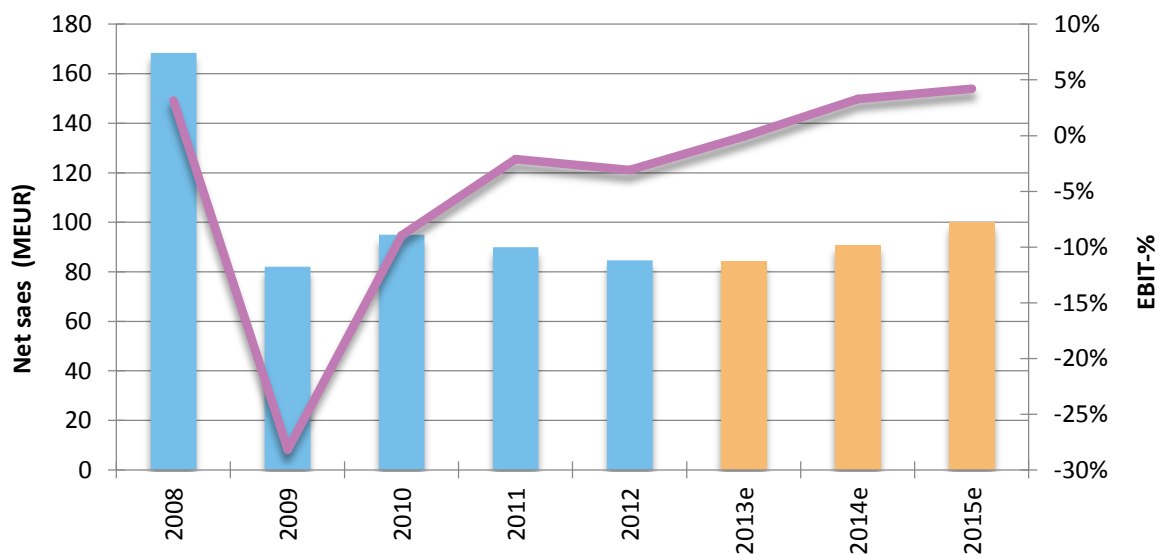
Sales growth correlation with EBIT % margin show the operational leverage of Glaston



Note: Calculated based on annual revenue and EBIT data (2002-2012)

Source: Factset

Machines segment's net sales and EBIT-%



Source: Inderes

7.1. Heat treatment

Heat treatment is the most important segment for Glaston.

Heat treatment is the most important segment for Glaston. This is where it has the largest lead in technology, market share and expertise. The technology is more advantaged in this segment, which means that the entry barrier for heat treatment business is relatively high and R&D work is critical.

Glaston's strongest area in heat processing is flat tempering.

Heat processing could be further divided to (flat) tempering, bending and (flat) laminating. Glaston's strongest area is flat tempering, which also includes its most important products FC500 (top-of-the-line) and RC200 (high-quality but competitively priced).

Heat treatment machinery is a small niche market with annual CAPEX market of 250-300 MEUR.

Heat treatment machines is a small niche market; the size of its annual CAPEX market is normally probably around 250-300 MEUR. We have estimated that roughly 2/3 of Glaston's net sales come from heat treatment, but this should be considered with extreme prejudice, since there is no reliable data available. We also believe that heat treatment machines business is profitable for Glaston even in the current poor market environment. Unfortunately these positive results are pushed down by losses in the other machines segment, pre-processing.

Larger entry barrier has kept the smaller companies away. Glaston succeeds in the high-end market, but Chinese dominate more price-sensitive lower classes.

The larger entry barrier has also kept the smaller companies away from the sector. If we simplify in some degree, Glaston has only two main competitors in heat treatment. These are both Chinese: NorthGlass and LandGlass. Glaston has competitive advantage over the technology and competence, but the Chinese are very competitive when it comes to prices. Therefore Glaston is generally the choice of clients that thrive through quality of glass, while the price-sensitive clients are more difficult for Glaston. Glaston is successful in the high-end market, but the Chinese dominate the lower classes (both middle and low). Glaston is staying away from the low-end of the market, where it wouldn't be competitive anyway.

7.2. Pre-processing

Pre-processing machinery market is more challenging due to fierce competition and lower entry barriers.

The pre-processing machine market is more challenging for Glaston for many reasons. First of all, competition in the segment is fierce and there are plenty of small, mostly local competitors. This is probably due to relatively low entry barrier; the key areas such as cutting, grinding, and drilling do not require such a specific knowledge in glass processing than heat treatment processes.

In pre-processing market price is even more important criteria than quality, since the "value added" is somewhat lower than in heat treatment.

While pre-processing is very important part of the glass processing chain, it's not the most critical when it comes to quality and value added. This means that there's a lot of "good enough" offering and also demand. For Glaston that is focused in the high segment always, this is a difficult market. Glaston is generally not competitive, when the decisive criterion is price.

We believe the pre-processing CAPEX to be 300 MEUR, and Glaston's market share to be less than 10 %.

If you go further into pre-processing area, we find that its key areas are cutting, grinding, bevelling, drilling and CNC. We believe that the pre-

processing CAPEX is roughly 300 MEUR market annually. We have estimated that around 1/3 of Glaston's machines net sales comes from this area; however, the uncertainty regarding the estimate is very high. Anyway, we believe that Glaston market share is little less than 10 %, which means that this market doesn't give company size or scale benefits.

We estimate the pre-processing machines business to be currently lossmaking.

We believe that the pre-processing machines business is currently lossmaking; Glaston's competitive edge in this area is currently relatively weak and the market situation is challenging. However, Glaston has launched new products also to the pre-processing area that could change the situation to better. The most important new products areas are the Glaston Hiyon straight line edgers and the XtraEdge double-edgers that were both "particularly well received" in the market according to Glaston.

Top competitors in pre-processing are mostly European companies, but there are plenty of challengers coming from Asia.

Main competitors in pre-processing are mostly European companies: LISEC, Bystronic (part of Conzetta), Intermac and Bottero. In the US there are also more local competitors. In addition to the large companies, there's a great deal of smaller challengers coming especially from Asia that have kept the price competition very tough.

Note that Services business segment is covered in the next page.

Basic information about the operating areas of Glaston Machines

	Business areas			
	Machines		Services *	
	Heat Treatment	Pre-Processing	Heat Treatment	Pre-Processing
Estimated market size	250 M€	300 M€	Potential 300 M€	Potential 250 M€
Estimated market share of Glaston	30 %	10 %	Insignificant	Insignificant
Estimated share of net sales	67 %	33 %	70 %	30 %
Technological level	High	Moderate	High	Moderate
Glaston's competitive edge	Solid	Moderate	Solid	Weak in most areas
Competitive situation	Few competitors	Fierce	In-house	In-house
Estimated profitability	Reasonable good	Lossmaking	Excellent	Reasonable good

Source: Inderes

8. Services business segment

Services business has great growth potential. Main competitor is customers' in-house maintenance.

Services business area is perhaps the most interesting for us. We believe it holds great potential, but so far only a small share of this has been captured. Services could be divided further into the heat treatment and pre-processing areas, but we won't do this in much detail. When it comes to services, the competitive situation is quite similar regardless of the area. The pressure coming from "outside" competitors is currently low, and the main competitor is clearly customers' in-house maintenance. For example the Chinese NorthGlass and LandGlass are currently focused on selling the machines, not the life-cycle solutions that we believe is the future also in this industry.

There are some significant different between services in heat treatment and pre-processing. We believe that heat treatment is clearly more attractive area also in services business when it comes to different opportunities, and it probably has better profitability also.

However, there are some significant different between services in heat treatment and pre-processing. First of all, the technological level as well as the price of the machines is completely different. This means that Glaston has much more opportunities for services outsourcing in heat treatment, since it typically has superior expertise in heat treatment area. This is true only to certain degree in the pre-processing area, where some of the machines can be very simple. Therefore we believe that heat treatment is clearly more attractive area also in services business, and it probably has better profitability also. Another thing is the consulting of clients; it's most likely very much focused in the heat treatment area.

Glaston has productized services (Glaston Care) and is moving towards serving customers with annual contracts, but the longer journey is in its first steps.

Glaston is taking the right steps in the services business; it has productized services (Glaston Care) and is moving towards serving customers with annual contracts. Still, compared to other industrials like Kone, Metso and Konecranes, its services business is still very much inadequate. Majority of the industrial companies have been focusing into services heavily in the past years, some even decades, and many have over 50 % of their net sales coming from services. So far Glaston hasn't been able to convince many clients that it has the best knowledge of the machines that it has provided, and of how they should be run. However, it's only fair to point out that in glass processing machinery there isn't any compulsory maintenance such as in elevators or cranes, so the markets potential is much harder to dig out.

Glaston has the widest customer service network of the industry with over 20 service offices. This is a significant competitive edge especially when thinking about the Chinese competitors in heat treatment.

In the Services business Glaston has over 20 service offices, which means that it has the widest customer service network of the industry, both geographically and as far as the number of personnel is concerned. This is a significant competitive edge especially when thinking about the Chinese competitors in heat treatment. NorthGlass and LandGlass are both far behind Glaston in this matter. The Services segment also provides the most extensive service range in the field and covers the whole span of the product life-cycle. The wide coverage both geographically and life-cycle should give Glaston a good possibility to separate itself from the competitors, if outside pressure were to arise. Service networks are expensive to create, especially without wide installed base.

Key competitive advantages are products, expertise of the personnel, and wide coverage.

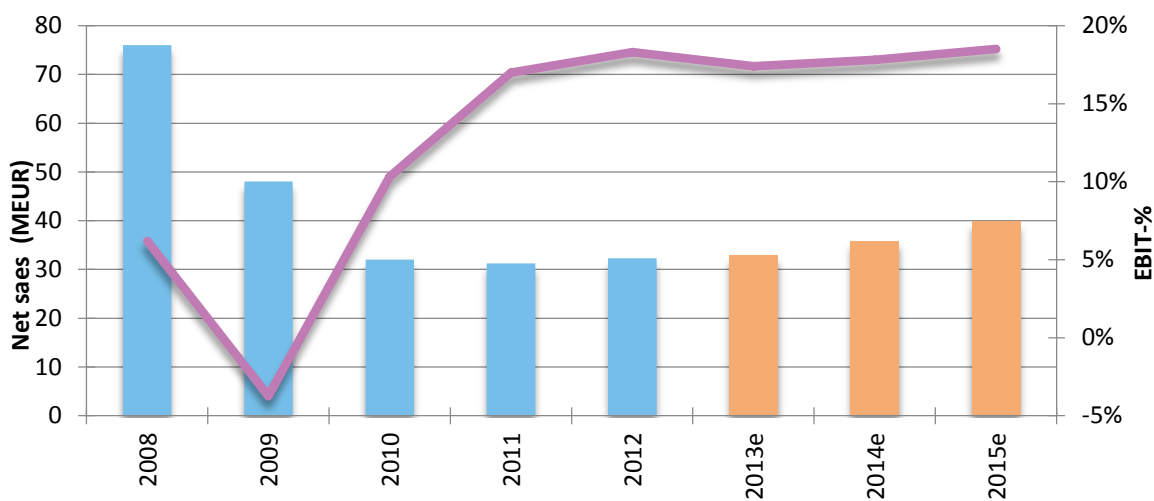
According to Glaston, the key competitive advantages of the segment are products and the expertise of the personnel. Since these are based on the know-how and technology of the primary machine supplier, we see no reason

to disagree. However, we would raise the above mentioned wide coverage to even more important role when thinking about the possible future development.

Services generate only 25 % of the total net sales, while we believe the potential to be much larger.

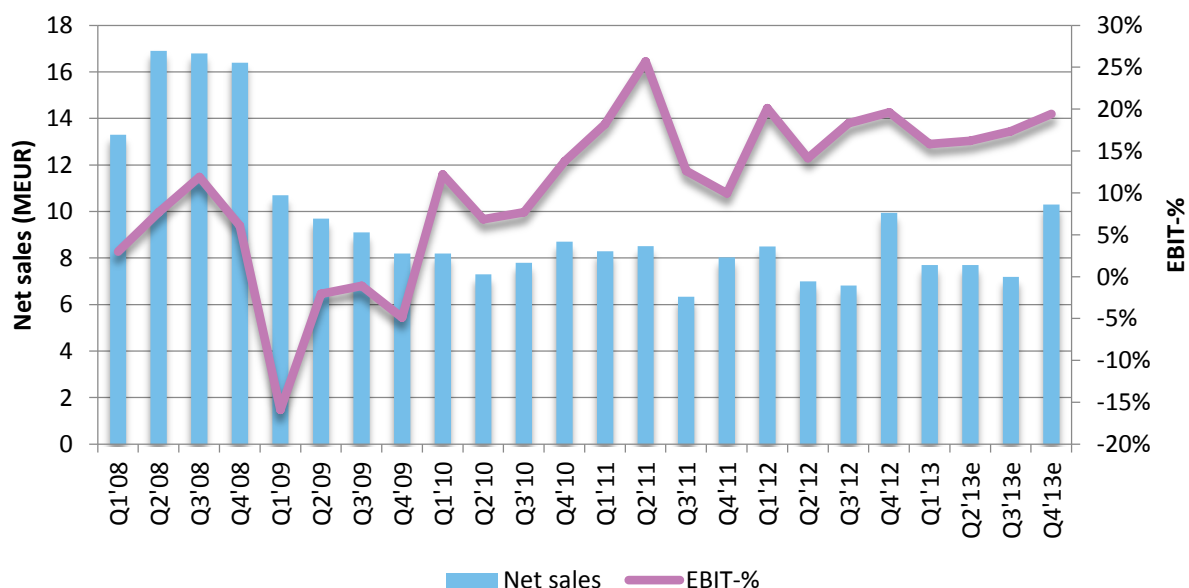
Considering the wide services offering of Glaston, its massive installed base, long-life cycle of glass machines and good profitability of Services business, one would think that this business area would be critical for Glaston. Still, Services business area's net sales are only around 1/4 of the total net sales. This is disappointing for us, since many companies with relatively similar setup have roughly half of their net sales deriving from services. Naturally this is also a great possibility for the company, if it can find growth in the area.

Services segment's net sales and EBIT-% on annual level



Source: Inderes

Services segment's net sales and EBIT-% on quarterly level



Source: Inderes

9. Competitive situation

Glass technology market is fragmented and Glaston has many competitors.

The glass technology market is still fragmented and Glaston has many competitors. However, due to the challenging market situation, consolidation has accelerated in recent years.

Most significant competitors in the Machines segment are from Europe, China and Taiwan. Glaston competes through its quality, comprehensive service offering, and local presence.

Glaston's most significant competitors in the Machines business area are from Italy or elsewhere in Europe, as well as from China and Taiwan. Chinese competitors are gradually also entering Europe and North America, but for now they are strongest in their home market. The Chinese operators have brought price competition along with them. Glaston strives to compete with the technological quality of its products, its comprehensive service offering and by being geographically close to its customers.

Top competitor in the Services segment is customers' own maintenance.

Glaston's most significant competitor within the Services segment is each customer's own service personnel. Especially the basic maintenance of the machines and appliances is a difficult area.

Some of the main competitors of Glaston and their basic information

Company	Country	Market Cap	Products	Main market areas
		€ 66	Glass processing products and solutions for Architecture, Solar, Automotive, and other purpose	Glaston's main marktes are: EMEA 42% Americas 36% Asia 22%
		€ 284	Products include e.g. flat and bent glass tempering systems and deep-processing glass products	Products are sold widely in China and in more than 50 countries around the world
		NA	Flat and bent tempered glass products for e.g. architectures, automobiles and solar energy industries	Customers all over the worlds while China is the main market
		NA	Solutions to the production and refinement of flat glass. Including machines, software and service	Worldwide presence
		NA	Machinery and systems for the economical processing of flat glass	Worldwide presence. Europe and Asia as the most significant markets

9.1. Main competitors

It is challenging to compare Glaston with its competitors since they have different business areas, and most of them are held privately.

Glaston's main competitors differ from business areas and unfortunately there are no good companies to compare Glaston with. The only Glaston's competitor that is listed on a stock exchange, and therefore provides also financial information to the markets, is Northglass. Chinese Northglass is a significant competitor in the area of heat treatment machines especially in Asia, but its valuation is quite outrages due to listing in China.

