



Wavin insight:

An exploration of its critical business issues from a financial
point of view



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1. Background Bachelor thesis

This thesis is the final assignment for the study *Bedrijfskunde* of the Twente University. In this thesis a research assignment is carried out for the sub-department Contractors, Building, Materials and Engineers (CBME) of the Corporate Clients department of ING Nederland. ING is a global financial services company providing banking, investments, life insurance and retirement services. ING serves more than 75 million customers in Europe, the United States, Canada, Latin America, Asia and Australia. ING Nederland is organised in 6 different lines of business:



Corporate Clients is a part of Wholesale Banking, more specifically of the client division of Wholesale Banking. Within Corporate Clients, clients are allocated to one of the six sub departments based upon branch membership. The department CBME therefore handles clients like BAM, Arcadis and Wavin.

CBME is a small department with two relationship managers and one assistant relationship manager. Together they manage a portfolio of 30 companies. An important part of their job is to keep up with the market developments and the challenges their clients are facing. Sector-and company research plays an important role in this process. Information obtained and provided by corporate clients is viewed as the starting point of business by ING upper management.

2. Research motives

This section has not been disclosed with reference to confidentiality issues.

3. Research question

Following from the research motives, it becomes clear that there are two objectives in this thesis. First the development of a framework that can be used for client- and sector analysis. And second, the identification of critical business issues of Wavin N.V. As the main point of interest of the department CBME is to generate new business, and thus act on the second objective, the identification of critical business issues will be the subject of the main research question:

What are the critical business issues of Wavin N.V.?

In order to answer this question satisfactory, insight in the position of Wavin must be provided. This can be done by applying a framework for client- and sector analysis on Wavin. The development of this framework is the subject of the supporting research question:

Which aspects are important for ING to include in a framework for client- and sector analysis?

In order to keep the overview among the different aspects which are relevant, a distinction is made between aspects that belong to the:

- ❖ Sector
- ❖ Main players in the sector
- ❖ Organization

This distinction implies an outside in approach as the basis for the framework. Before it is possible to elaborate on characteristics and strategy of an organization it is essential to get familiar with the context the organization is operating in. This means analyzing the sector of an organization first. When the relevant aspects of the sector are understood, it is important for ING to zoom in on different players in this sector. By comparing them, insight in which organizations are performing well and which are not is provided. When the aspects of both sections are clear the organization itself will be analyzed.

Once all three sections are analyzed it is possible to compare them to each other and answer the main research question: What are the critical business issues of Wavin N.V.?

¹ If the framework is applied on an organization which is not one of the main players in the sector, a peer group of the company should be analyzed instead.

4. Research Method

This thesis will follow ING's way of working. The format for the framework will therefore be a PowerPoint presentation. ING uses PowerPoint presentations instead of text documents because they provide many options for visualizations and are more to the point. When the framework is filled in for Wavin, the PowerPoint presentation will be converted into a text document for Twente University as bullet points and pictures do not leave much room for elaboration.

Aspects, used in the framework, from the three distinguished sections (*Sector, Main players in the sector and Organization*) are selected based on relevance and availability of data. Theoretical models such as Porter's five forces model will also be used in the framework in order to summarize information and place it into perspective.

The data to fill in the framework, when it's applied on Wavin, will be gathered through desk research and interviews with ING employees. As the goal for ING is to be proactive towards Wavin with this thesis, Wavin will not be approached with information requests or interviews.

The desk research will focus on annual reports, investor reports, studies from external research organizations and other publicly available information about the sector and its main players. Information from ING departments such as corporate finance, equity analysts and ING research will also be a valuable source of information.

On a regular basis the progress of the thesis is discussed with both supervisors (UT and ING) and directions and boundaries of the thesis are set in these meetings. Since ING want to use the outcomes of the main research question in a pro active approach to develop new business, the questions are viewed from a financial point of view.

When the framework is completed for Wavin, the analysis will be discussed with the members of the CBME department to identify critical business issues and answer the main research question. The completed framework and identified critical business issues will be presented to the director corporate strategy of Wavin.

5. Supporting research question

-Which aspects are important for ING to include in a framework for client- and sector analysis?

This section has not been disclosed with reference to confidentiality issues.

Aspects related to the Sector:

The purpose of this section is to get familiar with the context the organization is operating in and create an understanding of the market. Therefore this section will start with a sector definition in which the boundaries of the sector are set. As the analysis aims to identify critical business issues of the company, the definition of the sector needs to correspond with the part of the industry the organization does business in. When an organization only operates in Europe it has no use to analyze the same sector in Asia as well.

The second aspect of this section will focus on a segmentation of the sector. Since trends, demand and growth potential vary for different products of an organization a segmentation of the sector based on products is necessary. Then the value chain position of organizations operating in the sector is analyzed. Especially insight in which organizations in the value chain have direct contact with the end user/customer is important.

When the definition, segmentation and position of a sector are clear it is time to analyze the characteristics of a sector in more detail. This section is approached from a financial point of view. ING provides services on all financial areas from general lending to mergers and acquisitions, so market characteristics and dynamics need to be well understood if ING wants to identify financing opportunities. At least information about the market form, rivalry, entry barriers, geographic spread, main assets, capital intensity and cash flow generation needs to be mentioned. Sector specific information such as strong governmental influence should of course also be mentioned.

The next step is to provide data with respect to the outlook en growth potential in the sector. Estimates of market growth and important factors that influence the growth potential are the main subject here.

The five forces model of porter⁷ is used to reflect on the above data. As the purpose of the five forces model of porter is to determine the competitive intensity and attractiveness of a market it can serve to summarize the analyzed data. The section ends with important trends of the sector. The five forces of porter are the starting point in describing these trends, in other words what are the developments in these five area's? However, also changes in the market conditions and outlook of the sector are important to mention. The last area for which changes and developments will be analyzed is the product characteristics area.

⁷ Porter, M.E., Harvard Business Review, 1979

The aspects that will be analyzed in this section are:

- Sector definition
- Sector segmentation
- Value chain position
- Main characteristics and dynamics of the sector
- Market growth
- Porters five forces model
- Recent trends

Aspects related to the main players in the sector:

When the relevant aspects of the sector are understood, it is important for ING to zoom in on different players in this sector. By comparing them, it is possible to get a feeling with what is a good performance in the sector. As clients of ING's corporate clients division are typically large organizations, they will normally be one of the main players in the industry. However, if this is not the case a peer group of the organization, which is the target of the analysis, should be compared instead. Insight in how the peers of the organization compare to each other is the overall purpose of this section.

The main players in the sector will be selected based on their revenues. A short overview with basic data will be the first part of this section. This short overview consists of the core business of the companies, location of its headquarters, worldwide presence, revenues and their notation on a stock market. These elements are chosen to reflect the main activities of a company, its origin, the size of a company and its ownership.

The second step in this section is a detailed comparison of the financial figures of the main players. As not all organizations are listed on a stock market, not every organization is obligated to publish an annual report with detailed financial figures. Players for this detailed comparison will therefore be selected based on availability of data. Again, the main point of interest for ING is generating new business so the financial figures of the organizations are therefore the most relevant. The figures which will be used to benchmark the largest players in the industry are chosen to reflect the size of the companies (revenues, total assets, net debt and employees) and their profitability (net profit, EBITDA, EBITDA margin, and revenues per employee). When analyzing these figures large differences need to be explained and additional relevant information provided. Furthermore the geographic spread of the companies must be looked into, to identify gaps in players their footprint.

This section ends with a comparison of the share price and enterprise value of the main players. With this data the relative position of each of the companies can be calculated.

The aspects that will be analyzed in this section are:

- Short overview of the main players
- Detailed comparison of the financial figures
- Geographic spread
- Share prices and enterprise values

Aspects related to the Organization

Now both the aspects of the sector and the main players are clear it is time for a detailed analysis of the organization itself. This section will start with a short introduction of the company by summarizing its history and stating the key data. The way the organization is structured needs to be explained through providing insight in the allocation of products by the organization to strategic business units. Also insight in the strategy of the organization is important as ING wants to become a strategic sparring partner of the organization. Because the strategy of an organization is rather complex to comprehend a division into four domains (vision, strategic objectives, strategic directions and strategic measures) will be used. Through the steps of strategic objectives and strategic directions the vision of a company can be translated into strategic measures. These two steps also result in comparable strategic measures to be grouped together, so that overview is maintained. Furthermore the footprint of the organization as well as the financial figures are again the subject of analysis. Since these aspects are also analyzed in the previous section the focus will be on the level of detail as well as creating an understanding of the financial development through the years. In addition to this analysis the financial figures per region and per business unit need to be stated. The strategy of an organization can then be compared with their actual situation. Growth potential and outlook for the different regions and business units are also important for the total picture of an organization. This section finishes with a SWOT analysis to summarize the position of an organization.

The aspects that will be analyzed in this section are:

- | | |
|-------------------------------------|--|
| -Short introduction | -Overall financial figures of the last years |
| -Allocation of products to SBU's | -Financial figures per region and BU |
| -Abstract of the corporate strategy | -Growth potential |
| -Detailed footprint | -SWOT analysis |

Now all relevant aspects of the three distinguished sections are identified, it is possible to combine them into a framework. As explained in the research method section, the format for the framework is a PowerPoint presentation. Apart from advantages regarding visualization options and the fact that a PowerPoint presentation is "to the point", a PowerPoint presentation is easy to adjust for- and apply on different organizations. What the complete framework looks like can be seen in annex 1. Here the framework is applied on Wavin N.V.

In the next chapter the PowerPoint presentation is converted into written text for the university, the three identified sections will serve as three new supporting research questions for the main research question.

Sector:

-What are the characteristics and trends of the European plastic pipe system sector?

Main players in the sector:

-Who are the main players in the European plastic building materials industry and how do they compare to Wavin N.V.?

Organization

-What are the characteristics and strategy of Wavin N.V.?

5.1 Framework section 1: The Sector

-What are the characteristics and trends of the European plastic pipe system sector?

This chapter will start with a sector impression in which the sector definition, segmentation and characteristics are addressed. Then the value chain is described. Subsequently the market growth will be explored with the help of Euroconstruct reports and the five forces model of Porter is used to provide a visual overview of the sector. The chapter finishes with important trends of the sector.

Sector impression

The sector in which Wavin operates can be defined as the European plastic pipe systems sector. While nowadays plastics are used in almost every industry, Wavin only targets construction markets with plastic pipe systems. As plastic products for construction markets differ a lot from, for example, plastics targeting the packaging material market a boundary of the plastic industry was necessary. The same holds for the addition of "European" to the definition. Wavin only operates in Europe, which is a completely different market than Asia or America.

The European plastic pipe systems sector consists of numerous types of products, from plastic sewer pipes to plastic floor heating systems. All plastic pipe systems however are used in the construction sector which is generally divided in three segments.²

- Residential construction market
- Non-Residential construction market
- Civil engineering construction market

Because trends, demand and growth potential differ for the different types of construction markets a segmentation of the plastic pipe systems sector is also convenient. In general it can be said that in the Residential and Non-Residential construction markets only above ground plastic pipe systems are used. Below ground plastic pipe systems mainly target the Civil Engineering construction market.