LandGlass is somewhat similar to Northglass, but not listed and there's hardly any information available for the company. In Europe Glaston's competitors are LiSEC, Bystronic (business unit of Conzzeta group), Intermac (part of Biesse Group) and Bottero.

Main competitors summary table

	Business areas		
	Machines		Services *
	Heat Treatment	Pre-Processing	
Northglass	X	-	-
LandGlass	X	-	-
LiSEC	-	X	x
Bystronic	-	X	x
Intermac	-	X	x
Bottero	-	X	x
* Clearly the biggest "competitor" in services in in-house.			

Source: Inderes

Northglass

Chinese Northglass is the main competitor in heat treatment business area.

Luoyang North Glass Technology ("Northglass") is Glaston's main competitor when it comes to glass tempering furnaces or much discussed heat treatment. Northglass designs and manufactures glass deep-processing technologies and equipment in China and internationally. Its products include flat and bent glass tempering systems, coating glass systems, horizontal coating machines and deep-processing glass products, including insulated glass, tempered glass, laminated glass, and Low-E coated glass.

Northglass was founded in 1995 and it has currently versatile product portfolio.

The company also provides compound glass products, such as tempered hollow glass and energy-saving Low-E coated insulated glass. In addition, it offers flat spotless tempered glass, fireproof glass, laminated glass, screen printing glass, and half-tempered glass. The company was founded in 1995 and is based in Luoyang, China.

Northglass is listed on the stock exchange in China, but due to its really high

Northglass is listed on the stock exchange in China and its valuation is tremendously high. Company's EV is more than 2 times larger than its net

valuation with EV/Sales 2.2x. One could say that the stock is in a bubble and therefore isn't appropriate peer for Glaston.

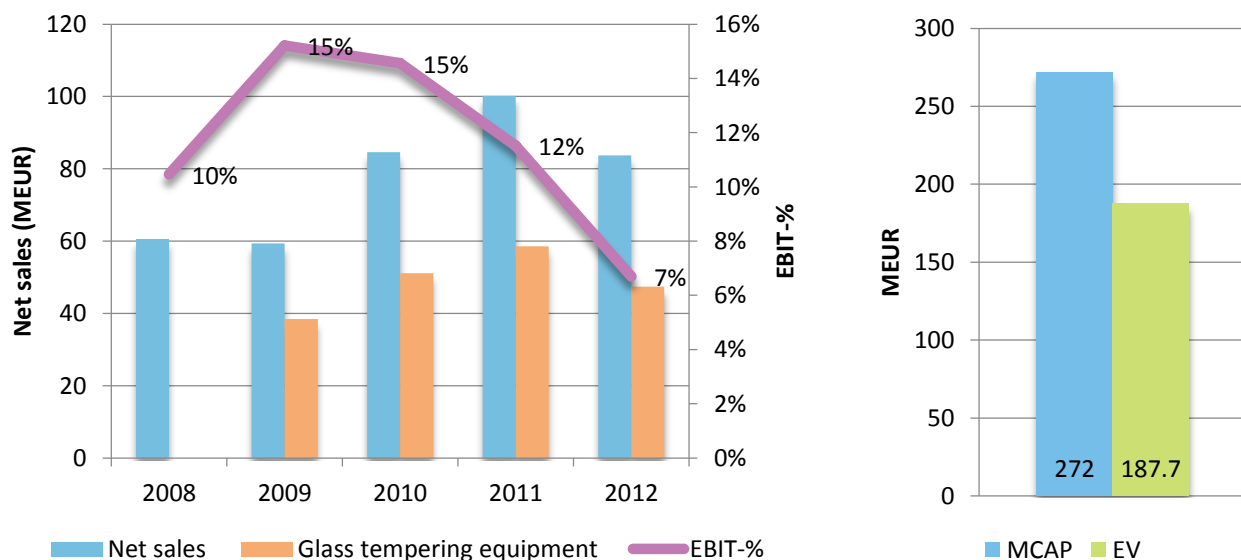
sales (EV/Sales ~2.2), while Glaston comparable EV/S is ~0.7. If we compared this the general valuation in the Western stock exchanges, the valuation of Northglass is simply senseless. Unfortunately there are no analyst estimates available for the company, which makes valuing it correctly very difficult. However, it's clear that this shouldn't be used as a peer for Glaston regarding valuation.

Northglass grew significantly in 2010 and 2011 with good profitability, but in 2012 its performance dropped

However, it is interesting to see how the financials of Northglass have been developing. In the following graphs, where company's key financials are demonstrated from the past years, one can see that company's development was very different from that of Glaston. Northglass has actually been able to grow significantly in 2010 and 2011, and its profitability (EBIT-%) has also been very good. The year 2012 was more challenging for the company, probably signaling a slower market also in China. Even though it's very difficult to make any reliable conclusions about the market shares from insufficient financial data, it seems that Glaston has been losing its share to Northglass after the financial crisis. Still, it's impossible to say how much of Northglass' growth has come from the relevant high segment and how much from the lower ones.

It's important to notice that Glaston competes against NorthGlass only in heat treatment machinery area. We believe that NorthGlass calls this business area glass tempering equipment. Notice that in the following graph we have selected this area also separately when it comes to net sales. Unfortunately we don't have information about the profitability of this area, so there's only the EBIT-% for the whole group.

Financial development and market value of Northglass



Source: Amadeus, Company reports

LandGlass

LandGlass could be called a small but aggressively growing “little brother” of NorthGlass. It was formed by the people leaving from NorthGlass and it has quickly become a significant competitor in the heat treatment area.

LandGlass has global marketing network that provides solutions for customers. Still, China is definitely its strongest area.

We believe that majority of LandGlass’ net sales come from heat treatment machinery, which means that it has become a significant player in the field over the past five years. Company’s growth in 2009-2011 has been both quick and profitable.

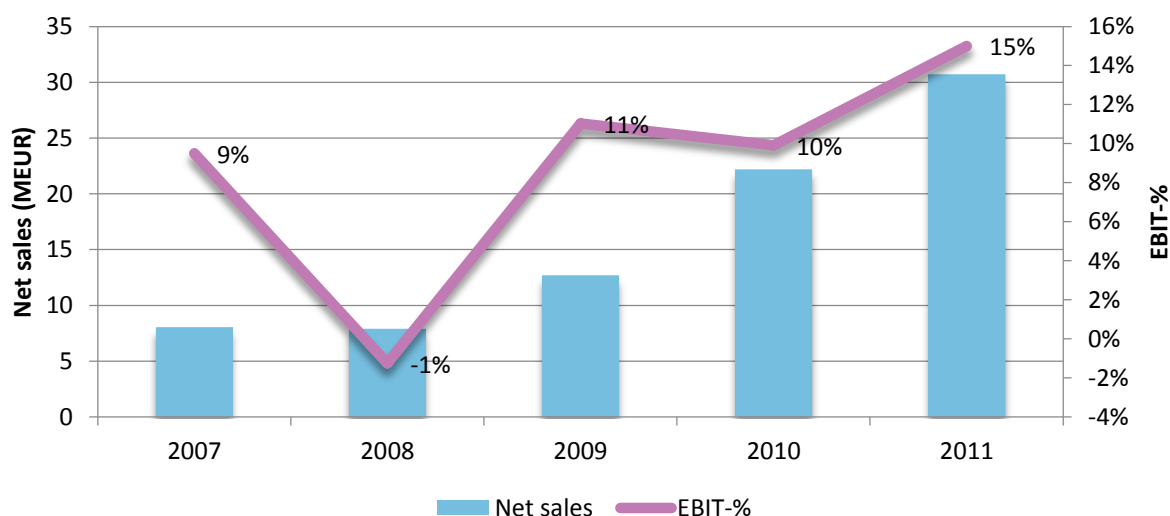
LandGlass Technology (“LandGlass”) defines itself as a “hi-tech enterprise specializing in the development, manufacturing and marketing of glass tempering furnaces.” Company’s history is relatively short, and as far as we know, it was formed by people that left NorthGlass with their expertise and started to compete against it. When we look at LandGlass from Glaston’s perspective, we could think that it’s a small brother of NorthGlass that’s growing aggressively.

LandGlass has established a series of technical solutions for the flat and bent tempered glass products to meet the demands in architectures, furniture, household appliances, automobiles and solar energy industries. Company has ten series of equipment and over one thousand kinds of specifications and types. The products of LandGlass have been successful among the customers in China, but company also says that it has sales in dozens of countries and regions in Europe, Americas, Asia, Oceania and the Middle East. Company lists references such: China South Glass Holding Company, Taiwan Glass, Minda Glass Group, Xinyi Glass Holding and Farun Glass Group.

LandGlass says that it has a world-wide marketing network that is providing technical consultations and solutions for customers. Company also provides “localized comprehensive technical services” by utilizing its technical service capacity and spare parts storage.

Unfortunately there’s only limited amount of data available from LandGlass, for example 2012 financial data is missing. However, in 2009-2011 company has been growing very quickly and at the same its profitability has been very good. Without better knowledge, we believe that majority of company’s net sales come from heat treatment machinery, which means that it has become a significant player in the field over the past five years. Company is still a challenger, but definitely a force to be reckoned with.

Financial development of LandGlass



Source: Amadeus, reports

LiSEC

LiSEC manufactures and markets high-tech machines and plants for insulating glass and glass processing industry. LiSEC is strongest in insulating area, where Glaston has no presence. However, LiSEC is Glaston's competitor in selected areas in pre-processing.

Austrian based LiSEC operates globally offering comprehensive solutions regarding production and refinement of flat glass.

LiSEC provides machines, software and services.

LiSEC has been very profitable with EBIT-% mostly above 10 % during the past years with net sales of 136 MEUR in 2011.

There might be synergies between Glaston and LiSEC, which makes it especially interesting.

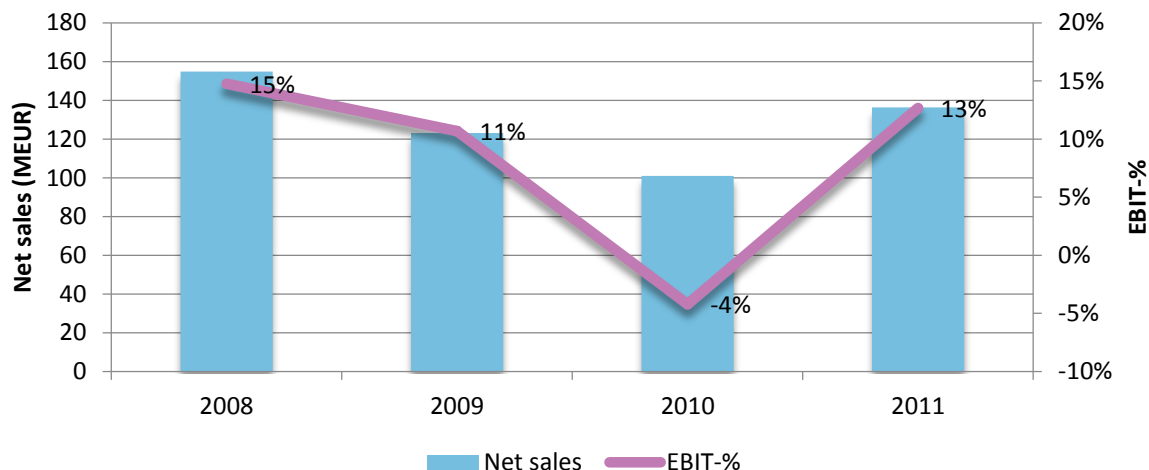
LiSEC Maschinenbau GmbH manufactures and markets high-tech machines and plants for the insulating glass and glass processing industry. It's worth noting that LiSEC is strongest in the insulating area, where Glaston has no presence. Therefore its direct competitor for Glaston only in few areas, but naturally it still fights for the investment euros of the same companies. The company was founded in 1993 and is based in Seitenstetten, Austria. LiSEC Maschinenbau GmbH operates as a subsidiary of Glastechnische Industrie Peter LiSEC GmbH.

LiSEC is an internationally active company offering comprehensive solutions regarding to the production and refinement of flat glass. With more than 1700 employees LiSEC is worldwide leading in solutions working with flat glass and sets standards in quality and technology. According to the company, it has a worldwide presence with more than 40 affiliated companies and agencies.

LiSEC provides a comprehensive portfolio of machines, software and services. It can offer the entire range of machines for an insulating glass production process like for example cutting tables for float and laminated glass, bending and application systems for conventional or flexible spacer frames as well as insulating glass production lines for any required capacity. On top of that LiSEC also offers stand-alone machines for vertical water jet cutting and processing of glass edges.

Once again the financial data that we have been able to gather is limited. Still, based on this we can see that company has been very profitable and EBIT-% has been mostly above 10 % in the past years. 2010 was difficult for the company, but LiSEC made a nice recovery already in 2011. Company's net sales in 2011 were 136 MEUR, which puts company in the same size category with Glaston (FY'11 net sales 120 MEUR), but like said company's focus in different areas. There might be significant synergies between Glaston and LiSEC, which makes LiSEC especially interesting.

Financial development of LiSEC



Source: Amadeus

Bystronic glass (part of Conzzeta AG)

Bystronic offers high-quality solutions for processing of architectural and automotive glass. Bystronic is part of Conzzeta AG, Swiss industrial holding company.

Bystronic glass offers high-quality system solutions for the processing of architectural and automotive glass. Since 1994 Bystronic glass has been part of Conzzeta AG, a renowned Swiss industrial holding company. From basis components through to automated, customer-specific units for glass processing, the Swiss-German company group offers solutions. Bystronic glass also provides proven machine technologies in the photovoltaic industry as well as in the field of window production.

Bystronic provides individual machines and modular units in various segments. Company is Glaston's competitor in selected areas in pre-processing.

Company provides individual machines as well as modular units, from loading and glass cutting through to the complete manufacture of insulating and laminated glass to the architectural glass processing industry. Bystronic glass offers also turnkey system solutions for the efficient pre-processing of automotive glass.

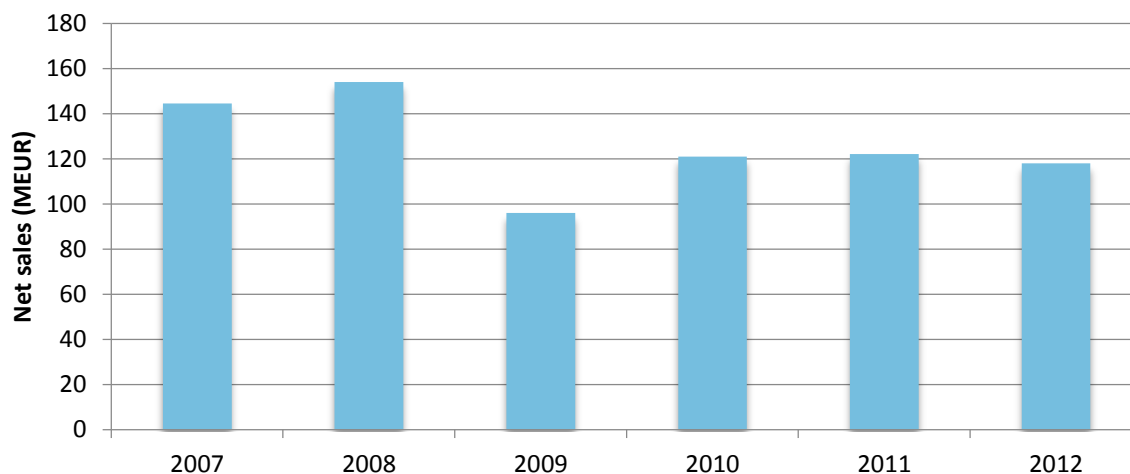
2012 Bystronic gave up the architectural glass cutting segment to cooperate with German machinery manufacturer Hegla.

In 2012 Bystronic gave up the architectural glass cutting segment and started to co-operate in this field with the German machinery manufacturer Hegla. This was an interesting move and part of the consolidating in the industry.