Segmentation based on the above- or below ground usage of the plastic product has another advantage. It makes a distinction based on the complexity of the plastic products. Below ground products are mainly straightforward and have relatively low margins, examples are:

- Foul water systems
- Drainage systems
- Cable ducting
- Distribution of gas and water

Above ground plastic products are more value adding products and therefore have relatively high margins, examples are:

- Floor heating/cooling systems
- Soil and waste discharge systems
- Roof gutter systems
- In-house electrical conduits

² Euroconstruct Summary report, November 2007

As above ground products target the (non)residential construction market, the segment shows a correlation with the developments in this market. This relationship also holds for the below ground products with the Civil Engineering construction market. However this correlation is a bit weaker because some below ground products target the (non)residential construction market as well. This means that growth of the (non)residential construction market will lead to growth potential in the above ground segments and civil engineering growth can boost the demand for the below ground plastic pipe systems.⁴

The market for plastic pipe systems in Europe is relatively young. The widespread use of plastics is something of the last decades. Substitution of traditional building materials (e.g. copper or concrete) is ongoing and therefore the overall plastic pipe system market is expanding.

The widespread use of plastic pipes in the building materials industry is further enforced by the recent attention for energy efficient building. Plastic pipe systems that transport cold water, for example, can replace air-conditioning systems as an energy efficient alternative.⁵

There are a few large multinational players active in the European plastic pipe system sector. While on a national level there are also a lot of small specialized companies, the investments necessary to operate on a European level limit the competition to a few large organizations. The capital intensity is high and the main assets of these companies are production plants and equipment together with the inventory. While the fixed costs are high, switching costs (from one type of plastic pipe to another one) are low. This limits the distinctiveness possibilities and emphasizes a strong focus on production cost reduction and efficiency. Relative market share and the added value of products are very important to determine the margins of products. A large market share provides pricing power and economies of scale. Because raw material costs are still a substantial part of a company's expenditures, fluctuations in these prices lead to volatility in gross margins.

Due to climate change, for example irregular rainfall patterns and flooding, new solutions for disposal and drainage are needed. These developments provide many possibilities to differentiate and organizations are trying to create niche markets such as last-mile telecom solutions and low noise foul water applications. The innovation rate among plastic pipe system producers is very high and new applications for plastic pipes are launched often.

The limited distinctiveness possibilities in the straight forward products have also led to a shift in the product portfolio of many organizations. More and more players focus on the above ground segment with its higher margins are greater complexity. While in the past, plastic pipes were sold "by the inch" leading companies today sell "pipe solutions" (complete systems).

High market standards, imposed by governments through quality directives, have led to a high level of technology needed to produce these products. Especially producing products made of PE and PP, require a substantial knowledge level. Apart from the capital intensity this is a serious entry barrier.

⁴ Bain&Company, Wavin report, 2005

⁵ GUA (Gesellschaft für umfassende Analysen GmbH (Vienna, Austria)) study "The contribution of plastics to resource efficiency" 2005

Value chain position

Plastic is made of polymers and plastic pipe producers buy these commodities from large petrochemical companies. They process the raw material into the plastic pipes which are sold to building and plumbing wholesalers and large civil merchants. The clients of plastic pipe producers are thus distributors and not the actual installers of the products. Companies operating in the end market, the buyers from the distributors, are housing developers, plumbers and civil contractors. Products targeting the Civil Engineering construction sector, however, are sometimes sold directly to the end market. Clients in this sector are often large organizations and the volume of plastic pipes is much higher. Figure 1 visualises the value chain.



Figure 1

Suppliers

For some time now there is a consolidation trend going among the petrochemical companies. Being the biggest is key and the ones that still remain are typical large multinational organizations. Plastic polymers are just a by-product for these organizations and they are able to pass material costs volatility through, to the plastic pipe producers, despite fixed contracts. This price setting is also possible because the refinery capacity in the world is limited. New refinery capacity is expected on the mid/long run from the Middle East but until then plastic pipe producers have to cope with powerful suppliers.⁶

Distributors

Preferences of the actual clients (distributors) and installers differ so it is very important for plastic pipe system producers to maintain close interaction with both groups.

Wholesalers and civil merchants are often large organisations and they prefer reliable suppliers with broad product portfolios that operate in the same countries as they do. This means that there are close relationships between the plastic pipe systems producers and their clients. While theoretical switching costs for distributors are low this does not happen often and it can be stated that there is strong brand loyalty in the industry. Because there are many distributors and the market is highly fragmented, distributors have limited bargaining power. A consolidation trend however is visible and it could very well be that distributors will play a bigger role in the future.⁷

⁶ Russel Boon, Director ING Corporate clients, team natural resources

⁷ Wavin annual report 2007

Market growth

There are two important factors that influence the growth of the plastic pipe systems market. Substitution of traditional building materials and change in construction output (the end market). Since there has been a continuing upward substitution trend for the last few decades, the relative market share of plastics in pipe systems is still growing. Figure 2 clearly shows this trend in the heating and cooling systems segment where the use of plastics compared to metals grows with almost 2 percent per year.⁸

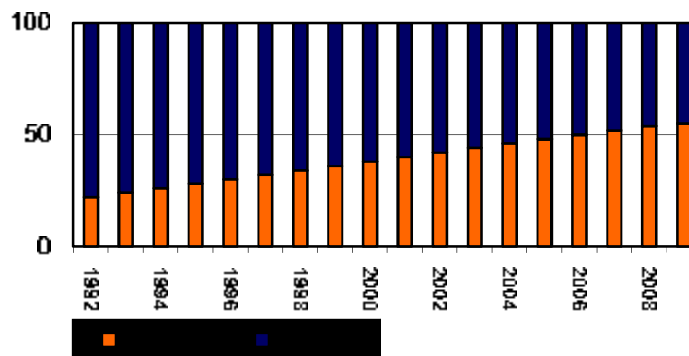


Figure 2

The other important growth factor, change in construction output, is a result of the strong correlation between the plastic pipe system sector and the construction market. This change is reflected by the Euroconstruct reports in which an estimate of the outlook for the construction sector in Europe is made every half year. Figure 3 shows the outlook for the construction output while figure 4 reflects the contribution to the construction sector from the different sub-sectors.⁹

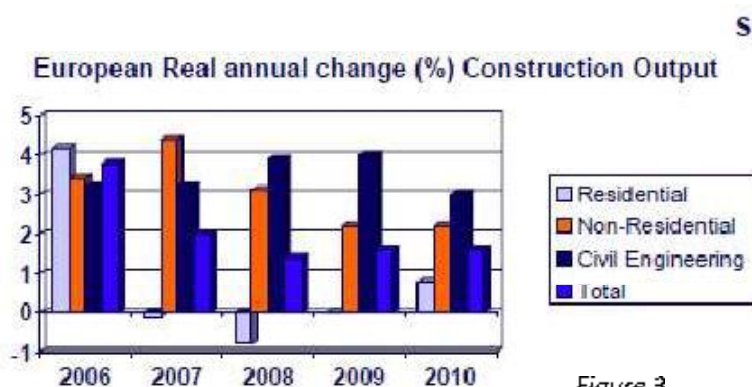


Figure 3

Share of Construction Sectors 2006

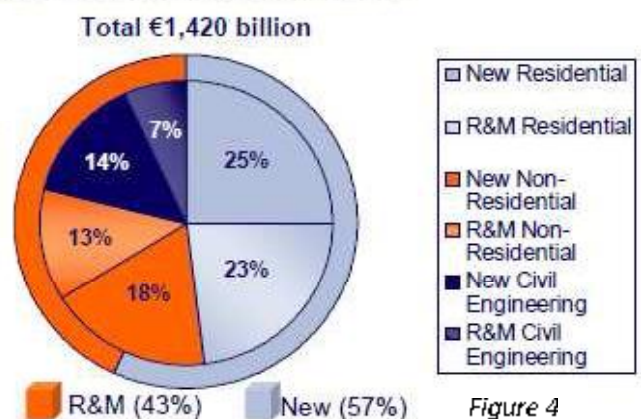


Figure 4

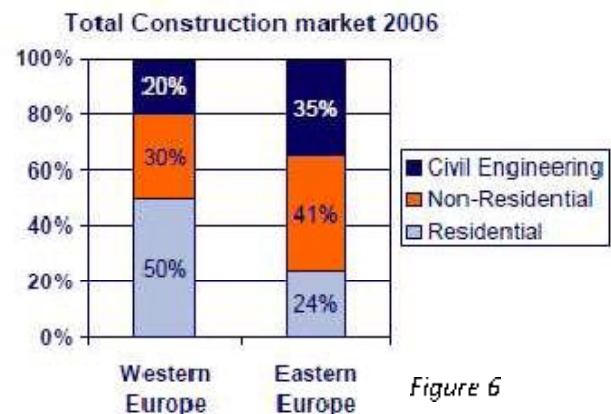
It can be seen that after years of buoyant growth the growth of the (non)residential constructing sector is slowing. Falling real estate prices (mainly in Spain, UK and Ireland) together with cautious investors put the brake on demand. Because the civil engineering sector is driven by government investments this sector is less volatile which is reflected by stable growth rates. These developments mainly effect the demand for above ground plastic products and implies a larger role for renovation and maintenance activities, especially in mature markets. In 2006 renovation and maintenance

⁸ KWD, European plumbing and heating systems, 2006

⁹ Euroconstruct summary report, December 2007

activities already amounted for 43% of the total construction output and this percentage will continue to rise with the current developments.

The short time outlooks are pessimistic but an important differentiation must be made between eastern- and western Europe.



While the construction market in western Europe has to cope with a slowdown, prediction in eastern Europe is for a strong increase in construction output for the next few years (figure 5).¹⁰ Construction markets there are mainly driven by civil engineering, which represent a much larger share of the construction sector than in western Europe (figure 6). The civil engineering segment in eastern Europe is benefiting from large governmental investments and subsidies from EU structural funds.¹¹

Oil prices also influence the potential market growth of the plastic pipe system sector, although indirectly. Raw materials used in the plastic pipe sector are by-products of Oil-refineries (PE, PP and PVC). When oil prices increase it is more profitable for refineries to produce other products. The production of polymers will be limited and limited capacity leads to higher plastic prices (figure 7). So high oil prices also have a negative effect on the market growth of the plastic pipe systems sector.

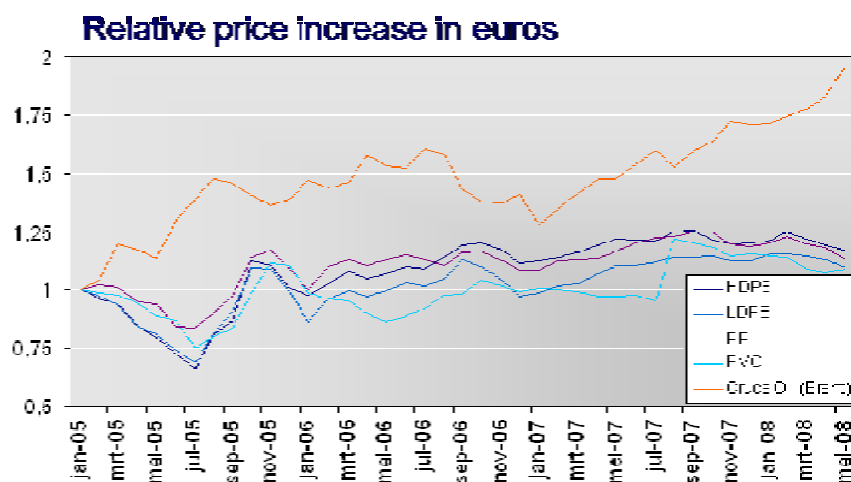


Figure 7

¹⁰ Euroconstruct summary report, December 2007

¹¹ Eastern and Central European Business Development group, Plastic pipes, CEE & Russia market study 2007

Of course also macro economic factors influence the potential growth of the plastic pipe systems sector. Key indicators for the general economy are changes in the gross domestic product, consumption and investments, employment and inflation. Table one shows the forecast of the European commission for the next years. The Economic growth of Europe is clearly slowing and there are no recovery signs in the near future.

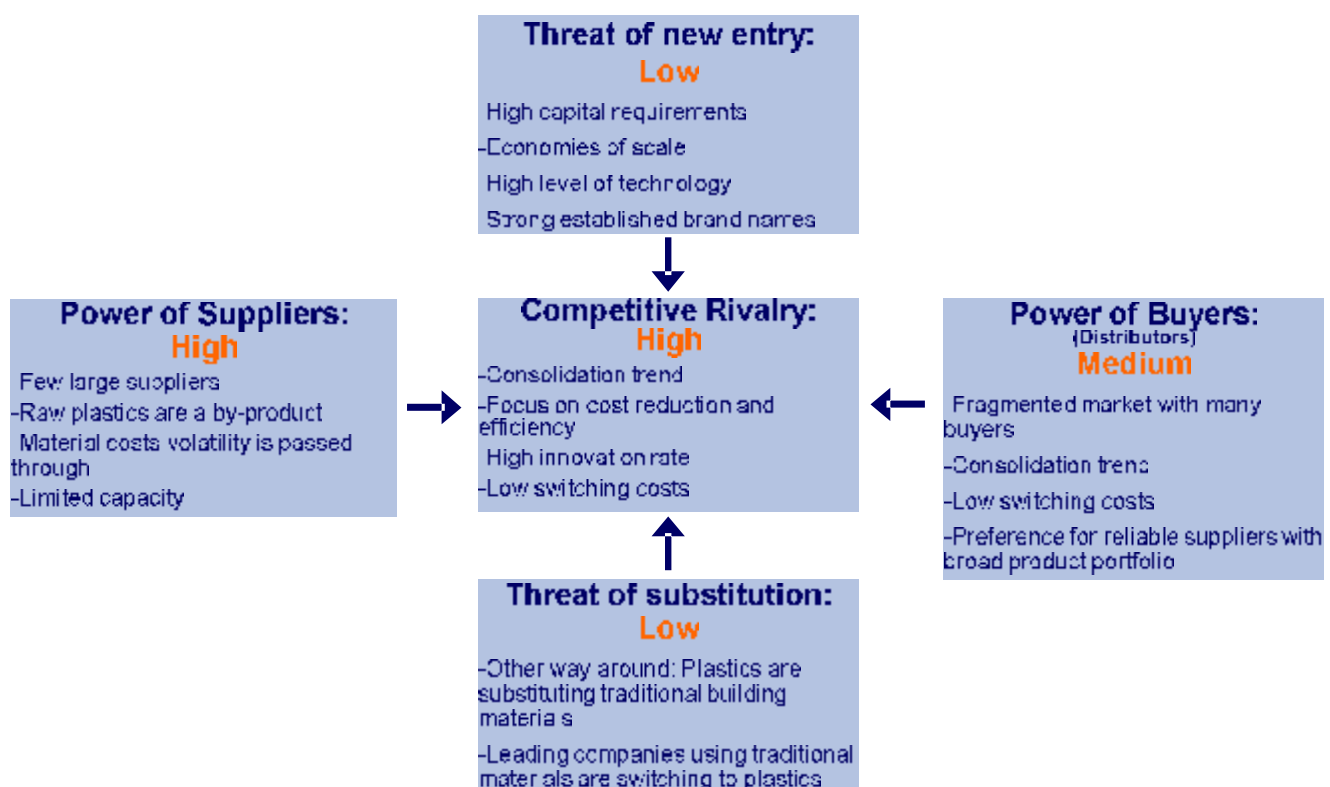
Economic outlook EU27			
Real annual % change	2007	2008	2009
GDP	2.8	2.0	1.8
Private Consumption	2.1	1.6	1.6
Total Investment	5.4	2.8	2.0
Employment growth	1.7	0.8	0.5
Unemployment rate % of labour force	7.1	6.8	6.8
Inflation	2.4	3.6	2.4

Source: European Commission Spring 2008 Forecast

Table 1

Porter's Five forces analysis¹⁷

This model uses concepts developed in Industrial Organization (IO) economics to derive 5 forces that determine the competitive intensity and therefore attractiveness of a market. It is a great tool to summarize the above information and place it into perspective.



¹⁷ Porter, M.E., Harvard Business Review, 1979

Recent trends

As the five forces analysis of Porter shows, the focus of power and thus threats to plastic pipe producing companies come from within the value chain. High entry barriers and the low threat of substitution lead to little vertical threats. Close interaction with the players in the value chain is very important as well as being aware of the developments in these segments. Suppliers, Rivalry and Buyers are therefore the starting point in describing the recent trends plastic pipe systems producers are subjected to. The threat of new entry and substitution are neglected as they form no serious danger. However, trends in overall market conditions and product characteristics are important for the outlook of the entire sector, which is why these areas are also covered.

Suppliers	• Upward pressure on raw material prices continues as a result of shortages • New refinery capacity is coming from the Middle East in the mid/long run • Consolidation trend ongoing, being the biggest is key
Rivalry	• Consolidation of competition, mainly by bolt on acquisitions • Focus on high-growth, high value-added sectors especially the Hot & Cold segment • Leading Companies are moving from selling inches pipe to selling complete systems • Growth of plastics in high value-added sectors leads to new competitors who are changing their product portfolio (e.g. acquisition of Henko by Aalberts)
Buyers (Distributors)	• Consolidation trend • Emphasis on reliable suppliers with broad product portfolio, Just in time deliveries
Market Conditions	• R&M activities are becoming more important in the mature markets • Construction sector of WE slows especially in Ireland, UK and Spain • Construction sector of CEE is still growing, driven by GDP growth and large investments in infrastructure of governments • Total costs installed is key in WE. Speed and ease of installation is considered best way to keep costs down. Plastics are becoming first choice due to their low maintenance, long life time and ease of installation
Product	• High innovation rate of new products/solutions enforced by: - climate change (e.g. irregular rainfall patterns and flooding require new disposal/drainage solutions) - energy efficient building (e.g. airco's are replaced by cold water plastic pipe systems) • Substitution trend of traditional building materials with plastics ongoing • Continuous improvement of plastics characteristics and its applications

5.2 Framework section 2: The main players in the sector

Who are the main players in the European plastic building materials industry and how do they compare to Wavin N.V.?

In an investor presentation Wavin recently held, it positioned itself against other large players in the plastic pipe systems sector. Because those organizations are viewed by Wavin as its peers they will be used as the benchmark for Wavin in this section. The selection Wavin used is limited to the European plastic pipe systems market which corresponds with the definition of the sector made in the beginning of this thesis. While Aalberts Industries was not named as a peer of Wavin in the investor presentation, it was added to the list to reflect the changing mindset of traditional building material companies. Some of them are diversifying and because Aalberts Industries recently acquired Henco, an advanced plastic tube and fitting systems producer, it is a good example of a possible future peer of Wavin.

Company	Description	Revenues reflect plastic pipe systems only
	Aliaxis is a Private Company, not listed on a stock exchange Group of 88 companies operating in 37 countries. Core business: Plastic plumbing products for all building segments Headquartered in Brussels (BE) Main engine of growth is acquisition	Revenues of €2405m in 2007
	Wavin N.V. is listed on the NYSE Amsterdam Presence in 28 European countries Core business: plastic pipe system solutions for all building segments Headquartered in Zwolle (NL)	Revenues of €1619m in 2007
	Uponor group is listed at the OMX Nordic Exchanges Helsinki Presence in 22 countries in Europe and North America Core Business: plumbing, pipe and heating systems for all building segments Headquartered in Helsinki (FI) Recently focusing resources on a single brand and growth	Revenues of €1219m in 2007
	Pipelife is a Joint Venture of Solvay and Wienerberger, not listed Presence in 28 countries worldwide Core business: plastic pipe systems for all building segments Headquartered in Vienna (AT)	Revenues of €875m in 2007
	The Geberit Group is listed on the SWX Swiss Stock Exchange Presence in 40 countries Core Business: sanitary technology in Sanitary Systems and Piping Systems Headquartered in St. Gallen (CH) Sanitary systems are mainly non-plastic	Revenues of €703m in 2007
	GF Piping is part of GF Group, listed on the SWX stock exchange Present in over 100 countries Core businesses: Piping systems, made of plastics and metal Headquartered in Schaffhausen (CH)	Revenues of €673m in 2007
	Polypipe group is privately owned, not listed Presence in 5 European countries Core Business: plastic piping systems for all building segments Headquartered in Edlington, Doncaster (UK)	Revenues of €384m in 2007

Company

Description

Revenues reflect plastic pipe systems only



The Rehau group is a family-owned company, not listed
 Presence in 54 countries
 Core Business: polymer solutions in the construction, automotive and industrial sector.
 Headquartered in Rehau (DE)
 Revenues of €200m in 2007 (Est.)



Aalberts Industries NV is listed at the NYSE Amsterdam
 Presence in 25 countries worldwide
 Core Business: Industrial Services and Flow Control (Metals)
 Headquartered in Langbroek (NL)
 *AI recently acquired Henco, an advanced plastic tube and fitting systems producer. Share of revenues of plastics is still small but AI illustrates changing mindset of traditional building material companies
 Revenues* of €1703m in 2007

Source: company disclosures

Many of these main market players are privately owned and not listed on a stock exchange market which means that more specific financial figures are not disclosed. Therefore only the four largest players in the industry, based on revenues and availability of data, will be compared in more detail. The figures which will be used to benchmark the largest players in the industry are chosen to reflect the size of the companies (revenues, total assets, net debt and employees) and their profitability (net profit, EBITDA, EBITDA margin, and revenues per employee).¹³ As the focus of the thesis is on the European plastic pipe market, there is a discrimination between overall revenues and European revenues. Unfortunately, it was not possible to make this discrimination for the other financial figures due to lack of data.