Bystronic glass has traditionally been a strong especially in high-end machines market in Europe. However, this market has been stagnating and there's intensive price competition in Europe as a consequence. Bystronic glass is responding to this strategic challenge by strengthening its activities in China, where the mid-range segment of its portfolio now includes a new insulating glass system geared to regional requirements.

Bystronic reports only net sales, which has remained at 120 MEUR level recently

As a business unit of Conzzeta, Bystronic reports its net sales promptly but unfortunately that's all. In the following graph one can see the sales development in 2007-2012. Company's sales slumped in 2009, but they have made a reasonable recover already in 2010. After that the sales growth has been more or less flat, and net sales have stabilized to ~120 MEUR.

Net sales development of Bystronic glass

Source: Annual reports

Intermac (part of Biesse Group)

Intermac is a division of Biesse Group specialized in production and distribution of machines and systems for flat glass.

Intermac Glass Division is a division of the Biesse Group specialized in the production and distribution of machines and systems for the working of flat glass and more in general for the sectors of furniture, automotive and building.

Intermac was founded in 1987, and it is a significant competitor of Glaston in pre-processing sector in Europe.

Company was founded in 1987 based on the idea to introduce in the glass sector all the experience and technology already developed for the wood working sector. Company is a significant competitor of Glaston especially in the pre-processing sector in Europe, but it has a widespread network of subsidiaries, dealers and agents around the world. Through the network company offers both professional pre-sale advice and after-sale and spare parts service.

Intermac operates through three brands.

Intermac Glass Division operates in the market under three specialist brands:

- Intermac: multi-functional work centers and machines and systems for the cutting of glass
- Busetti: drilling machines and double-edging machines and systems
- Gieffe: semi-automatic machines for glass edge grinding and bevelling

Production facilities are placed in Italy.

Intermac Glass & Stone Division main productive facilities are placed in Italy in Pesaro and in Bagnatica (Bergamo) with over 20.000 square meters of productive surface and over 250 employees.

Intermac doesn't publish its own financials.

As a part of Biesse Group, Intermac Glass Division doesn't publish its own financials. Unfortunately Biesse doesn't publish its figures either in the divisional level, so we don't have reliable financial info available about the company.

Bottero

Bottero offers solutions in the field of automatic machines for glass processing.

Bottero offers a complete range of solutions in the field of automatic machines for glass processing from standard products for medium-small companies up to designing and construction of entire production lines for large international industrial groups.

Bottero provides glass container production lines, and e.g. monolithic and laminated glass lines and machines

The company provides glass container production lines, including glass conditioning, gob forming and delivery, container forming, ware handling, control systems, servo technology, spare parts and equipment, and ancillary equipment. More relevant in this case is that company also offers flat monolithic and laminated glass lines and machines, such as cutting, grinding, bevelling, drilling, CNC, glass stock management, and insulated glass production lines. It also offers automotive, coating, float, laminated, mirror, off line cutting, packing, and solar lines.

Bottero was founded in 1957, and it is based in Italy.

The company was founded in 1957 and is based in Cuneo, Italy with subsidiaries in Brazil, France, China, United Kingdom, Germany and North Carolina.

Bottero has operated over 50 years in

Bottero states that it's the only company in the world able to provide

every sector of the glass industry. Bottero offers a wide range of products.

experience and high technology in any field of the glass processing industry by supplying proper equipment apt to each specific production, from flat monolithic and laminated glass to the production of bottles and jars, from complete production lines for float and laminated glass sheets to packaging lines. According to the company, Bottero is the only company in the world that has been world leaders for over 50 years in every sector of the glass industry.

Bottero's goal is to be a leading company in the glass industry, but it is impossible to find financial data to prove its success.

The ambition of the Bottero Group is to be a leading figure in the glass industry. This goal is confirmed by the high number of industrial patents in its possession, by its strong expansion and by the appreciation that the market acknowledges it. Unfortunately we were unable to find useful financial info about the company.

Glasstech

Glasstech claims to be the world leader in glass bending and tempering technology, and it's the strongest competitor in the US.

Glasstech introduces itself as the world leader in glass bending and tempering technology and fully committed to the solar industry, with glass system offerings for both bent and flat glass solar technologies. Company manufactures and sells glass bending and tempering systems for these markets worldwide, but it's clearly the strongest competitor in the US.

The fastest-growing segment is aftermarket services

Company's says that perhaps the fastest growing segment of Glasstech's business is its aftermarket services. These services include upgrading and retrofitting systems with the latest technology, providing contract services, conducting audits and providing training, tooling and replacement parts.

Glasstech was founded in 1971 and is based in Ohio, USA

Glasstech was founded in 1971 and is based in Perrysburg, Ohio. The company has facilities in New York, Shanghai and Mumbai. Glasstech is the somewhat relevant competitor in automotive sector and in solar, when it comes to Glaston. Still, it's not one of the main competitors of Glaston. Unfortunately we were unable to find useful financial info about the company.

Benteler Glass Processing (part of Benteler Group)

Benteler Glass Processing focuses on glass fabrication and processing industry with over 50 years of experience.

Benteler Glass Processing is one of the leaders in the glass fabrication and processing industry with around 50 years of manufacturing glass processing equipment. Company offers a full range of equipment for architectural glass manufacturer, automotive glass manufacturer, solar and display glass manufacturer – from stand-alone machines to large-batch production needs.

Company develops concepts for glass processing from fully automated lines to stand-alone equipment applications.

Benteler Glass Processing develops concepts for glass processing, from fully automated lines to stand-alone equipment applications. Product range includes standardized, economical tecLine washers and drilling machines, and customized machinery for all applications, including solar. Benteler can provide flexible solutions with specialized, module-installation products.

Unfortunately we were unable to find useful financial info about the company.

Hegla

Hegla supplies cutting, handling and storage solutions for architectural flat glass industry. Hegla is based in Germany.

Hegla Group supplies cutting, handling and storage solutions for the Architectural Flat Glass Industry. The company has three manufacturing plants in Germany with Beveurngen being the head office, which produces the bulk of the cutting equipment, while Satteldorf and Doeschwitz produce racking and handling solutions.

There are Hegla Group companies in USA, France, Russia, with the UK and Eire being covered as a sales and service outlet by Hegla. Company has well over 30 years of experience of cutting float and laminated glass.

Bystronic and Hegla started to co-operate in the architectural glass cutting segment in 2012, giving a small push to the consolidation of the field.

In 2012 Bystronic gave up the architectural glass cutting segment and started to co-operate in this field with Hegla. Like said, this was an interesting move and part of the much expected consolidating in the industry. Unfortunately we were unable to find interesting financial info about the company.

10. Financial situation – balance sheet is strong after the public offering

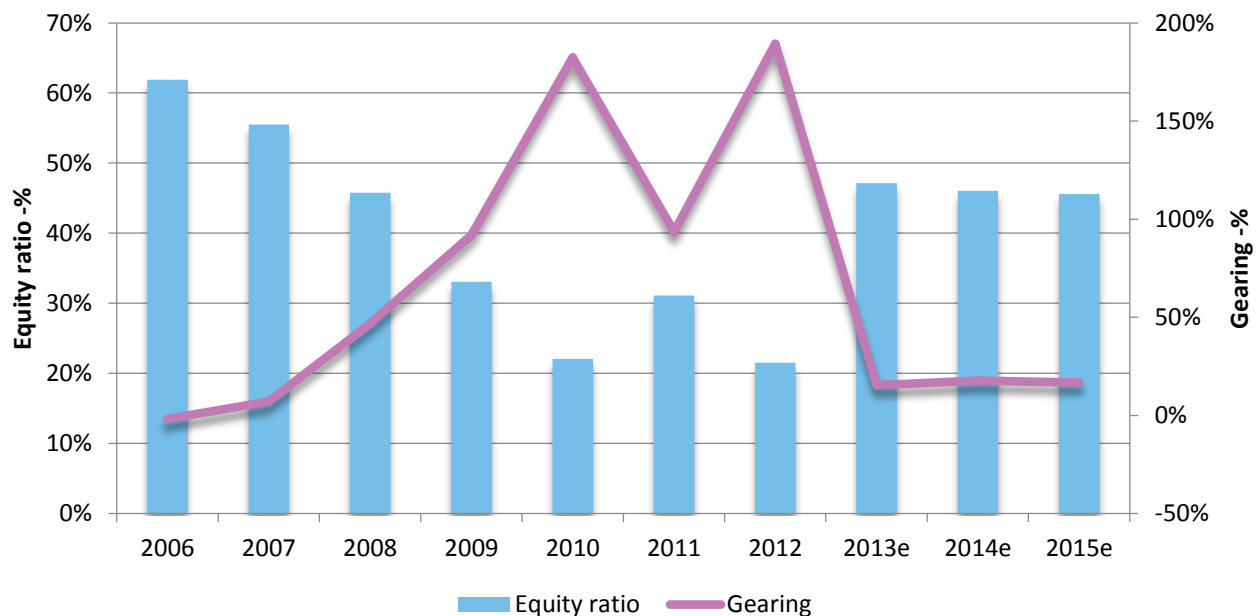
After heavy financial structuring Glaston's balance sheet is currently strong after years of financial distress.

After the financial crisis Glaston was struggling financially for a long-time. The demand for glass processing machines crashed and market conditions remained terrible for years. Quickly after 2008 heavy losses amplified company's debts to a level that gave company little possibilities to create shareholder value, since the overwhelming financial costs would have eaten up even strong operating results. At the worst times company's gearing rose almost 200 %, and Glaston's financial distress was very serious. However, after the heavy financial structuring that was finished during Q1'13, company's balance sheet is now in a good condition.

Gearing level has dropped from roughly 180 % to around 20 %. This is not only critical for investors, but important also for the clients.

Currently Glaston's balance sheet is strong. Gearing is only around 20 %, the amount of debt is in a healthy level and finally also the management can focus solely on business development. This is very important and we believe that due to the significant amount of prepayments in the machines segments, this also supports the client relationships.

Glaston's balance sheet is strong after heavy financial engineering



Source: Inderes

Glaston's balance sheet, even though clearly lighter than in the past, is still relatively large and heavy compared to industry peers. Large part of this is due to goodwill of 37 MEUR.

When looking at the balance sheet structure, we notice that the balance sheet is relatively large compared to company's size and net sales. One factor behind this is the goodwill of around 37 MEUR that has accumulated from the many acquisitions in company's past. Unfortunately at least part of this goodwill is under constant threat of write-off, if company isn't able to turnaround its profitability. We have discussed the goodwill further in the Risks chapter.

Glaston capital efficiency and asset turnover still leave a lot of room to improve. With the current balance sheet structure it's almost impossible to reach high levels of ROA-%, ROE-% or ROCE-%.

The goodwill and also otherwise relatively heavy balance sheet has significant effects on the returns on assets, equity and capital employed. All these figures are, and will be, relatively low for Glaston until the balance sheet structure is changed. We made an exemplary calculation with the current balance sheet and sales, where we lifted company's EBIT-% to 10 % and looked at what the ROE-% would be then, if nothing else is changed. It was only around 15 %, which tells that Glaston cannot reach high ROE-% without further balance sheet modifications. Company's asset turnover is currently just too low for this. However, of course the rising volumes would change this situation in Glaston's favor.

Balance sheet's asset side is clearly weighted towards intangible asset compared to tangible ones. We believe that working capital situation will improve now that company's financial situation is solid again.

In the following table one can see the balance sheet structure from the asset side. We would like to point out that the amounts of goodwill as well as other intangible rights are relatively high, while tangible assets are very small compared to the total assets. Also the working capital efficiency leaves room for improvement, and we believe that company will focus on it now further, when its financial situation has significantly improved.

Glaston's balance sheet – asset side

Assets (MEUR)	2010	2011	2012	2013e	2014e	2015e	2016e
Non-current assets	104.6	101.2	63.8	62.7	65.0	67.3	70.1
Goodwill	52.6	52.6	36.8	36.8	36.8	36.8	36.8
Other intangible rights	18.8	18.2	10.7	9.7	9.8	11.0	12.3
Tangible assets	19.5	18.7	7.3	8.2	10.4	11.7	13.1
Associated companies	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Other investments	4.5	4.4	0.3	0.3	0.3	0.3	0.3
Other non-current assets	0.3	0.3	1.8	1.8	1.8	1.8	1.8
Deferred tax assets	8.9	6.9	6.7	5.8	5.8	5.8	5.8
Current assets	87.8	86.3	66.2	76.7	82.0	91.5	102.4
Inventories	27.9	25.2	21.8	23.4	25.5	28.5	31.9
Other current assets	0.3	0.3	1.8	1.8	1.8	1.8	1.8
Receivables	43.9	42.1	32.0	32.8	35.7	39.9	44.7
Cash and cash equivalents	15.7	18.6	10.6	18.7	19.1	21.4	23.9
Balance sheet total	194.9	187.2	158.0	137.5	145.2	157.1	170.7

Source: Inderes

In the liabilities side balance sheet is healthy. Interest-bearing short-term debt has gone down from around 56 MEUR at the end of 2012 to around 10 MEUR. At the same time company gathered plenty of new equity.

In the liabilities side balance sheet is healthy. We would like to point out the radical change in the level of short-term debt as well as equity, which derives from the restructuring explained already earlier. Interest-bearing short-term debt has gone down from around 56 MEUR at the end of 2012 to around 10 MEUR. At the same time company gathered plenty of new equity. Notice that the different types of equity aren't necessary same that the company reports, but the total amount of equity is the only one that really matters.

Agreements made with debtors deny Glaston the possibility to payout dividends in 2013.

Still, it's important to know that the agreements made with debtors deny Glaston the possibility to payout dividends in 2013. Also company would need retained earnings to do this, and currently they are heavily in the red.

Note that the 2013 balance sheet figures are estimates, but the biggest change has already happened in Q1'13.

While the 2013 balance sheet figures are naturally estimates, since they are the end of the year figures, the biggest change happened already in Q1'13. Naturally small changes can happen during the rest of the year, but the uncertainty regarding these estimates is relatively small.

Glaston's balance sheet – liabilities side

Liabilities (MEUR)	2010	2011	2012	2013e	2014e	2015e	2016e
Equity	39.1	52.8	30.3	55.5	58.9	64.3	69.6
Share capital	12.7	12.7	12.7	12.7	12.7	12.7	12.7
Retained earnings	4.3	-8.7	-31.3	-26.6	-23.3	-17.9	-12.6
Shares repurchased	-3.3	-3.3	-3.3	-3.3	-3.3	-3.3	-3.3
Asset revaluation reserve	0.1	26.8	26.8	47.4	47.4	47.4	47.4
Other equity	25.3	25.3	25.4	25.4	25.4	25.4	25.4
Minority interest	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Deferred tax liabilities	4.7	3.6	1.3	1.1	1.5	1.5	1.5
Provisions	9.7	5.1	3.5	3.0	3.0	3.0	3.0
Non-current liabilities	27.8	46.7	14.9	21.6	21.6	24.2	25.5
Long-term debt	0.0	37.7	4.1	18.4	18.4	21.0	22.3
Convertibles	26.2	7.9	8.2	0.0	0.0	0.0	0.0
Other long-term liabilities	1.6	1.1	2.6	3.2	3.2	3.2	3.2
Current liabilities	113.2	78.7	107.6	56.0	60.0	63.8	70.8
Short-term debt	61.4	22.6	56.2	10.6	10.6	8.7	9.1
Non-interest bearing current liabilities	49.0	55.3	46.7	44.5	48.4	54.1	60.7
Other current liabilities (non-ib.)	2.8	0.7	4.7	1.0	1.0	1.0	1.0
Balance sheet total	194.9	187.2	158.0	137.5	145.2	157.1	170.7

Source: Inderes

11. Cost structure and profitability

Cost structure has developed positively in recent years and it finally starts to be at the level where it should be.

Glaston cost-structure has been clearly too high compared to the demand and the delivery volumes in the past years. Right now it seems like these are finally meeting each other: demand has stabilized despite the uncertainty and the cost-structure has been pushed down by efficiency programs. The huge shift in both the net sales as well as the cost structure can be seen in the following graph, where the main cost factors and their development are also visible.

However, cost structure is still relatively heavy compared to peers. Glaston has subcontracted basically all components, but still does the assembling itself.