	Revenues	European Revenues	Net Profit	EBITDA	EBITDA margin	Total Assets	Net Debt	Employees (x1)	Revenue Per Empl.
Aliaxis	2405	1154	182	369	15.3%	1716	473	11600	0.21
Wavin	1619	1554	93	212	13.1%	1492	542	7308	0.22
Geberit*	1563	1430	291	401	25.7%	1445	-111	5360	0.29
Uponor	1219	1073	102	188	15.4%	664	85	4497	0.27

Figures are in €x1 million

*Total group figures (Sanitary- and Piping systems)

Table 2

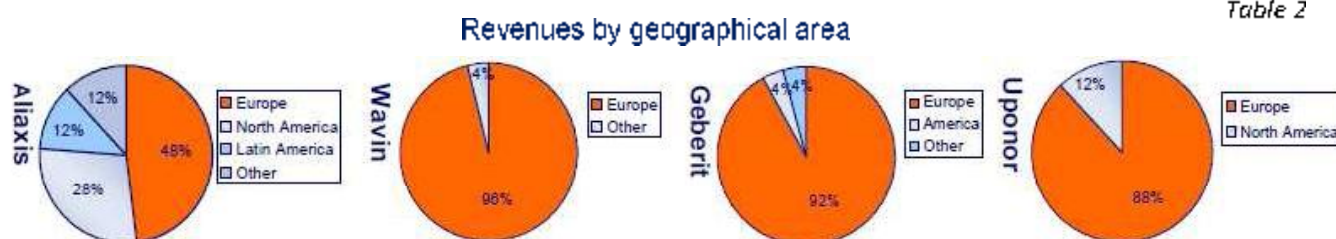


Figure 8

European Presence								
	UK	Ireland	NW Europe	N Europe	Spain	Portugal	Italy	CE Europe
Aliaxis	x	x	x	x	x	x	x	x
Wavin	x	x	x	x		x	x	x
Geberit	x	x	x	x			x	x
Uponor	x	x	x	x	x	x	x	x

North West Europe: Benclux, Germany and France
 North Europe: Denmark, Norway, Sweden, Finland
 Central and East Europe: Poland, Czech Republic, Russia, Slovakia, Ukraine, Hungary and Romania

Table 3

¹³ Annual reports 2007, Aliaxis, Wavin, Geberit and Uponor

The European revenues of all four players are in the same range, with Wavin as the European plastic pipe system leader. (Table 2). The EBITDA margin of Geberit however stands out. Since the figures of Geberit are based on the total group figures (sanitary and piping systems) the high margin level of the sanitary systems, a high value added market with less commoditised (non-plastic) products, is reflected in the EBITDA margin. The other three players produce relatively straightforward plastic pipe systems which results in the same EBITDA margin range.

Specific characteristics of countries can also influence margins and because of the different footprint of the four companies, this might partly explain the low EBITDA margin of Wavin (Table 3). Another factor which influences the margins has to do with the markets that are targeted. In the beginning of this thesis a differentiation was made between the above ground products and below ground products. Above ground products target the (non)residential market and have relatively high margins while below ground products mainly target the civil engineering sector and have relatively low margins. The percentage of revenues attributable to these segments is therefore important for the overall EBITDA margin of a company (figure 9). 62% of Wavin its revenues are attributed to civil engineering sector against 30% for Uponor which could explain Wavins lower EBITDA margin. Following line of reasoning would mean that Aliaxis performs really well. Aliaxis has similar margins as Uponor but the share of its products targeting the civil engineering construction market is much higher. Aliaxis however, has specialized itself in fittings and generates twice as many revenues as Wavin with the same tonnage of plastic reins. This obviously improves the margins of Aliaxis. Nevertheless Wavin its EBITDA margin is relatively low.

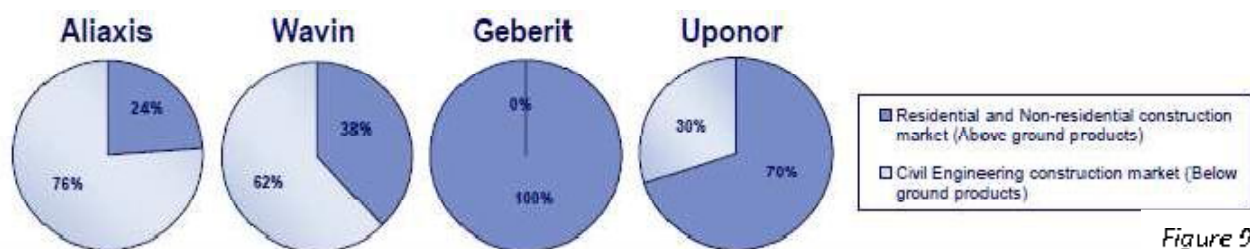


Figure 9

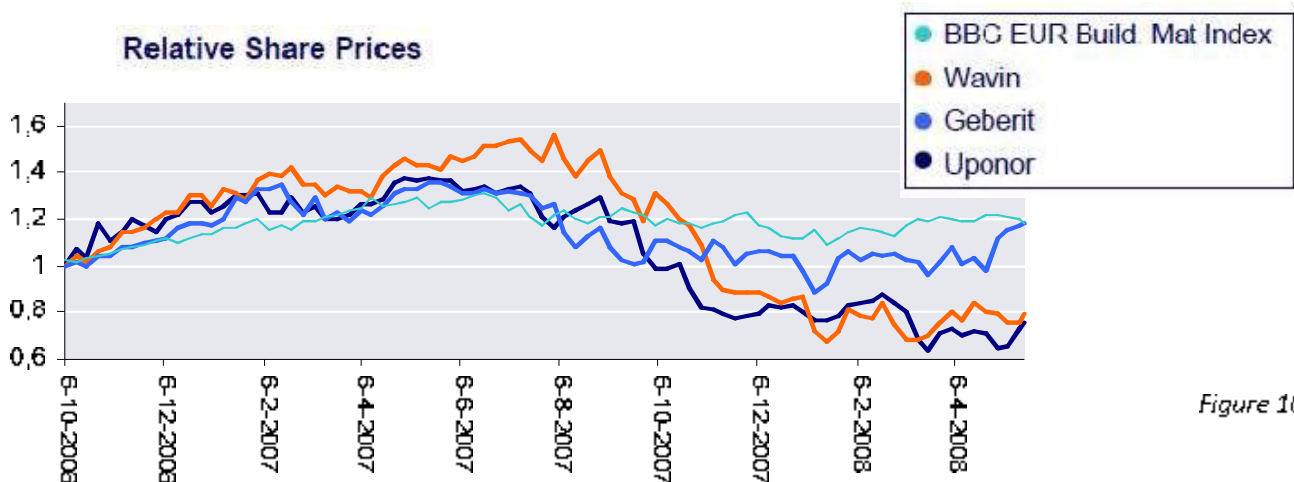


Figure 10

In figure 10 the share prices of Wavin, Geberit and Uponor are benchmarked against the European Building materials index. While the index as a whole is still doing well, Wavin and Uponor are clearly falling behind. The recent softening of the construction sector is already reflected in their share prices. Geberits position in the high value added sanitary market leads to a favourable position and makes its share price less volatile.

Geberits position in the sanitary segment is also illustrated by its position in the bubble chart (figure 11). Its enterprise value is more than twice as high as the EV of the other three players and also its EBITDA margin stands out. The enterprise value of Aliaxis is estimated, based on a grey quotation in Belgium, since they are not officially listed at a stock exchange market.¹⁷

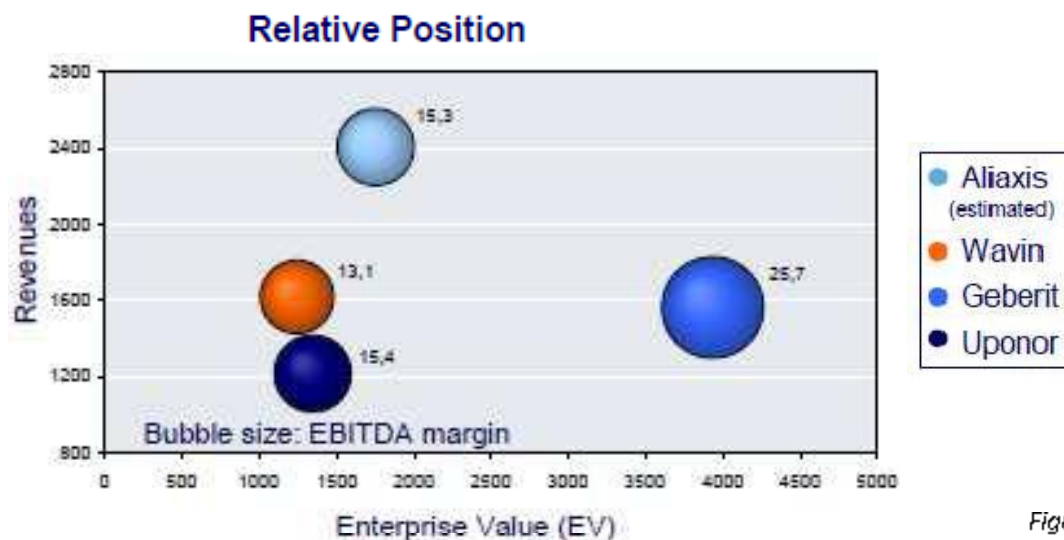


Figure 11

¹⁷ Thijs Hollestelle, NG Wholesalebanking, equity analyst

5.3 Framework section 3: The Organization

What are the characteristics and strategy of Wavin N.V.?

This chapter will zoom in on Wavin and begins with some characteristics of the organization. After a closer look on the footprint of Wavin the corporate strategy is explored. Financial figures from the last four years are compared and different business units and regions are studied in more detail. Subsequently the growth potential of the different business units is visualized. The chapter ends with a SWOT analysis in which company information is combined with sector knowledge.

Organizational characteristics

Wavin is one of the largest suppliers of plastic pipe systems and solutions in Europe with approximately 7000 employees and its headquarters in Zwolle. The company provides products for all building segments: systems and solutions for tap water, surface heating and cooling, soil and waste, rain- and storm water, distribution of drinking water and gas and telecom applications. Wavin mainly operates in the business to business market and has a presence in 28 European countries, with manufacturing sites in 17 of those.

Since October 2006 Wavin is listed the NYSE Amsterdam stock exchange (WAVIN) and has a current market cap. of €615.2 m. (June 2008).

Products are allocated to two Strategic Business Units:

- Building & Installation (above ground products)
- Civils & Infrastructure (below ground products)^{1,3}



Footprint

Figure 12 shows the position of Wavin in Europe. Based on logistic and managerial reasons Wavin always followed a strategy of expanding to neighbouring countries. This resulted in a strong presence in most parts of Europe. Twenty years ago, Wavin was the first of the European plastic pipe producers to move to Central and Eastern European countries. Aided by its first mover advantage, Wavin was able to gain leading positions in these countries. Today Wavin is still strengthening its position there through both acquisitions and organic growth.



Figure 12

¹ Wavin annual report 2007

While most of Europe is covered with either production plants or sales offices, Spain attracts attention as a large blank spot on the map. In the past Wavin was present there but withdrew because they had to face a highly fragmented market. As a consequence they were not able to obtain a top 3 position, which guarantees pricing power and advantages of scale. In January 2008 Wavin acquired Pilsa plastics (Turkey). If Wavin can strengthen its position in Turkey, the acquisition can serve as a bridge to central Asia for further acquisitions.

Corporate strategy

Wavin has a clear vision of where they want to stand in the future. The leading supplier of plastic pipe systems in Europe with unrivalled geographic presence, service, innovation and product range. This vision results in strategic objectives and directions with accompanying measures. Through the steps of strategic objectives and strategic directions mutual supporting strategic measures are grouped together and overview is maintained. Figure 13 shows this method for Wavin.¹⁵

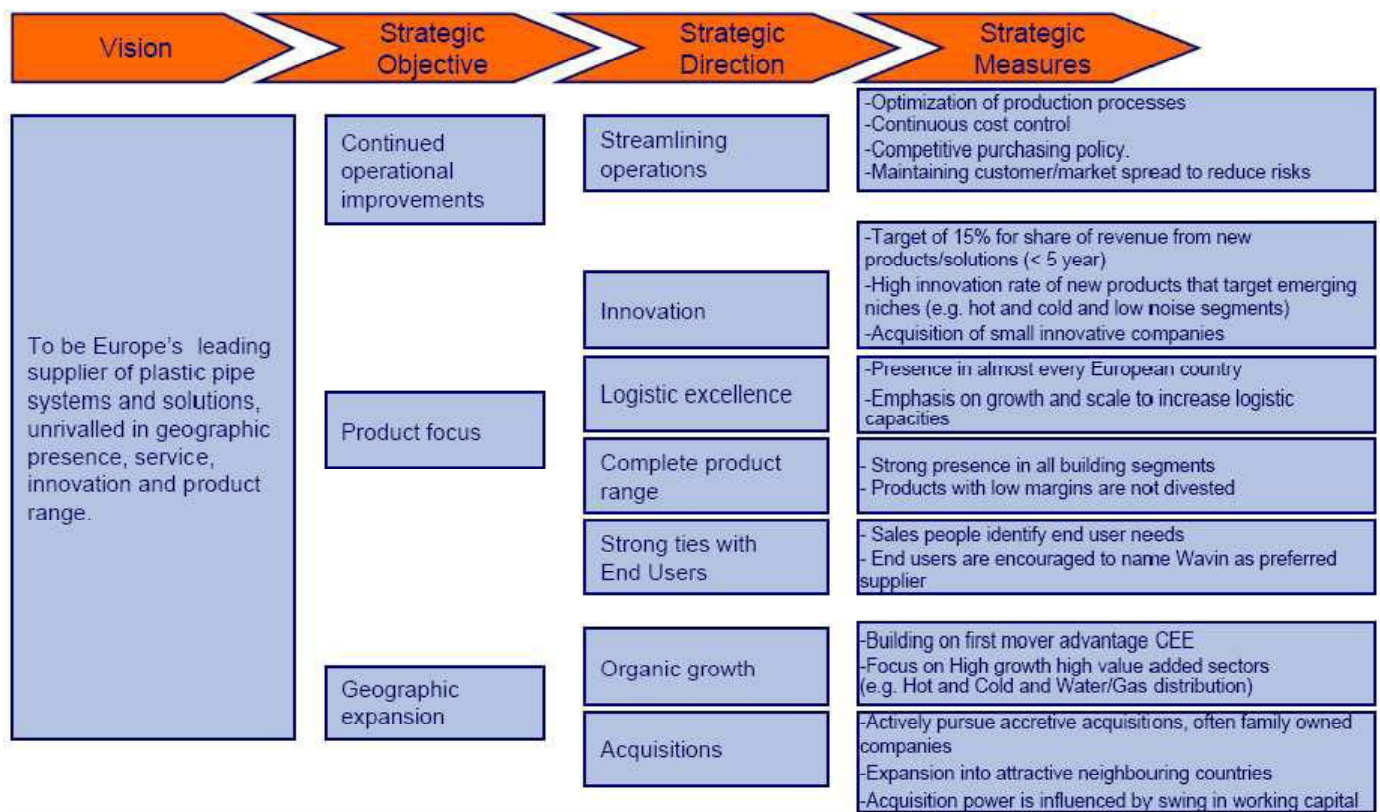


Figure 13

¹⁵ Wavin Roadshow presentation, may 2008, Investor presentation december 2006 and annual reports

Financials

The financial figures of Wavin for the year 2007 were already listed in table 2 among the benchmark of largest players in the plastic pipe systems sector. In this section the same financial figures are listed but then for the past four years. This way it is possible to get more understanding in the developments of Wavin over the last years. The net working capital and leverage ratio are added to the list of data as these figures provide useful information for ING in relation to financing opportunities.¹⁷

	2004	2005	2006	2007	2008F*
Revenues	1020	1331	1502	1619	1670
Net profit	35.4	29.7	73.4	93.0	88
EBITDA	108.3	163.4	196.3	212.1	185
EBITDA margin	10.6	12.3	13.1	13.1	11.0
Total assets	814	1596	1464	1492	1537
Net debt	332	909	598	542	503
NWC	150.4	197.7	205.1	219.3	n/a
Leverage (Net debt/EBITDA)	3.1	5.6	3.1	2.6	2.3
Employees (x1) (average number)	5239	6998	7069	7308	n/a
Rev per employee	0.19	0.19	0.21	0.22	n/a

Figures are in €x1 million

*Forecast based on trading update Wavin H1 2008

Table 4

Wavin performed excellent in 2007. It was, however, a year of significant contrast. Thanks to favourable weather conditions and strong demand from all markets, the first half year of 2007 showed exceptional growth. The second part of 2007 was marked by a sharp drop in demand and high raw material costs. The compound annual growth rate from 2004-2007 of the revenues is 17% and for the net profit even 38%. Also the EBITDA margin improved over the last couple of years but is still not at the same level as Wavin its peers. As well as a growth of revenues and profit, Wavin has seen a growth of its net working capital. This growth is currently enforced by the high raw material costs and further complicated by the exposure of Wavin to cyclical construction market developments. Since the construction output follows a yearly pattern, with its peak in the summer, so does the net working capital requirements of Wavin.

The forecasts for 2008 resemble the second half of 2007. Construction output will still be below normal levels and raw material prices are all time high. Furthermore the risk of the housing crisis spreading to more countries, puts growth scenarios under pressure.

¹⁷ Wavin annual reports 2004,2005,2006 and 2007

Financial performance per region

High transport costs combined with different purchase rules, per country, lead to "separate" markets with almost all business being local to local. In order to generate profit in each country, Wavin tries to obtain a Top-3 position in all the markets they are active. Top 3 position implies pricing power, advantage of scale and attracts large customers who are looking for reliable partners with broad product ranges. Wavin has a top-3 position (often leading) in all countries they are present, except Germany (top 5). They are especially strong in the CEE economies where they build on their first mover advantages. Besides the growth opportunities there, Wavin is able to achieve an EBITDA margin of 19,6%, which is the highest of all regions (figure 15). Wavin's strong presence in these emerging markets is further reflected by the upward trend in EBITDA share of CEE (figure 14). For managerial reasons Wavin classifies some emerging countries under "Nordic Europe" and "SW Europe" which makes the actual contribution of CEE countries even higher.

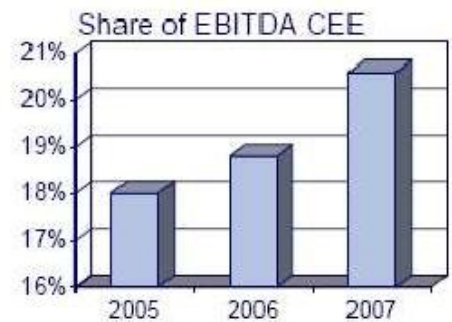


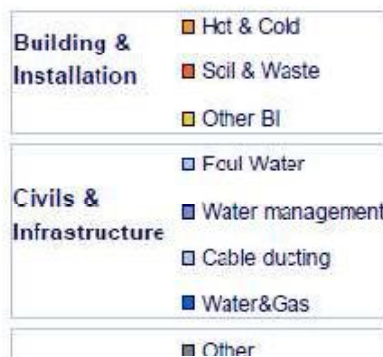
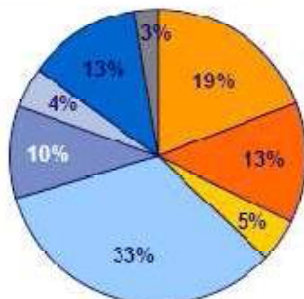
Figure 14



Figure 15

Financial performance per Business Unit

Share of revenues SBU's



Growth rate SBU's 2006-2007



Figure 16

Wavin once started out with the now low-margin and low-growth operations Water&Gas. Because this segment has entered a mature face in WE, there are only growth opportunities in CEE. Wavin is reducing its exposure to this market and is focusing on selective sophisticated products, which is reflected by the negative growth rate of Water&Gas (figure 16). The strategy of Wavin to focus on high value added sectors enforced the growth in the B&I segment. Being active in both the B&I and C&I segments provides a competitive advantage as important customers are also active in both segments. Furthermore provides a presence in both segments, purchasing power and synergies. Current C&I activities, also low margin/low growth ones are not divested but growth in the C&I segment is mainly attributable to specialities. For example water management systems that can deal with irregular rainfall patterns. Figure 17 shows the growth potential of the different business units estimated by Wavin. Specialities such as low noise applications and surface cooling systems (Hot&Cold) represent highest growth potential and offer the highest margins. However these segments are also more volatile because of their strong correlation to the housing market.¹⁸

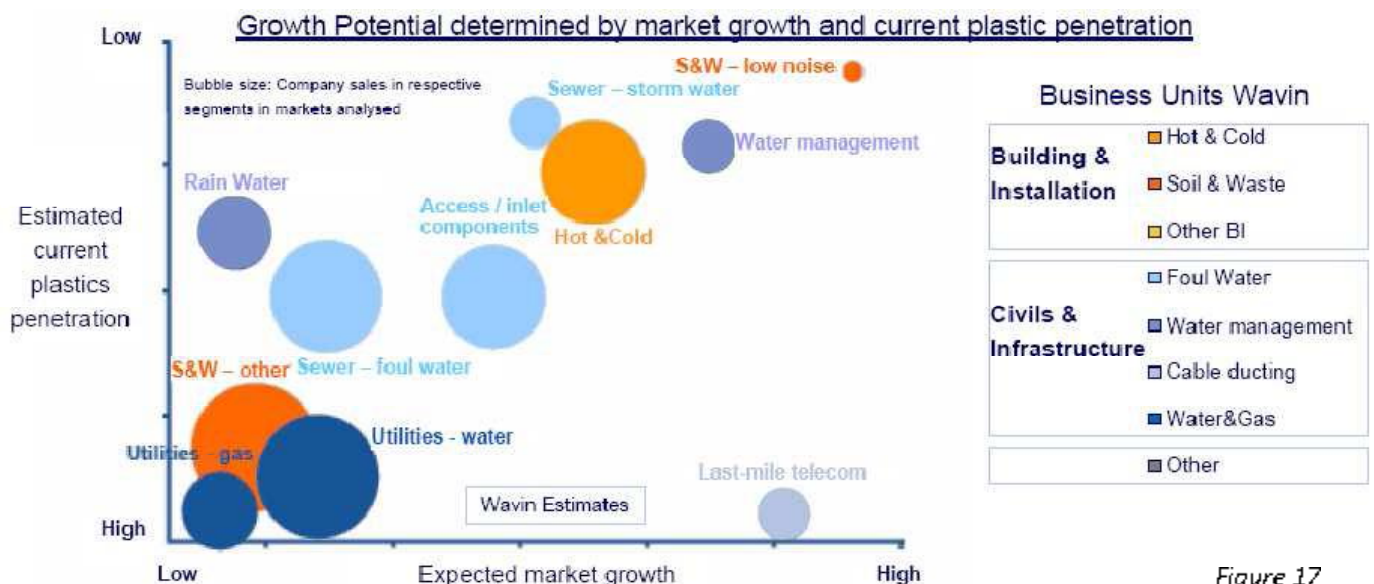


Figure 17

Share price

While the financial results of Wavin were fine, share prices are falling (figure 18). Despite the growth opportunities in CEE as well as within the SBU's, investors are afraid the housing crises will spread and affect Wavin.