While the company's cost structure has been to the direction of flexibility, it's still relatively heavy for an industrial company. Glaston has own manufacturing in three continents and still has relatively low share of subcontracting. This gives company a lot of operational leverage, like we already discussed earlier. Glaston has subcontracted basically all components, but still does the assembling itself.

Personnel expenses have decreased also relatively, when cost-structure has become more flexible.

When looking at the development of the main cost items, materials, personnel expenses and other operating expenses, we notice that share of personnel has decreased also proportionally. It's logical that materials follow the volumes, while the personnel expenses are fixed over the short-term.

Personnel expenses have decreased significant due to reductions in personnel, but also because headcount is currently more focused in Asia.

Naturally the decreased personnel expenses are due to the reductions in personnel. At the end of 2012, Glaston's continuing operations had a total of 602 employees, of whom 23% worked in Finland and 26% elsewhere in the EMEA area, 32% in Asia and 18% in the Americas. In 2011 the comparable figure was 675, which means that company reduced more than 10 % of its personnel during 2012. Around 50 employees were reduced as a part of the adjustment program. In 2010 the Glaston had 749 employees, so the change has been radical during the last few years. Back at the end of 2008 company had 1541 employees, but it's worth noting that this figure isn't comparable due to structural changes.

Category "Other expenses" has been reducing, but it's still high compared to net sales.

Other expenses (~38 MEUR in 2012), which includes items such as leases, subcontracting and maintenance, IT and travel expenses, have also been heading down with the other. Still, the level is relatively high compared to the current level of net sales.

Glaston reports only the sum of costs in quarterly level, and doesn't allocate group expenses to operational divisions. Hence the divisions show better results than the Group.

Couple of things worth mentioning about the reporting of Glaston. First, Glaston provides only the sum of costs in quarterly level, which makes following the development very difficult. This is also the reason why we aren't showing the following graph in quarterly level: there's no data available. Secondly, Glaston puts group expenses into separate segment and doesn't allocate them to operational divisions (machines and services). This naturally means that divisions show better results than the group. There's nothing wrong with the way of allocating costs as long as the group expenses remain the around the same level as they have. However, it's important to notice this before getting too excited about the high EBIT-% of Services segment: these results need to cover also the group expenses before Glaston is turning in the black.

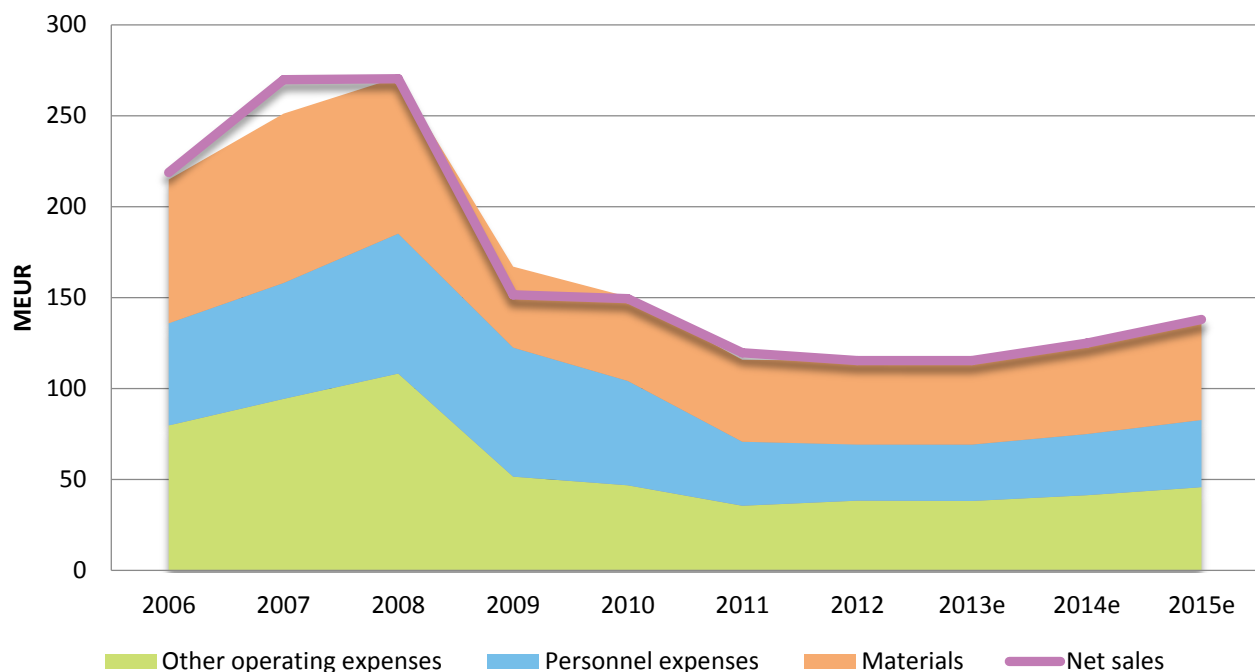
The main points of Glaston's cost structure are:

- 1) Cost-structure is relatively fixed
- 2) Cost structure is finally adjusted to meet lower demand
- 3) Cost structure is leaner
- 4) Some problems may exist with deliveries when volumes rise
- 5) Glaston doesn't provide separation of costs

In the end the main takeaways from the cost structure of Glaston are the following:

- 1) Cost-structure is relatively fixed compared to many industrial companies, which means relatively high operational leverage.
- 2) The cost structure has finally been adjusted to meet the lower demand.
- 3) Cost structure is leaner and more flexible than it has been in years, which means that more is outsourced to suppliers
- 4) The whole cost- and operational structure has gone through radical changes over the past few years, which might cause some problems with deliveries when volumes eventually rise.
- 5) Company doesn't provide separation of costs (even in this degree) in quarterly level, which makes following development more difficult.

Glaston cost structure has gone through large changes



Source: Company reports / Inderes

11.1. Operational leverage and break-even point

Operational leverage is one of the key aspects regarding profitability development, but it's difficult to estimate due to massive changes.

One of the key aspects regarding the profitability development in the future is the operational leverage of Glaston. We believe that company's structure is still relatively heavy when it comes to fixed cost vs. variable costs, even though there has been a large shift too. Higher amount of fixed naturally means if the volumes aren't there, the profitability will be very poor. However, once the break-even point is reached, the profitability increases quickly.

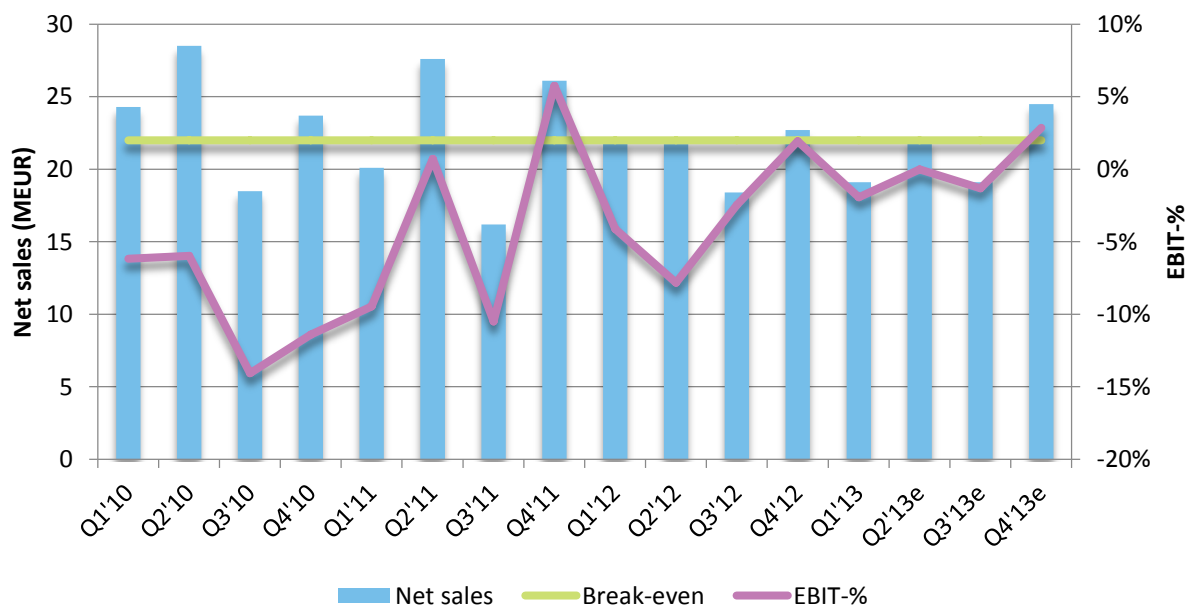
We estimate the proportion of fixed cost to be 50-60 %, which means that we believe operational leverage to be large.

We believe that around 50-60 % can be considered as fixed cost. It's worth noting that personnel expenses are assumed to be fixed here, even though they can naturally be adjusted with the number of personnel. However, they do not directly vary with the sales. Since the industrial companies are nowadays generally rely heavily into outsourcing, and therefore carry a little fixed costs, this figure is high compared to the industry average. Therefore we believe that Glaston's operational leverage is large, and the profitability should rise quickly with the volumes and net sales.

We estimate Machines segment's break-even point to be 22 MEUR.

With limited information available about the cost-structure of Glaston, especially when it comes to quarters, it's somewhat difficult to estimate the exact break-even point. Naturally this has to be adjusted down after the 5 MEUR savings program that was initiated last year anyway. We estimate that Machines segment's break-even point is currently around 22 MEUR, when we are talking about quarterly net sales. It should provide good enough capacity utilization for the company. Naturally there's no exact point since there are always other factors that influence it, but this should give as a decent proxy.

Machines segment's break-even point might be around net sales of 22 MEUR



Services has a clearly better profitability than Machines. Though Services generally have higher margins than Machines, the gap is very wide with Glaston. Much of this can probably be explained by unsatisfactory volumes.

Services segment is naturally already making high EBIT-margins (FY'12: 18.3 %), so break-even isn't relevant conversation here. It's natural that Services have significantly better profitability than Machines, after all, the competitive situation is much better there and services business includes natural high margin businesses like spare parts. Spare parts are typically the best businesses for industrials, if they aren't too general. Also in services the key is the "capacity utilization", but here it's even more related to personnel utilization. It seems that Glaston has been relatively successful in this area. Still, the difference between Machines and Services is radical in Glaston.

Cost control will be a key area for Glaston also in the future.

Cost control will be a key area for Glaston also in the future, because the price competition will be tough also in the future.

12. Future estimates

Market environment is still poor, but long-term drivers are sound. We have tried to be relatively cautious when it comes to long-term estimates, because company's track-record is poor when it comes to profitability.

We remind that the visibility beyond rest of 2013 is relatively low. Company's order backlog is relatively short.

Glaston's market environment is still poor, but like said, the long-term drivers are sound. Therefore there's a clear difference between the modest short-term expectations and long-term estimates. We have tried to be relatively cautious also when it comes to long-term estimates, because company's track-record is poor when it comes to profitability. It's always challenging to make long-term estimates for a turnaround company, because it's difficult to forecast the earnings potential without a solid foundation.

We have divided this chapter into the parts, short-term and long-term estimates. We remind investors that the uncertainty increases over time, and the visibility beyond rest of 2013 is relatively low. Company's order backlog is relatively short, so the development of new orders is quickly visible in net sales. There isn't much of buffer for bad times, but in the other hand, also positive development would be quickly visible. This makes forecasting the future development even more difficult. One thing worth mentioning is that Glaston tax rate will be clearly lower than the official one in the future, probably around 15 %. This is naturally due to heavy losses in the past.

12.1. Short-term estimates – turnaround expected

The biggest driver for profit improvement in short-term is the efficiency program launched in 2012.

Annual savings of 5 MEUR should be realized fully during 2013, and most of them were visible also in Q1'13.

Glaston expects 2013 net sales to be on the 2012 level (116 MEUR) and operating result to be positive.

Our estimates are in-line with the guidance. Since the top-line in 2013 will probably be roughly at the same level than 2012, the improvement has to come from the cost cutting.

In the short-term clearly the biggest driver for profit improvement is the efficiency program launched in 2012. The roots of the program derive from the Glaston's decision to adjust its strategy to focus on glass processing technology and services. Company announced in November 2012 the sale of Albat+Wirsam Software, which was company's Software business segment. Following the sale, Glaston's business operations consist of the Machines and Services segments. After this the company revamped its organization to correspond with the prevailing market situation and implemented a number of adjustment programmes. The annual savings of the adjustment programmes should be around 5 million euros and they should be realized in full during 2013. This was already clearly visible in Q1'13, especially in group expenses that were 1.2 MEUR (Q1'12: 1.6 MEUR).

In its financial guidance, Glaston expects 2013 net sales to be on the 2012 level and the operating result to be positive. In 2012 company's net sales from continuing operations were 115.6 MEUR and operating result was -8.8 MEUR (excluding non-recurring items -3.4 MEUR).

Our estimates about the net sales are well in-line with the guidance, since we expect FY'13 net sales to be around 117 MEUR. This means that despite the discontinuation of unprofitable product groups mostly in Brazil that had probably roughly 4 MEUR net sales, we expect a slight growth in net sales. Since the top-line in 2013 will probably be roughly at the same level than 2012, the improvement has to come from the cost cutting. If we use the adjusted operating result (-3.4 MEUR) as a comparison point, reaching the savings of 5 MEUR would just put company on the black (1.6 MEUR) also without NRIs.

Company's expects positive operating profit also without the NRIs that would be a major improvement.

It's worth noting that in Q1'13 there was a 3.7 MEUR one-time gain from the sold real estate in Tampere. This means that strictly speaking company would reach its guidance with ease, since the NRIs aren't excluded in the "positive operating profit" guidance. However, the management of Glaston has told openly that their guidance is positive operating profit also without the one-time gain. This would be a major improvement from 2012 result.

We estimate 2013 operating profit to be 4.9 MEUR, or 1.2 MEUR without NRIs.

Since the efficiency program was already showing good results in Q1, we believe that company will be successful in reaching most of the targeted 5 MEUR in 2013. Actually we are currently estimating the operating profit to be 4.9 MEUR, or 1.2 MEUR without the NRIs. As you notice, this doesn't quite reach the improvement of 5 MEUR; there's a 4.6 MEUR improvement without the non-recurring items. However, naturally there is some cost-inflation and probably some of the improvements will also go to clients. Therefore we don't see this to be conflicting with the savings target.

Sales mix can also affect the short-term profitability. There's a great difference in profitability between machines and services, and we believe that there's also significant difference between heat treatment and pre-processing.

Another thing that can affect the profitability also in the short-term is the sales mix. Like we have discussed before, there's a great difference in profitability between machines and services. If company's sales are inclined towards the services, the EBIT-% will be higher, or vice versa. Also we believe that there's a significant difference in the profitability of two main areas inside the machines segment: heat treatment and pre-processing. In heat treatment company should have better pricing power, hence higher margins. However, in machines the delivery volumes are still more important, since the difference in gross margins shouldn't be that large.

We agree company's view on outlook of cautiously positive. In North America, outlook for construction in particular is more positive than a year ago.

In the market outlook company said that their expectations for the development of the market in 2013 are "cautiously positive", and we see no reason to disagree with this. In North America, outlook for construction in particular is more positive than a year ago. In Europe, the economic outlook remains uncertain and we wouldn't hope for a fast recover. Glaston expects that the cautiously positive development that began in Asia in late 2012 will continue. Company also expects the stable development in South America to continue.

As a result of economic uncertainty and overcapacity, the market for new machines will continue to be challenging. The development of the service market is expected to remain positive, which should also be visible in the quarters to come.

Development of order book and new orders

In Machines segment the development of order book gives proxy for future sales.

In the Machines business area, the development of order book gives a reasonable good proxy for the future net sales development. In the following graphs we have new orders and order book development in long period and in a more recent history.