Figure 18

¹⁸ Wavin roadshow presentation, may 2008

SWOT analysis

Now insight in the strategy of Wavin, its financial position and the growth opportunities is obtained it is possible to combine these findings in a SWOT analysis. Information about from sector section is used to identify the opportunities and threats.¹⁹

Strengths	Weaknesses
➤ European market leader in plastic pipes ➤ Strong brand, footprint and product portfolio ➤ Relatively high exposure to fast-growing Central and Eastern Europe ➤ High service ratio and strong logistic system ➤ High innovative power ➤ Strong track record of successful acquisitions	➤ Low switch costs of customers ➤ Exposed to cyclical construction market developments ➤ Buyer doesn't operate in the end market ➤ High fixed costs
Opportunities	Threats
➤ Substitution of traditional building materials continues ➤ Growth of renovation and maintenance market (less volatile than new building) ➤ Growth of high value added markets (e.g. Hot&Cold) with more specific products ➤ Leveraging on first mover advantage in CEE ➤ Emerging niches due to climate change and energy efficient building ➤ Total costs installed becomes key	➤ Consolidation trend at customer base continues ➤ Raw material price volatility continues ➤ Downturn in important markets continues and spreads

¹⁹ Albert Humphrey, Stanford University, 1960 - 1970

6. Conclusions and recommendations

This chapter will elaborate on the outcomes of the two objectives in this thesis, the development of a framework for client- and sector analysis and the identification of critical business issues of Wavin N.V.

Development of the framework

The supporting research question of this thesis: *Which aspects are important for ING to include in a framework for client- and sector analysis?* was used to identify the elements of the framework. Relevance of an aspect for ING and the availability of data on an aspect were the main criteria for selection. To maintain overview, aspects were attributed to three sections: Sector, Main players in the sector and Organization. The selected aspects were:

Sector:

- | | |
|--|----------------------------|
| -Sector definition | -Market growth |
| -Sector segmentation | -Porters five forces model |
| -Value chain position | -Recent trends |
| -Main characteristics and dynamics of the sector | |

Main players in the sector:

- | | |
|---|-------------------------------------|
| -Short overview of the main players | -Geographic spread |
| -Detailed comparison of the financial figures | -Share prices and enterprise values |

Organization:

- | | |
|-------------------------------------|--|
| -Short introduction | -Overall financial figures of the last years |
| -Allocation of products to SBU's | -Financial figures per region and BU |
| -Abstract of the corporate strategy | -Growth potential |
| -Detailed footprint | -SWOT analysis |

Following ING's working method, these aspects were combined in a PowerPoint presentation. In annex 1 the complete framework can be seen, while applied on Wavin N.V.

This section has not been disclosed with reference to confidentiality issues.

The availability of information was an important factor in selecting the relevant aspects of the framework but in some sectors it is just harder to obtain data than in other ones.

For example, detailed financial figures of main players in a sector. When many of the main players in a sector are privately owned or active in several sectors, acquiring the right figures to make a

comparison can be an unfeasible job. Estimates of expected market growth or sector outlook can also be difficult to obtain.

Apart from the availability of data, filling in the framework will always be a time consuming activity. This can be problematic for employees of ING, who also have other responsibilities and tasks. However, when the analysis is done by a relationship manager for internal purpose, not all aspects will be necessary to analyze. Relationship managers already have a good understanding of the sector and business of the targeted organization. This leads to a different approach of the analysis then when the targeted population has no affinity with the organization. It can also occur that ING is interested to analyze the added value of a specific financial service for an organization. In this scenario not all identified aspects of the framework will be relevant, while others may need to be explored in more detail.

These remarks of the framework lead to the following recommendation for ING: Before the framework is applied on an organization, the purpose of the analysis as well as the targeted population needs to be clear and agreed upon.

When the purpose and the targeted population are clear, the framework can be adjusted to fit the specific requirements. This way the researcher can focus on the most relevant aspects, which reduces the total time needed to carry out the analysis.

The framework in its current form should thus be considered as a basis for client- and sector analysis and not as a definite blank exercise.

Identification of the critical business issues of Wavin N.V.

The framework developed in the supporting research question was applied on Wavin. Since the PowerPoint presentation was translated into written text for the university, the three sections (Sector, Main players in the sector and Organization) served as three new supporting research questions for the main research question:

What are the critical business issues of Wavin N.V.?

These three supporting research questions were:

- What are the characteristics and trends of the European plastic pipe system sector?
- Who are the main players in the European plastic building materials industry and how do they compare to Wavin N.V.?
- What are the characteristics and strategy of Wavin N.V.?

Sector

The main findings of the sector analysis section were summarized in the five forces model of porter and the overview of recent trends. These figures showed that the main threats to plastic pipe producing companies come from within the value chain. There are few suppliers and the upward pressure on raw material prices continues as a result of shortages. The rivalry as well as the buyers in the sector are consolidating with the rivalry focusing on high-growth and high value added segments.

The outlook for the sector is mixed. The construction sector in Western Europe slows as a consequence of the housing crises, while the construction sector is still growing in Central and Eastern Europe. The substitution trend of traditional building materials with plastics is ongoing and the innovation rate of new products/solutions is high.

Main players in the sector

The purpose of this section was to create an understanding of what a good performance in the sector is and how the main players compare to each other.

The peers of Wavin were selected based on revenues and availability of data. The analysis showed that different characteristics of countries and markets had a strong influence on margins. Geberits position in the high value added sanitary market was clearly reflected by its higher margins. The other three players (Aliaxis, Wavin and Uponor) were operating in the same margin range with Wavin performing the least. Share prices of the companies reflected the recent softening of the construction market. Furthermore the absence of Wavin and Geberit in Spain stood out, as many of the clients of these companies are present in this large construction market.

Organization

This section finished with a SWOT analysis in which the analyzed aspects of this section were combined with findings from the sector section. Wavin comes forward as an European market leader with a strong brand and relative high exposure to the fast growing construction market in CEE. However, Wavin has to cope with high fixed costs, cyclical construction market developments and lacks presence in Spain. Furthermore is it hard for Wavin to add value to their products as the buyers of Wavin do not operate in the end market.

Opportunities they can act on, are the emerging niche markets due to climate change and energy efficient building and the growth of high value added segments (e.g. Hot&Cold). The downturn in important markets and the raw material price volatility are the biggest threat to Wavin. When the downturn continues and spreads, margins will be under pressure which can cause serious problems as the working capital requirement remains high.

With the analysis of the three supporting research questions, the trends and characteristics of the sector are clear as well as the position of Wavin. The completion of the framework for Wavin marks the achievement of the first step in the NISSM approach. With this analysis as a basis the second step of NISSM and the main research question can be answered. Again, also this question is viewed from a financial point of view as ING wants to act on the identified issues.

What are the critical business issues of Wavin N.V.?

- ❖ *Rise and volatility of raw material prices*
- ❖ *Limitations of Wavins European footprint*
- ❖ *Habits of installers and plumbers in the Building and Installation segment*
- ❖ *Share price developments*
- ❖ *Structural working capital increase*

Rise and volatility of raw material prices

Raw materials costs account for approximately 45% of total sales costs and 32% of total revenues. The plastic reins prices are correlated with the oil price which has shown a sharp increase and volatility lately. Until now Wavin has been able to pass on the recent price increases with a delay of 2 to 6 months. Small fluctuations are absorbed by Wavin which results, with the current upward trend, in short time losses. With oil prices at all time high and rising, the negative impact on Wavins margins continues and it will become harder to pass the price increase through to its clients.

Limitations of Wavins European footprint

One of the core aspects of Wavins strategy is "Unrivalled European presence", however there are still some blank spots in its footprint and especially the absence of Wavin in Spain stands out. As many of Wavins important customers in other countries are also present in Spain Wavins focus on service also implies that they should be there.

The market in Spain however, is highly fragmented and obtaining a top-3 position (which guarantees pricing power and advantages of scale) is very difficult. Currently Wavins absence in the Spanish market is even an advantage, due to the crisis in its housing market. Nevertheless this blank spot remains a weakness on the long run.

Apart from the blank spots in Wavin its European footprint, the single focus on Europe has also its limitations. There is still a large growth potential in CEE but in the future Wavin will have to look further than Europe if it wants to continue its growth strategy. With the single focus on Europe, Wavin could miss opportunities across the European borders which would benefit them later. Especially because many of the new high value added products, Wavin is focusing its resources on, are much smaller than its traditional products. This enlarges the radius in which it is profitable to transport and sell them.

Habits of installers and plumbers in the Building and Installation segment

Wavins clients in the B&I segment are mainly distributors and wholesalers and not the actual "end users" of the products. This complicates the communication and influence Wavin has on these end-users.

End-users in the B&I segment are mainly small companies or even single persons (plumbers) who are used to work in specific ways. A good example is their habit to charge by the hour instead of agreeing to a fixed price beforehand. While many of Wavins products are easier to install and less expensive (on total costs installed basis) than traditional products these "end users" still favour traditional materials/products because they simply can charge more workhours. Another group of "end-users" is still unfamiliar with Wavins products and simply has a preferred choice for traditional materials/products.

This mindset puts the brake on the substitution of traditional materials/products by plastics. The challenge for Wavin, is to change this mindset and encourage end-users to charge fixed prices for the whole job (solution selling) instead of working hours and increase awareness of the advantages of their solutions.

Share price developments

The continued devaluation of Wavins shares decreases access to capital which is necessary for substantial growth scenarios. While according to Wavin the fundamentals of the company as well as the outlook in the sector are fine their share price is falling fast (figure 18). Share price developments correlate closely with perception and expected performance of both the building materials sector and the company. Somehow Wavin has problems with presenting itself to investors.

Structural working capital increase

Wavin has seen a structural increase of its working capital the last few years which is further enforced by the upward trend in raw material prices. A structurally higher working capital level can put margins under pressure and has an important influence on the funds available for acquisitions. The seasonal net working capital swing, as a consequence of Wavins exposure to the cyclical construction market, further complicates this financing need. Working capital is at low point at year end. Peak difference amounts to € 90-110 m. Consensus of analysts' is for an even stronger increase of working capital in 2008.

With the identification of critical business issues of Wavin N.V. the main purpose of this thesis is fulfilled. ING should use the analysis and its outcomes as the basis for an open dialogue with Wavin. If Wavin confirms that they struggle with one or more of the identified issues, a team with members from different departments can be formed to execute the next step in the NISSM process: creating solutions for the issues.

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Annex 1: Wavin N.V.

June 2008

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Contents

Part 1: European plastic pipe systems sector

- Sector Impression
- Market Dynamics
- Market Growth
- Main European market players
- Main European market players: Financials
- Five forces analysis
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Part 2: Wavin

- Company overview
- Footprint
- Financial performance
- Financial performance per region
- Financial performance Business Units
- Growth potential Business Units
- Corporate Strategy
- SWOT

Part 3: Critical Business Issues Identified

Part 1: European Sector Impression

European Plastic Pipe systems sector

Segmentation of the sector by products

Above Ground products

Target Residential and Non-residential construction market

Examples:

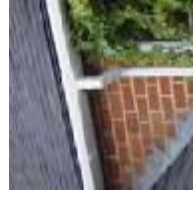
Hot and cold water systems

(e.g. floor heating systems)

Soil and waste discharge systems

Roof gutter systems

In-house electrical conduits



High Value adding products

Relatively high margins

Below Ground products

Mainly target Civil Engineering construction market

Examples:

Foul water systems

Drainage systems

Cable ducting

Distribution of gas and water

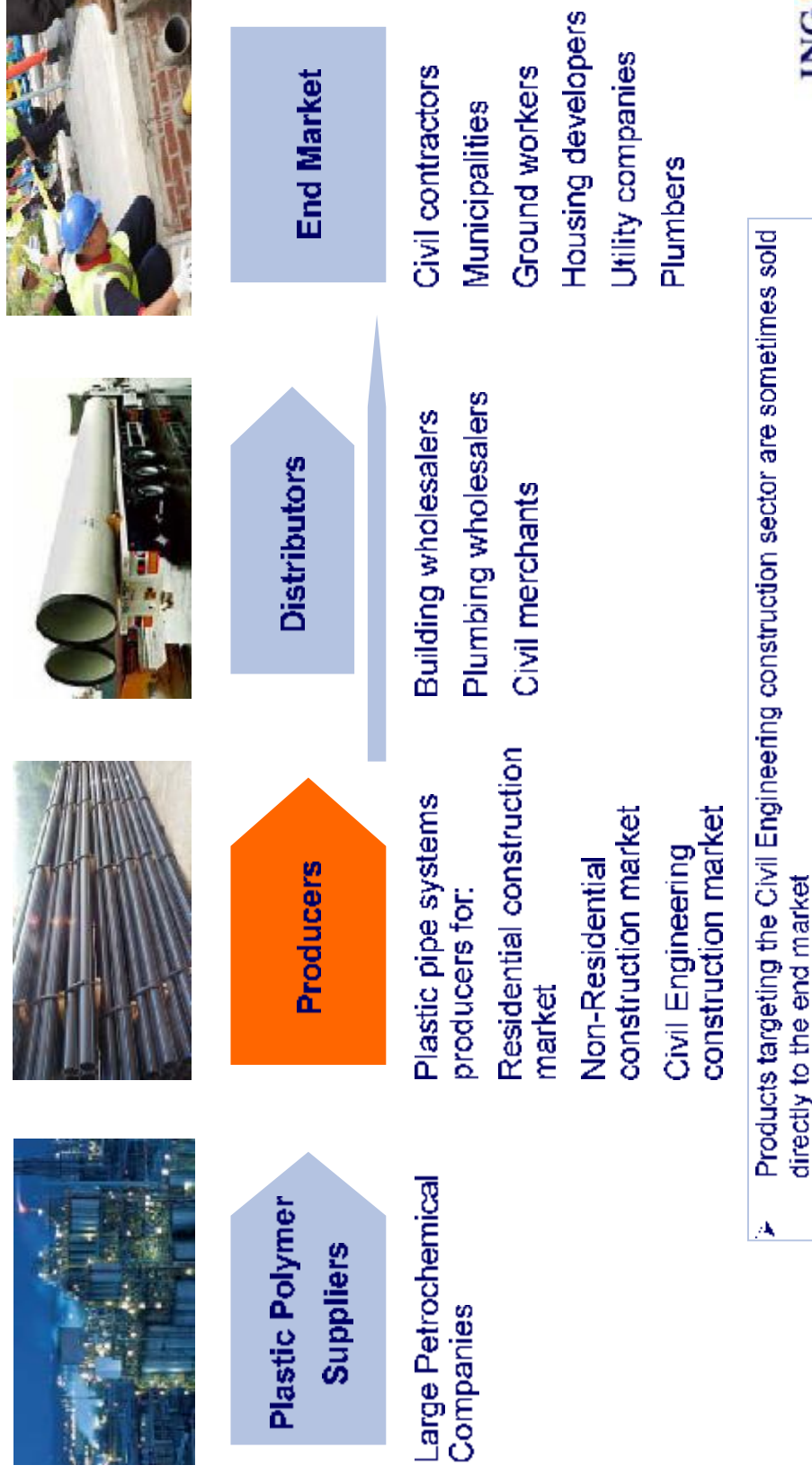


Mainly straightforward products

Relatively low margins

European Sector Impression

Value Chain Position



European Sector Impression

European Plastic Pipe systems sector

Above ground products
Strong correlation with
Residential and Non-residential construction market

Below ground products
More dependant on
Civil Engineering construction market

Strong governmental influence through quality directives

Overall market is expanding as traditional building materials are substituted

New markets niches emerging due to climate change and energy efficient building

Geographic spread

A few large
multinational players

Main Assets

Production plants and
equipment
Inventory

Capital Intensity

Overall high CAPEX
levels

CF Generation

Volatility in gross
margins due to
fluctuations of raw
materials prices

High competition with
focus on production-
cost reduction and
efficiency

Market Dynamics

Market form

- Competitive market with limited distinctiveness possibilities
- Many niches (Specialities such as last mile telecom and low noise foul water applications)

Rivalry

- Many competitors
- Growing Industry
- High fixed costs
- Low switching costs
- High innovation rate in products and processes
- More players active in the Above ground segments than in the Below ground segments

Barriers to entry/exit

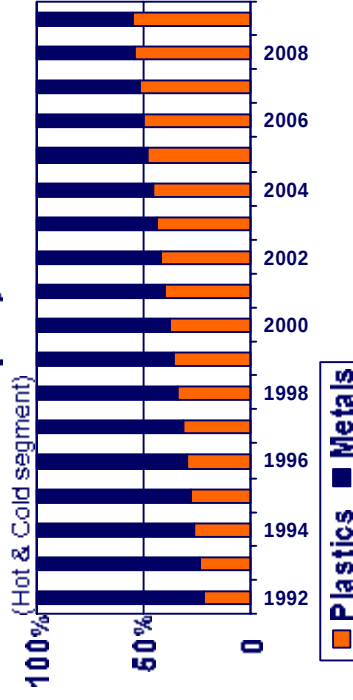
- High capital requirements and economies of scale
- Customers are wholesalers and civil merchants who prefer large reliable suppliers with broad product portfolios
- Strong brand loyalty
- High market standards, imposed by governments, through quality directives (differ for each country)
- High level of technology (differs for specific products, PE and PP products are more complicated than PVC products)

Nature of profit

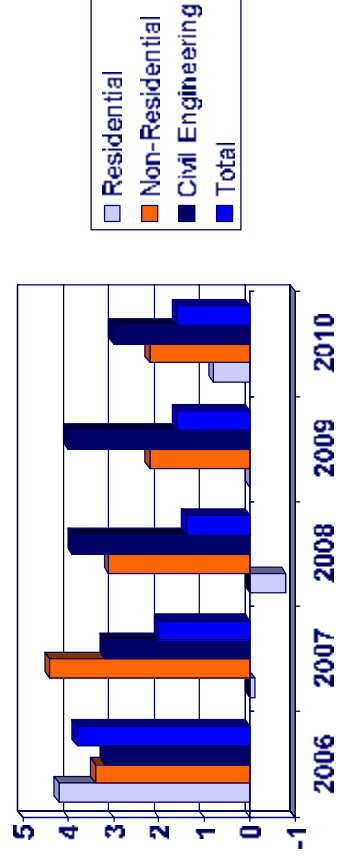
Relative market share and the added value of products determine margins. Leading companies are moving from selling inches pipe to selling "pipe solutions" (complete systems).

Market Growth

Substitution in Pipe Systems



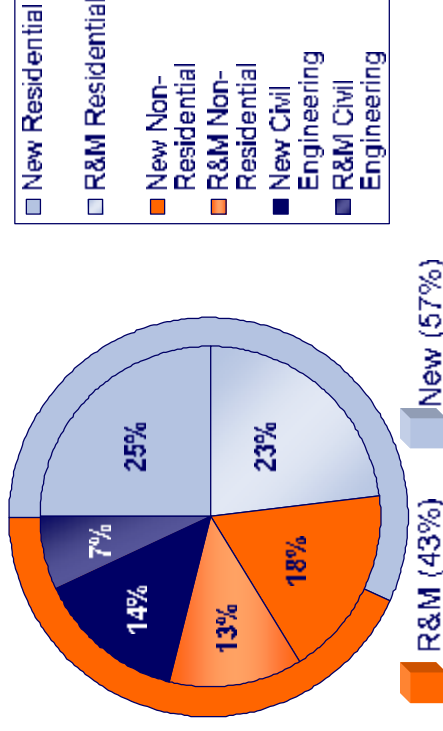
European Real annual change (%) Construction Output



- The relative market share of plastics in pipe systems is growing as substitution trend continues
- Renovation and Maintenance activities are becoming more important compared to New-Build, especially in mature markets. R&M segment is less volatile
- Demand for above ground plastics products, used in the (Non)Residential construction sectors, is affected by the slowdown
- Civil engineering is sector is less volatile than the other sectors which is reflected in stable growth rates
- New markets niches emerging due to climate change and energy efficient building

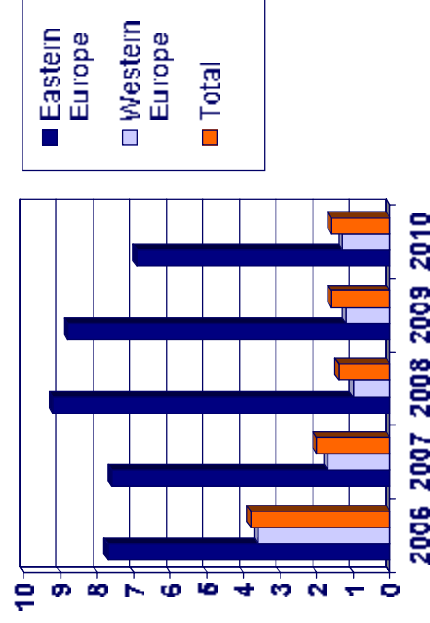
Share of Construction Sectors 2006

Total €1,420 billion

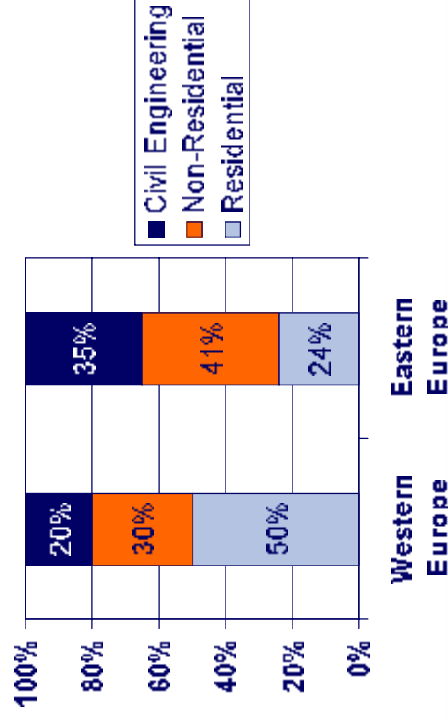


Market Growth – Different trends in Europe

Real annual change (%) Construction Output

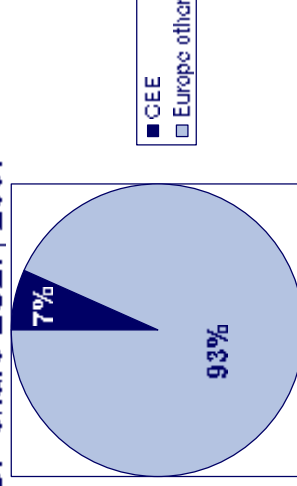


Total Construction market 2006



- Western Europe struggles with cautious investors and falling real estate prices (mainly Spain, UK and Ireland). This puts the brake on demand for construction investment after years of buoyant growth
- Because the slowdown effect is felt most in the Residential construction sector, the Non-Residential construction sector is the new growth driver by default
- In Eastern European the prediction is for a strong increase in construction output over the next few years
- Eastern European construction markets are driven by Civil engineering, benefiting from large governmental investments and subsidies from EU Structural Funds