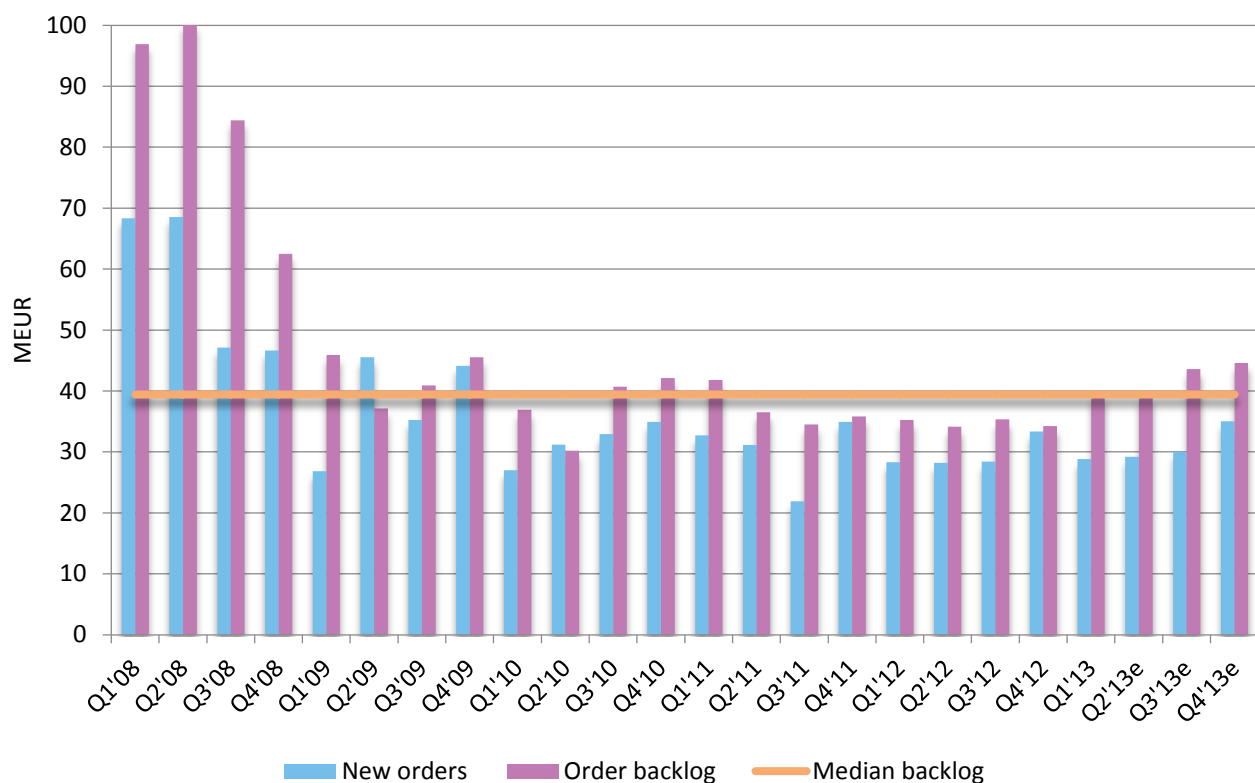
In Machines segment the average delivery time is around 4 months, while services have practically no order book.

When we look at the orders, of course the machines orders are more interesting, since services order book is almost non-existing and delivery times very short. In the Machines segment the average delivery time is probably around 4 months.

Glaston's order intake is typically relatively stable with average order being less than 1 MEUR. On average, single machine in heat treatment is probably around 0.8 MEUR. In pre-processing machines are generally fractions of this.

Glaston's order intake is typically relatively stable. This is probably because company doesn't have larger projects (>10 MEUR), because it doesn't provide full production lines or factories. Since the average order is less than 1 MEUR already an order above 3 MEUR could be considered as a large one for Glaston. One heat treatment machine is probably around 0.8 MEUR on average, and pre-processing deals are only a fraction of this on average (perhaps around 100 thousand euros per machine). Since these orders are still a relatively small portion of Glaston's net sales (<10 % of quarterly sales), there aren't made peaks or bottoms in the quarterly orders. Stable order intake is a good thing, as long as the level is in order, since it helps company to maintain a stable utilization rate. Of course there can be problems regarding the mix, which could cause bottlenecks, but this is another matter.

Glaston's order book and new orders



Source: Company reports / Inderes

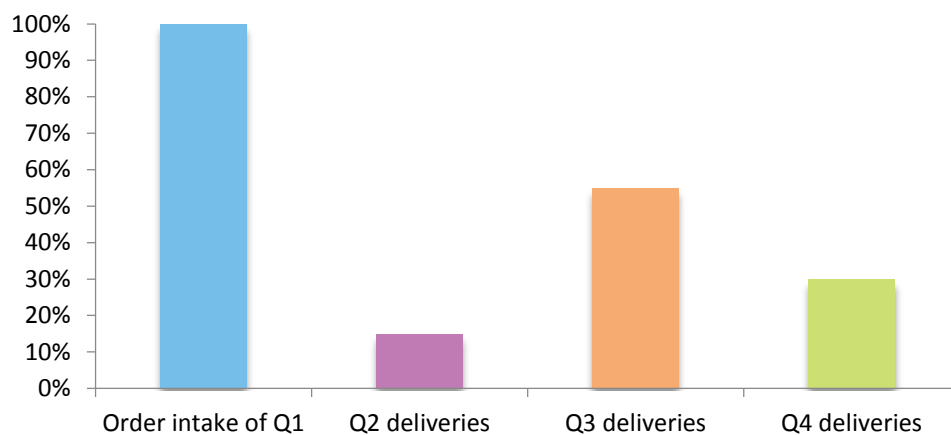
Glaston has managed to shorten its delivery time clearly during the past years.

Glaston told in the 2012 annual report that it was able to shorten the delivery time of basic tempering machines from around six months to around 15 weeks. While this might give company also a slight competitive edge, a shorter delivery time is generally a sign of improved efficiency of the process. This typically is visible also in the profitability.

We estimate that e.g. orders received in Q1 are typically mostly delivered in Q3, which tells something about the visibility.

Naturally the delivery time is also a significant factor in estimating the net sales development. Of course there is never a "typical" order intake, but as an example: We believe that orders received in Q1 are typically mostly delivered in Q3. The distribution could be something like in the following example. Note that the deliveries are those of the orders received in Q1 and only those, and that this is naturally just an illustrative example.

Glaston's machines order-delivery process: illustrative example

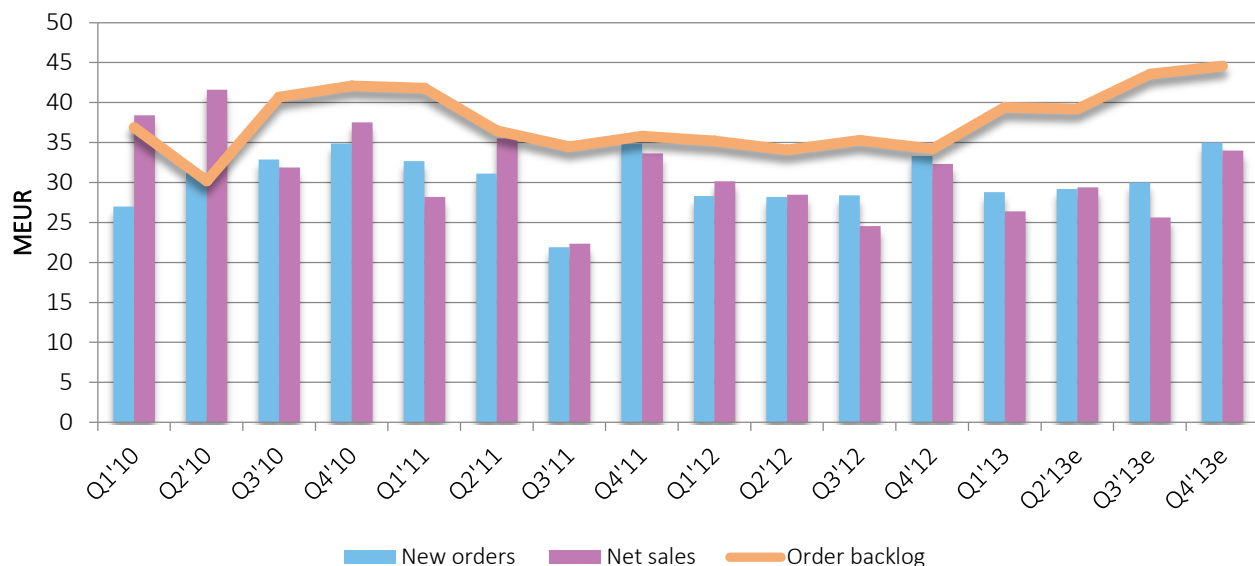


Source: Inderes

However, also utilization rates, possible bottlenecks, and seasonal variation affect sales estimates.

Of course estimating the accumulation of net sales isn't quite this easy. There are also things like capacity utilization rates and possible bottlenecks. Typical seasonal variation is also relatively strong; normally the fourth quarter is the strongest quarter for Glaston, which is the standard in industrials. In the other hand the Q3 is typically weak due to the holiday season. In the following graph we have tried to demonstrate the connection between the order intake and net sales, but also some seasonal effects can be explored there.

Glaston's new orders and net sales on quarterly level



Source: Inderes

There is no a significant order backlog for services.

Of course the process is completely different with services. Services don't typically have a significant backlog, though bigger modernization projects can last over a quarter. Average size of a service order is naturally small; smallest can be spare parts and some installation projects. Largest modernization projects are measured hundreds of thousands at best.

Cycle of demand gives indication of the market situation

Cycle of demand indicates the current market situation and gives a weak signal of the future development.

There's another key aspect in services demand. Because the demand of customers depends heavily on their own capacity utilization, in addition to the profitability of business, there's typically a "cycle of demand". If the glass producer's (Glaston's client) capacity utilization rate is low, there's naturally no need for new capacity and since the machinery is lightly used, the maintenance needs are also low. Further, client's business cannot be very profitable, if the capacity utilization is low. This gives another incentive to cut investments and also buying services from outside.

When capacity utilization rates rise to moderate level, the maintenance need rises that leads to some business for Glaston.

When the capacity utilization rates rise to a moderate level, the maintenance needs rise and client is more inclined to buy at least the basic services (spare parts, maintenance, perhaps optimization). This is when Glaston starts to get some business from the client, though demand is still low.

At good utilization rate Glaston should receive significant amount of offers for upgrades and modernizations, but new capacity investments are still low.

The next step is naturally a good utilization rate, when capacity upgrades start to be considered. At this point Glaston should receive significant amount of offers for upgrades as well as modernization projects, but the investments in the new capacity are still low. We believe that we are currently moving towards this stage of the market, though there are large differences between the market areas (both geographically as well as industry vice).

At full utilization rate, there's a need for new capacity, and Glaston should receive CAPEX orders.

At the last point client's capacity is in "full use" and there's need for new capacity. Naturally this is the point when the tendering activity for new machinery is high, and Glaston should receive CAPEX orders. Typically the orders start from small and accumulate to large orders, eventually completely new lines and factories. At the top of cycle there might even be completely new players entering the market, and there's plenty of new capacity coming to the market. Eventually the cycle starts again.

We have demonstrated the cycle of demand, but we emphasize it's just an illustrative presentation.

We have attempted to demonstrate this in the following graph. However, we must stress that this is an illustrative picture and the real world never works quite like this. There are always losers and winners in the markets, which means that some companies are struggling even in a good market situation, and in the other hand others are thriving and investing even in a generally poor market situation. Therefore this concept is the rough generalization, but we believe it to be useful.

We estimate the current phase to be between moderate and good market in USA and Asia, but moderate in Europe.

We believe that we are currently somewhere between moderate and good market in the US, though there's a wide spread within the industry. In Europe the current stage is probably moderate, and in Asia perhaps something between good and moderate.

Cycle of demand – Connection between client's capacity utilization and demand (illustrative, note the colors)



Source: Inderes

Machines – turnaround expected

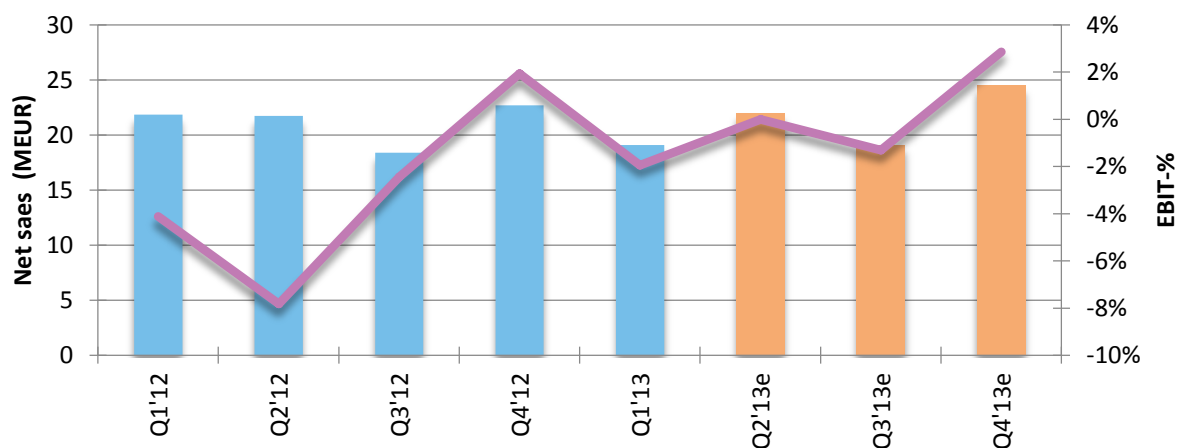
Machines segment's short-term estimates derive from the order backlog and segment's cost-structure. Due to 5 MEUR annual savings to break-even level is estimated to be around 22 MEUR of quarterly net sales.

There's some seasonal variation, and Q4 is typically the strongest. FY'13 EBIT should be also close to break-even.

Our short-term estimates regarding Machines segment naturally derive from the order backlog and segment's cost-structure. We already discussed about the estimated break-even point in earlier chapter. Taking the 5 MEUR (on annual level) savings program, which was initiated last year, we estimate that Machines segment's break-even point is currently around 22 MEUR, when we are talking about quarterly net sales.

Machines segment's order backlog was 37.8 MEUR in the end of Q1, and segment's order intake has been around 21.5 MEUR/quarter during the last 12 months. This should serve a relatively good proxy for the quarterly net sales in the coming quarters, putting segment close to break-even. There's some seasonal variation, and Q4 is typically the strongest. FY'13 EBIT should be also close to break-even, and we expect it to be +0.1 MEUR.

Financial development and estimates of Machines segment



Source: Inderes

Services – solid profitability expected to continue

Services business is more stable and typically easier to forecast than CAPEX driven Machines business.

While Machines has been struggling, Services has been posting solid numbers in the past years. FY'12 EBIT-% was 18.3 %, which is an excellent level. It's difficult to improve from these levels, at least in the short-term.

Services business is always balancing between resources and their utilization; between growth and profitability. We see significant growth potential in the coming years, but it's difficult to improve profitability from current levels. Company has to optimize the resources in order to keep even the current level.

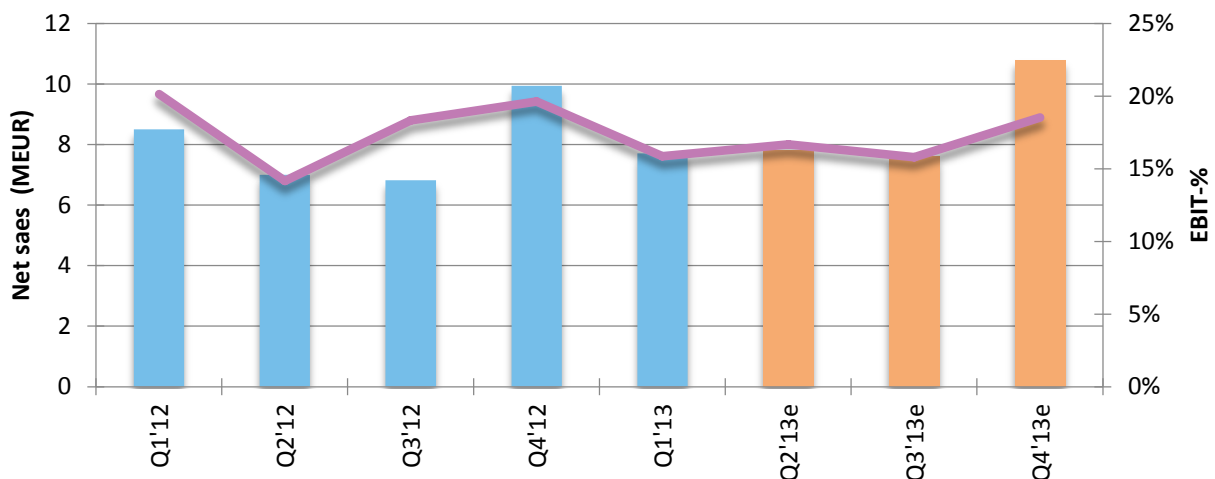
Services is typically more labor-intensive business, though there is also things like spare parts and upgrades that have a significant amount of "hardware".

Services business is typically more stable and more predictable. Larger modernization projects can cause fluctuations, but typically this business is much more stable than CAPEX driven Machines. Also Services faces seasonal fluctuations, and Q4 is also here the strongest.

The profitability of Services has been very good in the past years. Since 2010 EBIT has been positive continuously and in most quarters well-above 10 %. FY'12 EBIT-% was 18.3 %, which is an excellent level. We believe this level to be difficult to achieve FY'13; last year included some extraordinary quarters and already after Q1'13 company is clearly below FY'12 figures. Still, we don't expect large changes, and believe EBIT to be roughly 5.7 MEUR in 2013 (FY'12: 5.9 MEUR). Still, if the group expenses would be allocated into divisions, these figures would be much lower.

Naturally the demand of services is one of the key aspects also here, because capacity utilization, though more usage of personnel in services, is very important here. We don't expect major changes in the demand during 2013, even though Q1'13 was actually clearly below Q1'12 (net sales -9.4 % and EBIT-% 16 % vs. 20 %). We believe the rest of the year to be relatively stable compared to last year. In the coming years the demand should improve through client's capacity utilization rates, but we believe that the EBIT-% was already close to its peak in 2012. We expect EBIT-% to be around 18-19 % in the few next years. However, there's significant potential in sales growth.

Services is typically more labor-intensive business, though one has to remember that there is also things like spare parts and upgrades that have a significant amount of "hardware". Still, due to this nature one can add another indicator to the segment, which is net sales per employee. The logic is simple, it's very difficult to grow sales without increasing personnel and in the other, the utilization rate of this personnel is critical to the profitability of the business. At the end of 2012, Services segment employed 130 persons. One should follow the development of personnel especially in services.

Financial development and estimates of Services segment

Source: Inderes

12.2. Long-term estimates – to the next level?

It's very difficult to make reliable long-term estimates for Glaston especially due to its poor track-record. The potential is clear, but estimating high margins would require solid proofs.

The whole sector might be going through major changes (e.g. consolidation) even in the near future. However, one cannot make reliable future estimates based on this kind of scenario.

We have made modest and stable estimates when thinking about the potential, but one could say that estimates are high compared to the track-record of company.

We are expecting Glaston's profitability to rise to the next level, where EBIT margin is around 5-6 % in 2-3 years from now. However, we believe that cost-cutting road has been travelled close to an end after 2013, and the improvements have to come through volumes and net sales growth.

Note that the long-term estimates do not attempt to reflect the economic cycles, but the average over the cycle.

Glaston DCF-value is high, but it's mostly derived from the terminal year, which signals a very high risk profile. DCF-calculation is a theoretical value anyway, and we use it mostly as a reality-check.

It's very difficult to make reliable long-term estimates for Glaston, even more difficult than on average for industrial company. There are two main factors behind this: Glaston's track-record is poor and there's no real evidence about the high profitability, but still there's definitely potential both in terms of growth and profitable especially through rising volumes. The operational leverage could boost the margins significantly, but we are unwilling to forecast EBIT margins around 10 % even in the long-term without proof. Also the new product launches make estimating difficult; company might get a significant boost from them, but it's too early to make judgments at this point.

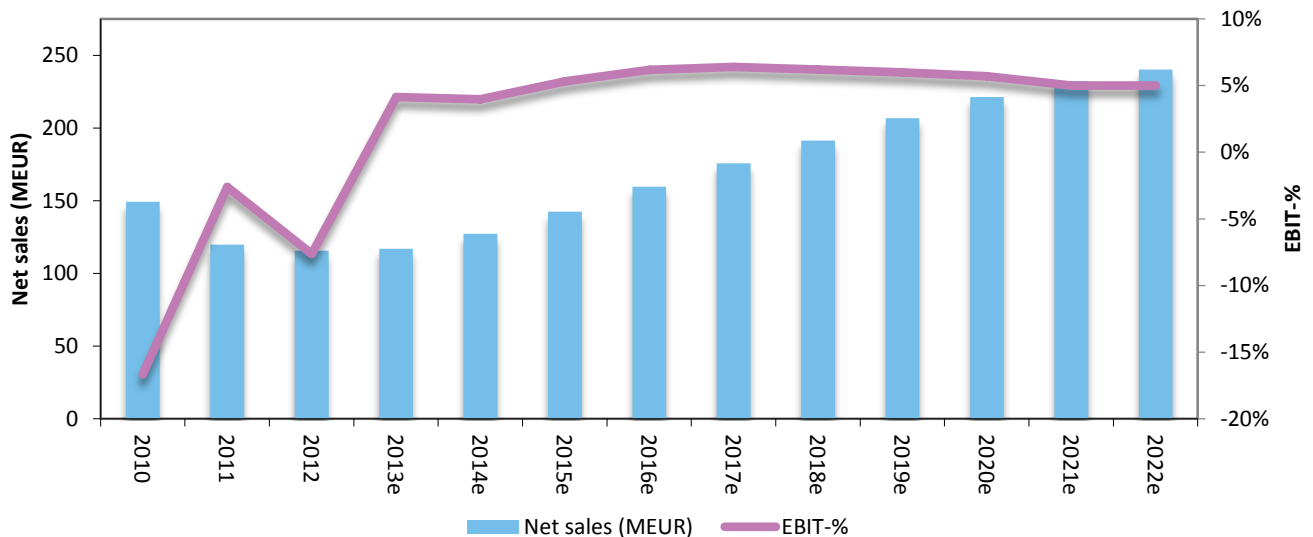
Naturally Glaston doesn't operate in a vacuum, and it seems that its competitors are also going forward all the time. It would be reasonable to expect significant consolidation in the sector, which has a huge amount of small players with relatively poor profitability. Naturally these moves could have a significant impact on the general profitability, but it's impossible to forecast changes at this point.

We have tried to make a somewhat modest and stable long-term growth scenario for the company. In our base case the profitability rises to the level of slightly over 6 % (EBIT-%), while the sales growth is around 10 % for next four years. Therefore the medium-term base scenario is based on the assumption that Glaston will grow slightly faster than the general market, after the overcapacity has melted. Eventually we expect EBIT-% to decrease around 5 % and growth to slow down close to the GDP-growth (3.4 %) in our DCF calculation.

When thinking about profitability, basically we are expecting Glaston to make a jump to the next level (EBIT margin 5-6 %) in 2-3 years from now. It's worth noting that FY'13 estimates are still close to break-even, when we exclude non-recurring items. After the savings program that will be finished in 2013, company's cost-structure is probably going to be relatively stable. Therefore the improvements have to come from net sales growth. The key component is the volume development, which derives from new capacity investment. Naturally a boost in investments requires decent macroeconomic growth, and for example the construction sector in the US is assumed to continue its positive development. Notice that the long-term estimates do not attempt to reflect the economic cycles, but more average over the cycle.

In the following graphs we have tried to demonstrate the expected development in the future. The neutral scenario constructed for Glaston can be seen in the DCF calculation in the following page. DCF-calculation gives Glaston a value of 79 MEUR, which is roughly 0.40 euros per share. This would put Glaston fair value above our target price. However, one important thing to notice in the calculation is that a huge amount of the value derives from terminal year (around 62 %). This figure is very high, and it signals a high risk profile for the company. DCF-calculation is a theoretical value anyway, and we use it mostly as a reality-check. Actual valuation of the share will be discussed in the next chapter.

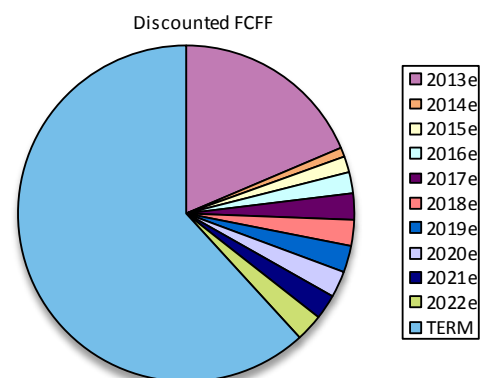
Neutral long-term scenario for the key financials



DCF Valuation and its basic assumptions

DCF Valuation (MEUR)	2012	2013e	2014e	2015e	2016e	2017e	2018e	2019e	2020e	2021e	2022e	TERM
EBIT (operating profit)	-9	5	5	8	10	11	12	12	13	12	12	
+ Depreciation	8	5	4	5	5	6	7	7	8	8	9	
- Paid taxes	-3	0	0	-1	-2	-2	-2	-2	-2	-2	-2	
- Tax, financial expenses	1	0	0	0	0	0	0	0	0	0	0	
+ Tax, financial income	0	0	0	0	0	0	0	0	0	0	0	
- Change in working capital	-21	21	-1	-2	-2	-2	-2	-2	-1	-1	-1	
Operating cash flow	-24	31	8	10	12	13	14	15	16	16	17	
+ Change in other long-term liabilities	0	0	0	0	0	0	0	0	0	0	0	
- Gross capex	29	-5	-7	-7	-8	-9	-9	-10	-10	-10	-10	
Free operating cash flow	5	26	1	3	4	5	5	6	6	6	7	
Other items	-4	0	0	0	0	0	0	0	0	0	0	
FREE CASH FLOW TO FIRM	1	26	1	3	4	5	5	6	6	6	7	172
Discounted FCFF		26	1	2	3	3	3	4	3	3	4	85
Sum of discounted FCFF		137	112	111	108	106	102	99	95	92	88	85
- Interest-bearing debt		-69										
+ Cash and cash equivalents		11										
+ Market value of associated companies		0										
- Market value of minorities		0										
- Previous year dividend correction		0										
Value of equity, DCF		79										
Enterprise Value DCF		137										

Cost of capital (WACC)	
Tax rate, WACC	24.5 %
Target debt ratio D/(D+E)	35.0 %
Cost of debt	5.0 %
Equity beta	1.20
Market risk premium	4.8 %
Liquidity premium	0.3 %
Riskfree interest rate	4.0 %
Cost of equity	10.0 %
Weighted Average Cost of Capital (WACC)	7.8 %



Source: Inderes

13. Valuation of the share

Glaston holds a significant potential but has a poor track-record, which makes its valuation challenging. With traditional multiples such as P/E Glaston's share is currently expensive, and P/B and dividend yield cannot offer much support either.

Glaston is clearly in a different position than most of its peers. While many in company's peer group are currently probably close to the peak result, Glaston is still at the bottom. Outlook is also brighter than the average in the machinery sector.

The peer group is made from Nordic machinery companies, since Glaston's direct competitors are not listed.

Probably the best peer company is Raute that has similar business logic. However, companies have a different long-term outlook.

Glaston's track-record is well below its peer group, but in the other its future potential for profit improvements is much higher.

There's no denying that Glaston holds significant potential, so the question becomes how this potential should be priced. Currently the valuation of the share isn't very attractive, when looking at the earnings based multiples for this year or the next. It's also difficult to find support from other multiples. Glaston's P/B is very low, but if this figure is cleaned from the goodwill in the balance sheet, it's not attractive either. Dividend yield is non-existent, so it doesn't support the valuation either. Therefore we have to rely mostly in the EV-multiples, which are compared against the peer companies.

Glaston is priced with clearly higher multiples than most of its peers, at least with FY'13e figures. When looking at the industry's outlook and those of the peers, Glaston's earnings growth should clearly outstrip that of the other machinery companies. First of all, market outlook is a lot better. Second, the starting level is completely different. Many companies in the industry could be considered to be close to the peak performance currently, while Glaston is closer to the bottom. In the other side of the coin is the poor track-record of Glaston, which naturally raises a question about the quality of the company in general – as well as its capabilities for the required profitable growth.

13.1. Peer group analysis

Unfortunately Glaston has no direct competitors in its peer group, since none of them are listed. NorthGlass is naturally listed like already mentioned, but its valuation is completely outrageous and holds no value for comparison. Therefore we had to make the peer group from Nordic machinery companies. While the drivers of these companies are mostly different from Glaston's, at least capital expenditure is a key element of all these companies. However, none of these are in the glass industry, so one should be cautious when thinking about the valuation levels of peers.

Perhaps the best peer company, though hardly a good one, is Raute. Raute's business logic is very close to Glaston and it's in the same size category than Glaston. Raute's also a machinery manufacturer whose customers are companies operating in the wood products industry manufacturing veneer, plywood and LVL (Laminated Veneer Lumber). Raute's offering covers machinery and equipment for the customer's entire production process. Even though the demand of Raute's customers isn't expected to grow as fast as Glaston, they do have some similar drivers such as the development of construction industry. However, when thinking about the valuation of the share, Raute's valuation is currently very modest.

Even though the conventional wisdom, looking at the track-record of peer companies and Glaston for the last few years, would say that Glaston should be valued significantly lower than its peers, there is another side to the story. When looking to the future, Glaston's prospects look much better than most of its peers. For many machinery companies the rebound after the financial crisis was quick, and the demand has been strong in the past few years. This

is especially true for mining industry (companies like Metso, Atlas Copco and Sandvik), but now the future looks relatively modest. Cargotec and Wärtsilä had huge and long order books after the financial crisis, and companies have been able to gather enough orders to keep the delivery volumes at high levels. However, current outlook on the marine market isn't bright, though the demand of offshoring segment is still strong.

Glaston has plenty of room to improve and the market situation seems to be picking up instead of slowing down. This is the main counter argument for poor track-record of Glaston.

Also the general outlook of industrials is somewhat dim currently, and Glaston's prospects are actually a lot better than most. When comparing at the absolute levels of net sales and profitability, one might conclude that Glaston is currently close to the bottom while many others are close to the top. This makes a compelling argument for justifying a higher valuation for Glaston: it has plenty of room to improve and the market situation seems to be picking up instead of slowing down.

We believe Glaston's valuation to be somewhat in-line with its peer group. Still, Glaston has a higher risk profile since most of its value is based on the uncertain profit improvement.

"New Glaston" has clearly lower cost-structure and it has a healthy balance sheet, so it no longer deserves a discount due to these factors. However, we cannot just forget the poor track-record of the past altogether, at least not before Glaston has demonstrated its ability for profitable growth. Currently we believe that Glaston's valuation should be somewhat in-line with its peer group. However, we do believe that Glaston's risk profile is higher than its peer group's average.

We believe EBITDA-multiples to be most relevant when comparing with peers, since they are most comparable. Also it's worth noting that FY'14 should be first reasonable normal result for Glaston, so we are putting more than usual weight on it.

The current valuation of the peer group and Glaston is presented in the table below. Glaston multiples are clearly above median figures in most cases. The only expectation, though a significant case, is EV/EBITDA FY'14e. Here Glaston is valued in-line with peers. EBITDA is the best figure to use, since Glaston's practice used with the R&D investments and amortizations differs from the peers. Most industrials put lion's share of R&D investments directly to expenses. 2014 should be closer to "normalized" level of Glaston, though substantial earnings improvements are expected also after it.

Glaston's peer group of Nordic machinery companies

Company	Share price	MCAP (MEUR)	EV (MEUR)	EV/EBIT		EV/EBITDA		P/E excl. NRIs	
				2013e	2014e	2013e	2014e	2013e	2014e
Glaston	0.33	64	74	64.8	14.8	11.9	7.9	67.3	19.4
Raute	8.79	35	28	6.0	5.3	4.2	3.7	10.4	10.5
Kone	63.1	13834	14290	15.3	13.5	14.0	12.5	22.1	20.0
Konecranes	23.04	1436	1619	11.9	9.9	9.2	8.0	15.1	12.1
Metso	27.55	4080	4449	7.3	7.2	5.7	5.6	10.5	10.2
Wärtsilä	35.93	6981	7797	14.2	12.4	11.3	10.3	17.5	15.2
Cargotec	21.5	1160	1705	12.0	9.8	8.2	6.9	13.9	10.9
ABB	21.13	48206	52918	10.6	9.3	8.4	7.6	14.3	12.3
Alfa Laval	146	6950	7329	13.9	12.6	11.6	10.7	18.2	16.7
SKF	162	8371	9455	11.2	9.0	8.9	7.5	15.6	12.7
Trelleborg	107.1	2948	3708	12.4	10.1	9.8	8.0	14.5	12.5
Sandvik	82.7	11773	14873	10.5	9.2	7.9	7.0	13.3	11.4
Atlas Copco	165.4	22316	23061	11.1	10.6	9.7	9.3	15.6	14.5
Average				11.4	9.9	9.1	8.1	15.1	13.3
Median				11.6	9.9	9.1	7.8	14.8	12.4

Estimates: Thomson Reuters, expect Glaston and Raute that are from Inderes. Estimates collected 11.07.2013.

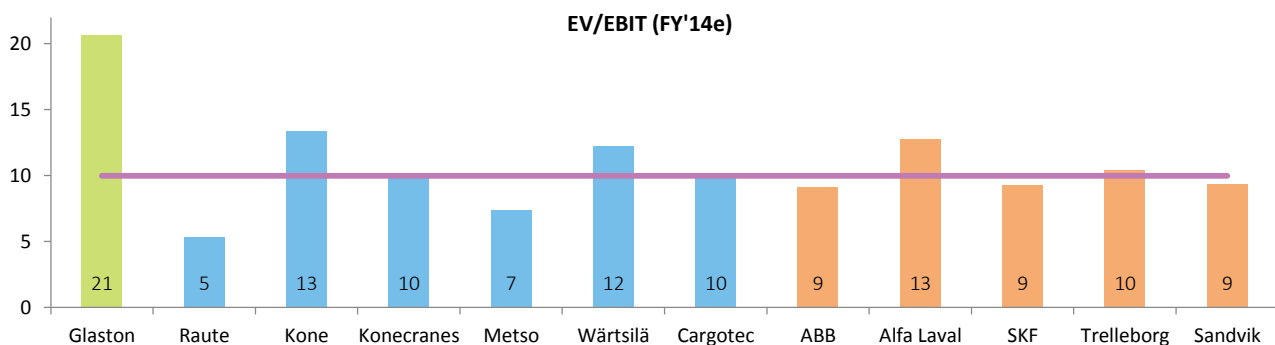
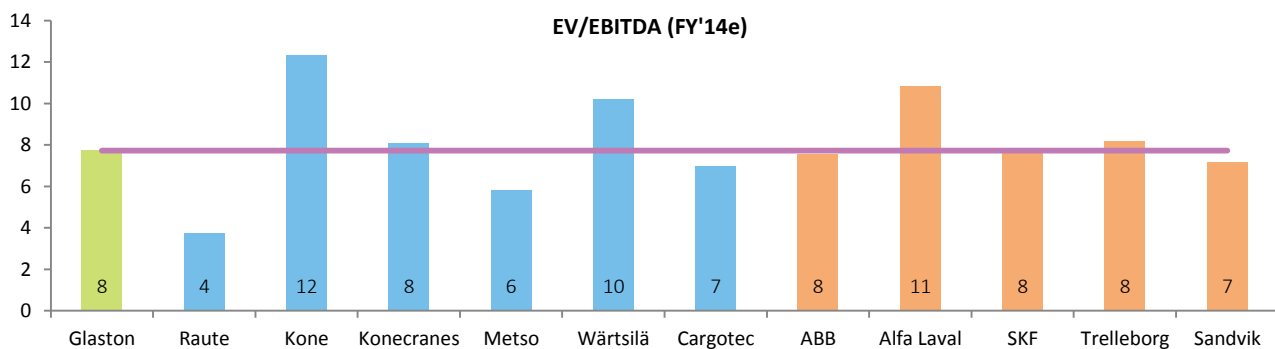
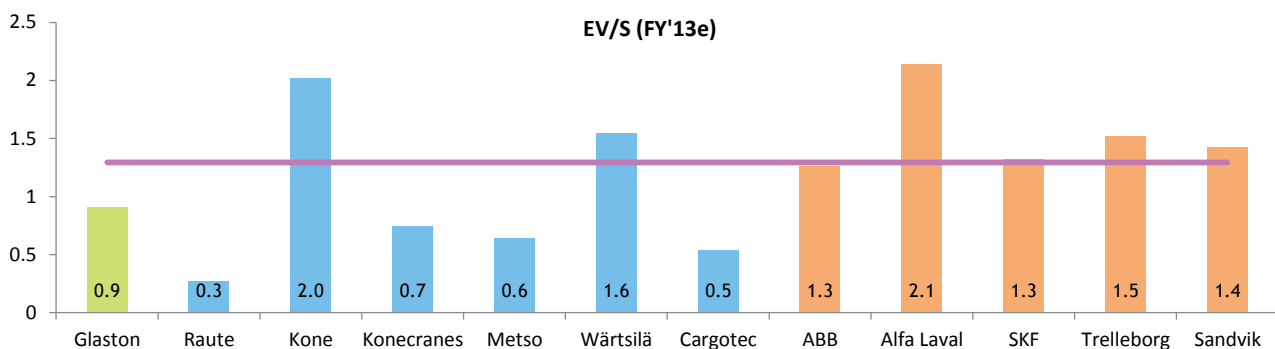
Glaston valuation is either slightly higher or in-line with that of the peer group. This means that the turnaround is already priced in. In order to keep the current valuation level, the expectations must be met.

All in all, valuation of Glaston is either slightly higher or in-line with that of the peer group. Further evidence of this is in the following graphs that are based on Reuters consensus estimates. The key takeaway for us is that the turnaround of the company is already priced in. In order to keep the current valuation level, the market expectations must be met. Perhaps the long-term potential isn't fully priced-in, but figures above these reflect high expectations and therefore high risks for investors.

Glaston's valuation becomes less attractive when moving towards the bottom line in the income statement.

When looking at different figures in more detail (see graphs below), we notice that Glaston's EV/S-multiple is low. This is naturally due to the low profitability of the company. It's also interesting to notice in more general level that the Swedish comps are trading at a higher EV/S multiple than the Finnish ones. The lower we move in the income statement, the worse Glaston's valuation looks. With EV/EBITDA Glaston is in-line with peers with Reuters consensus estimates, but it's clearly higher valued with EV/EBIT. P/E-figures are not shown, but they would be even more unattractive currently.

Peer group valuation multiples based on Reuters estimates (16.7.2013)



Glaston should be “catching up” in terms of valuation in the coming years, because its earnings are expected to grow significantly faster than average.

Glaston’s peer group is full of quality companies, and we cannot accept a premium for the company.

Glaston’s low P/B-multiple can be misleading, because it needs to be compared with expected ROE-%. There’s a large amount of goodwill in the balance sheet, which isn’t “working” for the company, making the ROE-% clearly unsatisfactory.

Glaston’s capital efficiency is relatively low. Many times this separates excellent operating models from good ones.

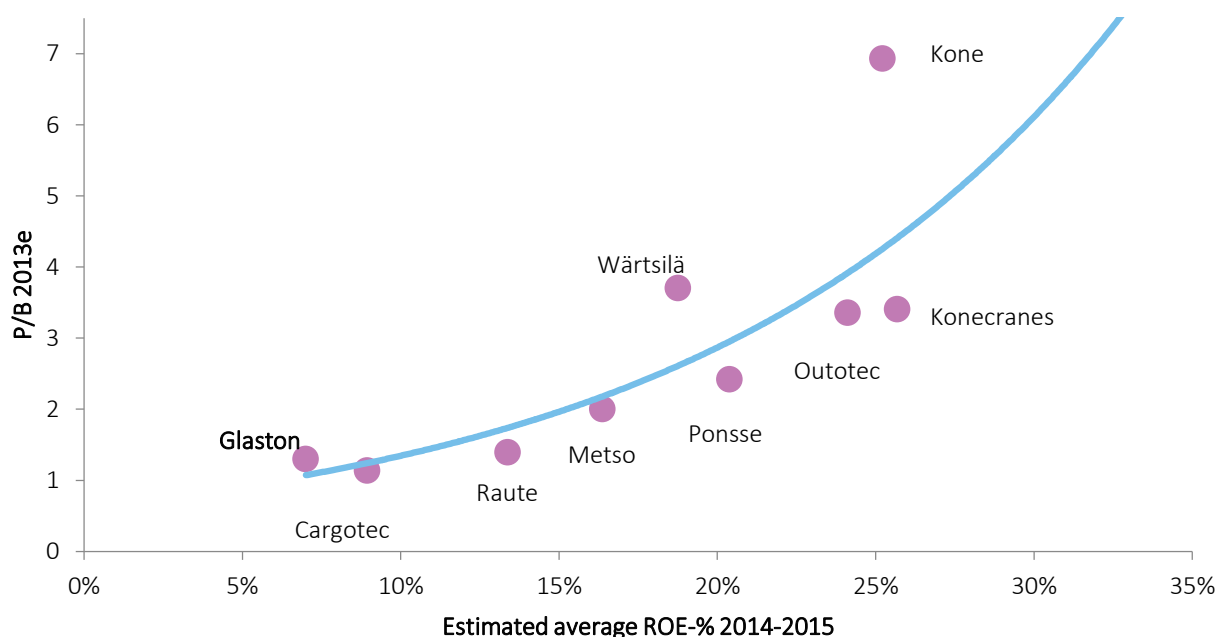
Market expects significant earnings improvement from Glaston in 2014, while in general sectors’ earnings growth is limited. Therefore the valuation of Glaston looks more attractive with FY’14e multiples than with FY’13e. It’s important to take note that the situation is expected to be similar also in the coming years.

It’s also worth noting that the peer group presented above includes basically the best that Nordic machinery has to offer. Naturally companies have mostly very different drivers and starting points, making this a somewhat unfair competition tipping the scale slightly to Glaston’s direction. Still we couldn’t accept a significant premium for Glaston; first company must prove its ability to perform.

There’s one factor where Glaston looks very attractive without modifications: P/B-figure, which is currently around 1.2. However, this is only relevant if company can earn decent return on equity (ROE-%), which in Glaston’s case is problem. Glaston’s P/B-multiple is one of the lowest in the Finnish machinery sector, but unfortunately its ROE-% is the lowest despite the expected profit improvements. There’s a large amount of goodwill in the balance sheet, which isn’t “working” for the company. Eventually also with P/B-figure Glaston is in-line with peers, when comparing the price of equity to the expected return.

Glaston clearly suffers from the goodwill. If we speculate further, Glaston’s ROE-% would be roughly 15 % with 10 % EBIT-margin with current level of net sales. This means that there’s a deeper problem, and P/B has to remain low. What normally separates excellent operating models from good ones is the capital efficiency. Best example in Finland is Kone, whose asset turnover is more than 3.5 times higher than Glaston.

Glaston’s valuation is in-line with Finnish peers also in P/B & ROE-%



Source and estimates: Inderes 29.05.2013

Turnaround priced in, recommendation reduce

We believe that Glaston's current valuation is challenging. Significant profit improvements have to be realized in the coming years in order to justify current valuation. We do not recommend Glaston for risk-averse investors.

In summary, we believe that Glaston's current valuation is challenging. The turnaround of profitability is already priced in, and significant profit improvements have to be realized in the coming years in order to justify current valuation. Glaston is a difficult case to value, since there are no clear "support levels"; historical valuation isn't really relevant for the "new Glaston" and since the current earnings are very small and dividend-% is zero, the bottom is very challenging to form. Therefore the value is almost solely based on the future success and risks related to Glaston's share are high. We do not recommend Glaston for risk-averse investors.

Company seems to be doing the right things and we believe that the management is on the right road. Still, we don't see any upside potential when it comes to valuation.

Company's performance in the past has left very much to be desired. However, currently company seems to be doing the right things and we believe that the management is on the right road. The long-term drivers of Glaston are attractive, so if we can accept a valuation close to the current. Still, we don't see any upside potential when it comes to valuation. Note that the valuation can also rise, if company is unable to reach the expectations and future estimates have to be lowered.

When it comes to the upside potential of the share, the biggest potential clearly lies in earnings growth as well as improving the capital efficiency.

Despite the estimated profit improvement, Glaston's ROE%- is low compared to Finnish comps. There's a big difference in asset turnover, which means that it's not only a margin question. When it comes to the upside potential of the share, the biggest potential clearly lies in earnings growth as well as improving the capital efficiency.

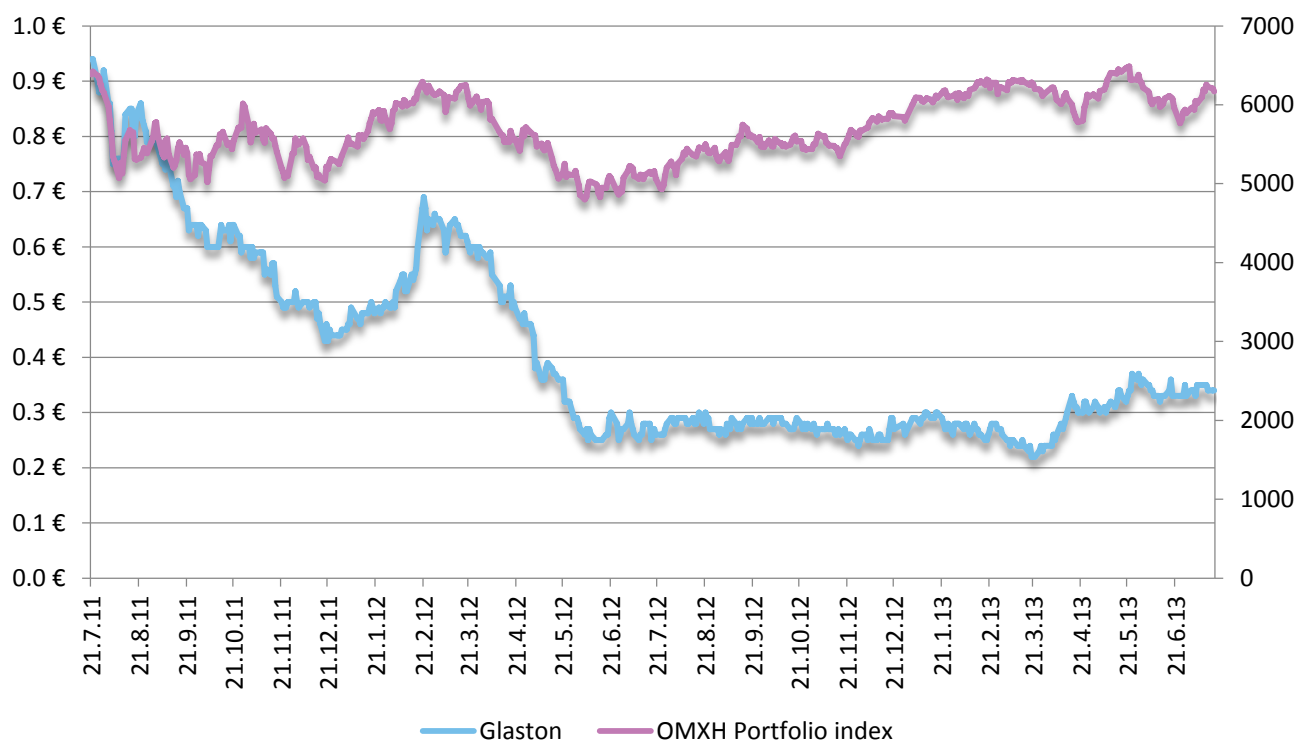
Glaston market value has tripled from roughly 25 MEUR to current 68 MEUR. While the share price has risen from 0.22 EUR to 0.34 EUR, the number of shares has risen from roughly 105 million to 194 million.

One thing that investors should definitely understand is that Glaston market value has nearly tripled from roughly 25 MEUR to current 68 MEUR. While the share price has risen from 0.22 EUR to 0.34 EUR, the number of shares has risen from roughly 105 million to 194 million. This naturally makes a huge difference in the valuation and MCAP. Most of the rise can be easily justified; after all, Glaston was in a really tough financial situation before the heavy financial restructuring finished in Q1'13. At 0.22 EUR per share Glaston was clearly a bargain, but that's no longer the case. In the future, share price can justifiable rise only through solid earnings development.

Our recommendation is reduce and the target price for the next six months is 0.33 EUR.

Our recommendation is reduce and the target price for the next six months is 0.33 EUR. The market expectations reflected on the current share price are high and we wouldn't be surprised, if there would be better entry points arriving in the next six months. Glaston has a lot of potential, but the risks that are discussed in detail in the next chapter are also high.

Glaston's share price development



14. Risks

Glaston's risk profile is still relatively high from investors' perspective.

In this chapter we focus on the risks of Glaston. Every investment carries a risk, and Glaston's risk profile is still relatively high even though the balance sheet is now strong. Note that we have considered risks especially from investors' standpoint, and we haven't included any operational or other risks that are always present in business. We believe that the biggest risks are the following.

Delay of the profit improvements

The biggest risk of Glaston's investment case could be the combination of low visibility and high expectations. Since the macro economy continues to be weak, there could be a delay in the expected profit improvements, even if the company itself would improve its internal performance.

Perhaps the biggest risk that we see in Glaston's investment case is combination of low visibility and high expectations. This is typically a dangerous combination for investors. While we believe in the long-term case of Glaston, the macro-economic situation is likely to continue to be sluggish. This could easily cause a delay in the profit improvements that are expected both by us as well as the market, even if the company itself would improve its internal performance.

Since the valuation of the share is high, the markets probably have a low tolerance for possible setbacks.

If the market situation wouldn't improve like expected, the volumes wouldn't recovery and it would be extremely difficult for Glaston to reach the current expectations. Since the valuation of the share is high, like discussed earlier, the markets probably have a low tolerance for possible setbacks. Since Glaston's track-record is weak, the confidence of investors could be seriously hurt by possible delays. This would be visible also in the share price, which doesn't have many support levels after a quick upswing.

Strong cyclicity of the business

Cyclicity of the business is strong, which is clearly a risk that has to be noted.

While the long-term drivers for the glass demand as well as Glaston processing machines is strong, this business is also very cyclical. The biggest users of glass, construction and automotive sectors, are both cyclical. Therefore it isn't surprising that the demand of glass is also cyclical.

The demand for new machines is very cyclical, but services business smoothens the overall cyclicity slightly. Glaston's net sales are also well-diversified both geographically and client wise.

When it comes to Glaston, the demand for especially new machines is even more cyclical. In conditions of economic growth, company's clients invest more and machine sales increase. In an economic downturn or recession, the amount of investment falls. The cyclicity is smoothened by the demand for services, machine updates and optional accessories. Also Glaston's geographical market areas – EMEA, Asia and America – help to balance the cyclical fluctuations to some degree. Moreover, Glaston has a number of different customer groups, which means that the economic cycles of the construction, automotive and alliance industries tend to partly balance each other out. Glaston's customer structure is also diversified.

Even though all these factors, we still think that Glaston should be considered very cyclical. If one needs convincing, one can look at the sales development before and after the financial crisis. While the boom and bust

was naturally exceptionally strong, it's still an example of the cyclical and higher than average risk profile..

Poor track-record in profitability

Glaston has a poor track-record in profitability especially after the financial crisis.

Glaston has been struggling financially and has had a very poor profitability after the financial crisis. Naturally one can blame the market situation, which was undoubtedly terrible during the worst years, this cannot be the sole reason for Glaston's poor performance. After all, most industrial companies were able to recover relatively quickly while Glaston continued struggling until this year. We believe that poor track-record is a risk, because it also creates uncertainty for the future; there's no meaningful reference point in the past, making it more difficult to analyze the potential. Poor track-record isn't easily forgotten either, so if company were to disappoint markets, it might lose their confidence faster.

We believe the former CEO made some significant strategic mistakes that worsened the already shadowy situation.

We believe that the former CEO Mika Seitovirta (and his management team) made some significant strategic mistakes that made Glaston's situation worse. Probably the biggest one was that Glaston was gearing up for a period of fast growth and made front-loaded investments right at the top of the boom - time, when one should have been preparing for decline in demand. However, with hindsight these things are naturally easy to see. Whether big mistakes were made or not, Glaston turned from basically net debt free to a crisis company in only few years. After destroying so much shareholder value, we believe that it's justified waiting for proofs of the improved profitability before estimating huge profit improvements for the coming years. Therefore we have tried to keep our expectations in a modest level.

Competitive pressures (both fair and unfair)

Glaston's R&D and patents give it a technological advantage, but in China company's patents haven't always been respected. If this continues, it could be very detrimental for the company.

Competition is naturally always present in all businesses, but in Glaston's case the competitive and innovative pressure can be more pressing, since its competitive edge derives largely from technology. We are confident about Glaston's technological superiority against its competitors. Company has protected its technology through patents that company has over 500.

However, especially in China these patents have been ignored and at least one competitor has been using Glaston's propriety technology that should be protected by patents. Glaston has litigated over the matter in many countries and won all the other cases, but in China they lost. This could be a significant setback for a company that's main competitive edge is the superior technology and continues investments R&D. Chinese competitors might receive an unfair advantage through this.

There's always the risk that a competitor will be more successful in innovations and catch up Glaston, whose competitive edge is based on technological advantage.

Of course there's also a risk of tightening competition also without problems mentioned above. This is clearly visible in pre-processing machines, and with time it would be surprising if the competitors would be able to catch up the lead of Glaston also in heat treatment. There's always the risk that a competitor will develop the "next big thing", if the competitive edge is based

on technological advantage. It's important to understand that competitors don't necessarily have to reach the level of Glaston in order to do "good enough" and gain some market share. Already this would reduce Glaston's pricing power and add the pressure on the margins.

Goodwill in the balance sheet –especially in pre-processing

Glaston's otherwise strong balance sheet has one significant weakness in it: goodwill of 36.8 MEUR. We believe that the goodwill allocated to pre-processing, which amounted to 10.2 MEUR, is still facing some pressure of impairment charges.

Although Glaston's balance sheet is currently strong, there's one significant weakness in it: goodwill of 36.8 MEUR (at the end of Q1'13). The amount of goodwill isn't deadly considering that Glaston currently had 53.3 MEUR of equity in the end of Q1'13 and most of the goodwill is estimated to be justified. However, we do believe that some of the goodwill is still under pressure of impairment charges, if the financial development doesn't pick up. This is the share of goodwill allocated to pre-processing, which amounted to 10.2 MEUR at the end of 2012. This mostly derives from the Bavelloni acquisition done in 2003, which in hindsight has been a poor investment. It has never been as profitable as hoped, and the outlook isn't bright either.

We don't see an immediate risk for any impairment losses, since the "risky" goodwill starts to be at a reasonable level.

The risk of goodwill was realized last time in Q4'12, when Glaston declared an impairment loss of 3 MEUR. Currently we don't see an immediate risk for any impairment losses, since the "risky" goodwill starts to be at a reasonable level. Even without new impairment losses, significant amount of goodwill in the balance makes it difficult for the company to reach good levels of ROE-%. This in turn means that company's P/B-ratio is bound to be low.

Most of the risky goodwill derives from problematic acquisition of Bavelloni.

Problems of Bavelloni probably derive mostly from two things in our opinion: company used to be family-owned and run that means that its culture was far from the profit-driven listed company. In the other hand, Italian labor structure is far from flexible, which made changing this very difficult. The other factor was simple the deteriorating business environment in pre-processing, mainly meaning rising competition (mostly from Asia) though the demand has been sluggish in the past years also.

We believe that Glaston would gladly divest Bavelloni, if the right offer would come along. However, due to reasons mentioned above, we believe it's stuck with pre-processing for a long time.

M&A and shareholder value creations

Glaston's possible M&A activity in the future naturally cannot be judged or estimated based the past success or lack of it. This is especially true when the past mistakes have been made a long time ago and by different management teams.

It's impossible to judge company's possible future M&A activity, acquisitions or divestments, based the past success or lack of it. This is especially true when the past mistakes have been made by different management teams, since Glaston's management has been changed a long time ago. Note that here we are focusing on the acquisitions and divestment that concern Glaston, not Kyro Group that used to own Glaston as well as many other companies in different fields.

Still, we feel obligated to point out that the track-record of Glaston's M&A activity

When it comes to acquisitions made in the 21st century, at least Bavelloni and A+W Software have been destroying shareholder value. While we

is relatively poor. In the past company has made mistakes in M&A, and shareholder value has been damaged significantly.

cannot estimate the effect of Finton Oy acquired in 2002, since we don't have enough information about it, we do believe that it was strategically a mismatch. Same could be said about the glass processing operations in general, though they might have contributed positively also to the machines development side.

We believe that the current management will be more deliberate when it comes to acquisitions, and that the company has learned from its past mistakes. Therefore we don't believe this risk to be very relevant currently. Still, we feel obligated to point out that the track-record of Glaston's M&A activity is relatively poor.

Liquidity and volatility of the share

Glaston share's liquidity is relatively poor and its volatility is high, partly because the low share price. Investors should take this into account.

Glaston share's liquidity is relatively poor and its volatility is high, partly because of the low share price. With the share price around 0.35 euros, even the small changes in the absolute price lead into relatively large changes in percentages. We don't consider this risk to be very relevant for long-term investors, but it can be problematic for others. In our mind it changes the way investors should approach the share. Over a short period of time there can be significant fluctuations in the share price, which means that we do not recommend Glaston's share to those investors, who cannot handle this (risk-averse investors). However, if you are a long-term investor, these short-term fluctuations can be more of an opportunity than a risk to you.

Liquidity is naturally a bigger problem for larger investors, since it will take a long time to accumulate a large position in Glaston's share. At the same time, these larger moves can naturally have significant effect on the share price. Naturally this has to be considered, but it's naturally a risk that concerns the business of Glaston.

Appendixes

Appendix 1: Current future estimates

Key Figures	Q1'12	Q2'12	Q3'12	Q4'12	FY'12	Q1'13	Q2'13E	Q3'13E	Q4'13E	FY'13E	FY'14E
Net sales	30.2	28.5	24.6	32.3	115.6	26.4	29.5	26.1	35.0	117.0	127.4
Machines	21.9	21.7	18.4	22.7	84.7	19.1	22.0	19.1	24.5	84.7	92.3
Services	8.5	7.0	6.8	9.9	32.3	7.7	7.8	7.6	10.8	33.9	36.7
Eliminations	-0.2	-0.3	-0.7	-0.3	-1.4	-0.4	-0.3	-0.6	-0.3	-1.6	-1.6
EBITDA	0.6	0.0	-0.4	-0.6	-0.4	4.6	1.5	1.2	2.8	10.0	9.4
Depreciation	-0.6	-0.7	-0.5	-0.4	-2.2	-0.5	-0.4	-0.4	-0.4	-1.7	-1.6
Amortization	-0.7	-2.0	0.5	-1.0	-3.2	-0.7	-0.9	-0.9	-0.9	-3.4	-2.7
EBIT	-3.7	-2.7	-0.4	-2.0	-8.8	3.4	0.2	-0.2	1.5	4.9	5.0
EBIT excl. NRIs	-0.8	-2.7	-0.4	0.5	-3.4	-0.4	0.2	-0.2	1.5	1.2	5.0
Machines	-0.9	-1.7	-0.5	0.4	-2.6	-0.4	0.0	-0.3	0.7	0.1	3.0
Services	1.7	1.0	1.2	2.0	5.9	1.2	1.3	1.2	2.0	5.7	6.6
Non-recurring items	-3.0	0.0	0.0	-2.5	-5.4	3.7	0.0	0.0	0.0	3.7	0.0
Net financial items	-1.5	-1.9	-1.7	-3.5	-8.6	2.3	-0.5	-0.5	-0.5	0.8	-1.2
Pre-tax Profit	-5.2	-4.6	-2.1	-5.5	-17.4	5.7	-0.3	-0.7	1.0	5.7	3.9
Taxes	0.2	-0.4	0.3	-0.9	-0.8	-1.0	0.1	0.1	-0.2	-1.0	-0.6
Minorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net earnings	-5.3	-4.1	-7.6	-5.4	-22.4	4.7	-0.3	-0.6	0.9	4.7	3.3
Net sales growth %	7.0 %	-19.8 %	10.0 %	-3.8 %	-3.5 %	-12.5 %	3.5 %	6.3 %	8.2 %	1.3 %	8.8 %
EBITDA %	1.9 %	0.0 %	-1.6 %	-1.7 %	-0.4 %	17.2 %	4.9 %	4.4 %	8.0 %	8.5 %	7.4 %
EBIT %	-2.6 %	-9.5 %	-1.6 %	1.5 %	-3.0 %	-1.3 %	0.5 %	-0.6 %	4.3 %	1.0 %	4.0 %
EPS excl. NRIs	-0.02	-0.04	-0.07	-0.03	-0.16	0.00	0.00	0.00	0.00	0.00	0.02

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Recommendation	Upside potential*
Buy	> 15 %
Accumulate	5 - 15 %
Reduce	-5 - 5 %
Sell	< -5 %

* Potential regarding to 6 month target price

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Glaston Summary

Profit & Loss	2010	2011	2012	2013e	2014e
Sales	149	120	116	117	127
EBITDA	-10	5	0	10	9
EBITDA margin (%)	-7.0	4.2	-0.4	8.5	7.4
EBIT	-25	-3	-9	5	5
Pre-tax profit	-32	-14	-17	6	4
Net profit	-32	-17	-22	5	3
EO items	0	0	0	0	0
Balance Sheet	2010	2011	2012	2013e	2014e
Total assets	195	187	158	138	145
Shareholder's equity	39	53	31	56	59
Goodwill	53	53	37	37	37
Interest-bearing debt	61	60	60	29	29
Cash Flow	2010	2011	2012	2013e	2014e
EBITDA	-10	5	0	10	9
Chnage in NWC	16	11	-21	21	-1
Operating cash flow	3	17	-24	31	8
Free cash flow	-4	5	1	26	1

Company Description

Glaston is a global company developing glass processing technology for architectural, solar, appliance and automotive applications. Company's portfolio ranges from pre-processing and safety glass machines to services and it offers services for all glass processing needs with a lifecycle-long commitment in mind.

Glaston serves its customers worldwide in over 20 locations. Glaston has production in four countries on three continents. At the end of 2012, Glaston had around 600 employees. Company has two reporting segments: Machines and Services.

Glaston's head office is located in Helsinki, Finland. Glaston's share (GLA1V) is listed on the NASDAQ OMX Helsinki Small Cap List.

Per Share Data	2010	2011	2012	2013e	2014e
EPS	-0.41	-0.16	-0.21	0.02	0.02
EPS adj.	-0.23	-0.16	-0.16	0.00	0.02
Operating cash flow per share	0.04	0.16	-0.23	0.16	0.04
Book value per share	0.50	0.50	0.29	0.29	0.30
Dividend per share	0.00	0.00	0.00	0.00	0.00
Dividend payout ratio, %	0.0	0.0	0.0	0.0	0.0
Dividend yield, %	0.00	0.00	0.00	0.00	0.00
Ratios	2010	2011	2012	2013e	2014e
P/E	neg.	neg.	neg.	13.3	18.8
P/B	1.8	0.9	0.9	1.1	1.1
P/Sales	0.5	0.4	0.2	0.5	0.5
P/CF	21.7	2.9	neg.	2.0	7.8
EV/Sales	1.0	0.8	0.7	0.6	0.6
EV/EBITDA	neg.	19.7	neg.	7.3	7.7
EV/EBIT	neg.	neg.	neg.	15.0	14.3

Company Miscellaneous

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IR:	Agneta Selroos	Webpage	www.glaston.net

Major Shareholders

	Capital	Votes		Capital	Votes
Etera Mutual Pension Fund	14.0 %	14.0 %	Gws Trade	6.9 %	6.9 %
Varma Mutual Pension Fund	9.0 %	9.0 %	G.W.Sohlbe	6.6 %	6.6 %
Teollisuussijoitus	8.6 %	8.6 %	Yleisradio f	5.4 %	5.4 %



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