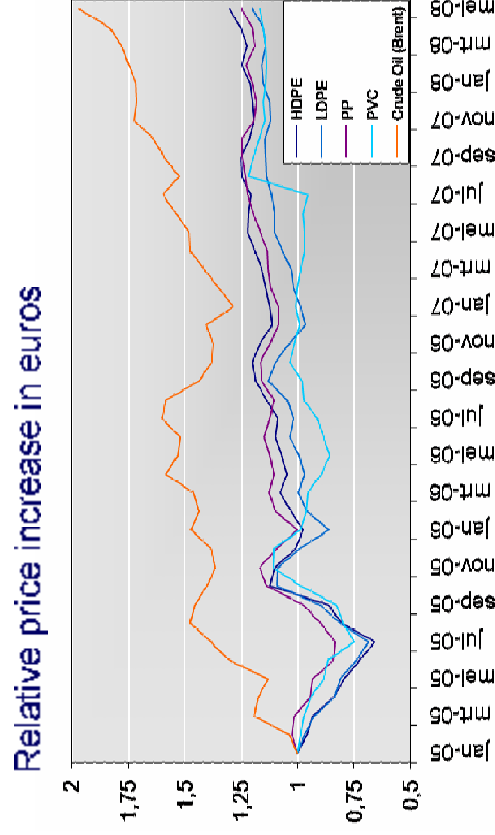
GDP share EU27, 2007



Market Growth – Macro factors

Economic outlook EU27				
Real annual % change	2007	2008	2009	
GDP	2.8	2.0	1.8	
Private Consumption	2.1	1.6	1.6	
Total Investment	5.4	2.8	2.0	
Employment growth	1.7	0.8	0.5	
Unemployment rate	7.1	6.8	6.8	
% of labour force				
Inflation	2.4	3.6	2.4	

Source: European Commission Spring 2008 Forecast



High oil prices indirectly influence raw material prices used in the plastic pipe sector (PE, PP and PVC). These are by-products of Oil-refineries. When oil prices increase it is more profitable for refineries to produce other products. The production of polymers is limited. Limited capacity leads to higher plastic prices.

➤ The Economic growth of Europe is clearly slowing and there are no recovery signs in the near future

➤ Because of growing demand Oil price is likely to stay high in the future. Volatility in margins remains.

Main European market players (1)

Company

Description

Revenues reflect plastic pipe systems only

Aliaxis

Aliaxis is a Private Company, not listed on a stock exchange
Group of 88 companies operating in 37 countries.
Core business: Plastic plumbing products for all building segments
Headquartered in Brussels (BE)
Main engine of growth is acquisition

Revenues of €2405m in 2007

wavin

Wavin N.V. is listed on the NYSE Amsterdam
Presence in 28 European countries
Core business: plastic pipe system solutions for all building segments
Headquartered in Zwolle (NL)

Revenues of €1619m in 2007

uponor

Uponor group is listed at the OMX Nordic Exchanges Helsinki
Presence in 22 countries in Europe and North America
Core Business: plumbing, pipe and heating systems for all building segments
Headquartered in Helsinki (FI)
Recently focusing resources on a single brand and growth

Revenues of €1219m in 2007

PIPELIFE

Pipelife is a Joint Venture of Solvay and Wienerberger, not listed
Presence in 28 countries worldwide
Core business: plastic pipe systems for all building segments
Headquartered in Vienna (AT)

Revenues of €875m in 2007

Main European market players (2)

Company	Description	Revenues reflect plastic pipe systems only
 GEBERIT Advanced plumbing technology	The Geberit Group is listed on the SWX Swiss Stock Exchange Presence in 40 countries Core Business: sanitary technology in Sanitary Systems and Piping Systems Headquartered in St. Gallen (CH) Sanitary systems are mainly non-plastic	Revenues of €703m in 2007
	GF Piping is part of GF Group, listed on the SWX stock exchange Present in over 100 countries Core businesses: Piping systems, made of plastics and metal Headquartered in Schaffhausen (CH)	Revenues of €673m in 2007
	Polypipe group is privately owned, not listed Presence in 5 European countries Core Business: plastic piping systems for all building segments Headquartered in Edlington, Doncaster (UK)	Revenues of €384m in 2007
	The Rehau group is a family-owned company, not listed Presence in 54 countries Core Business: polymer solutions in the construction, automotive and industrial sector. Headquartered in Rehau (DE)	Revenues of €200m in 2007 (Est.)
	Aalberts Industries NV is listed at the NYSE Amsterdam Presence in 25 countries worldwide Core Business: Industrial Services and Flow Control (Metals) Headquartered in Langbroek (NL) *AI recently acquired Henco, an advanced plastic tube and fitting systems producer. Share of revenues of plastics is still small but AI illustrates changing mindset of traditional building material companies	Revenues* of €1703m in 2007

Main European market players: Financials

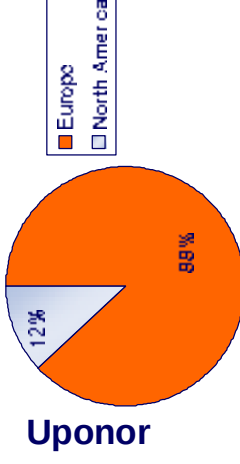
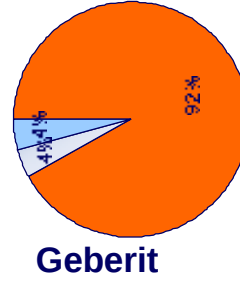
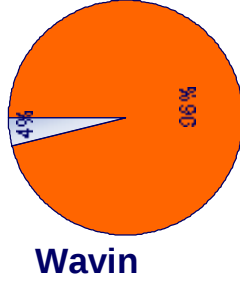
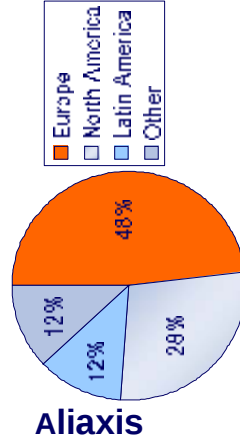
Players selected on revenues and availability of figures

	Revenues	European Revenues	Net Profit	EBITDA	EBITDA margin	Total Assets	Net Debt	Employees (x1)	Revenue Per Empl.
Aliaxis	2405	1154	182	369	15.3%	1716	473	11600	0.21
Wavin	1619	1554	93	212	13.1%	1492	542	7308	0.22
Geberit*	1563	1438	291	401	25.7%	1445	-111	5360	0.29
Uponor	1219	1073	102	188	15.4%	664	85	4497	0.27

*Total group figures (Sanitary- and Piping-systems)

Figures are in €x1 million

Revenues by geographical area



European Presence

	UK	Ireland	NW Europe	N Europe	Spain	Portugal	Italy	CE Europe
Aliaxis	x	x	x	x	x	x	x	x
Wavin	x	x	x	x	x	x	x	x
Geberit	x	x	x	x			x	x
Uponor	x	x	x	x	x	x	x	x

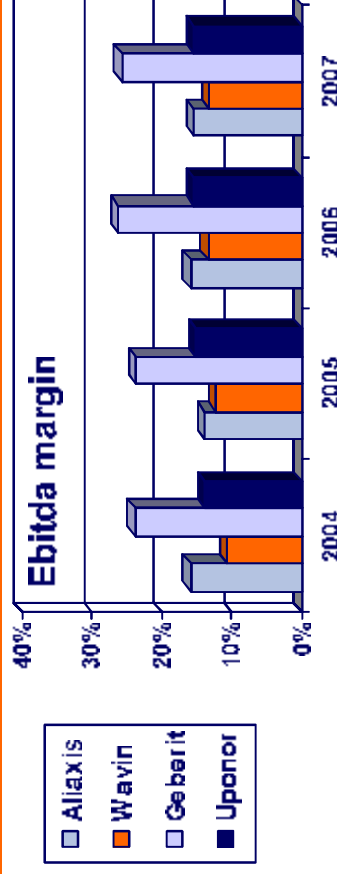
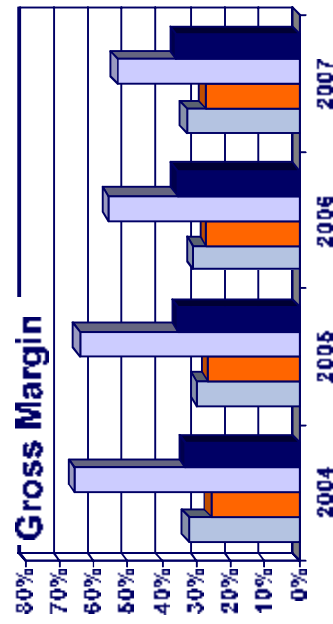
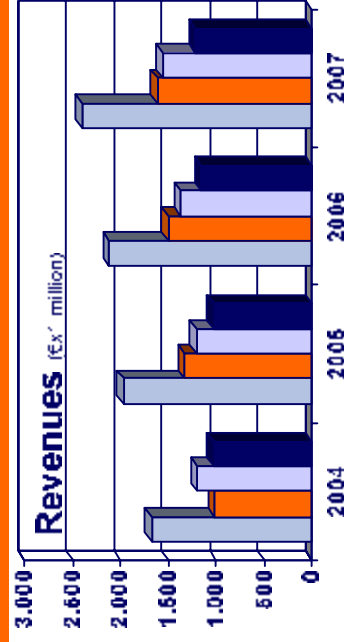
North West Europe:
Benelux, Germany and France
North Europe:
Denmark, Norway, Sweden, Finland
Central and East Europe:
Poland, Czech Republic, Russia, Slovakia,
Ukraine, Hungary and Romania

Source: Annual reports 2007

Wholesale Banking

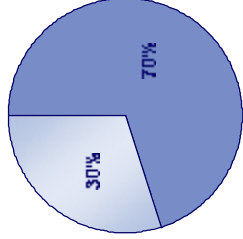
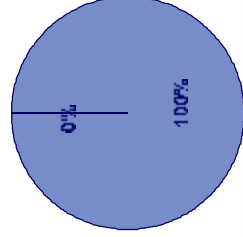
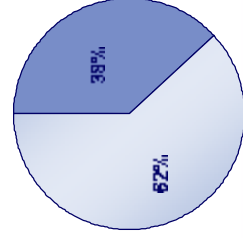
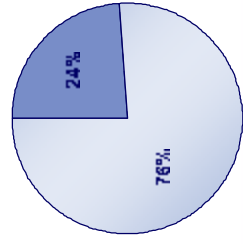
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Main European market players: Financials



- Graphs clearly reflect Geberits position in high value added sanitary market with less commoditised (non-plastic) products
- Other players produce relatively straightforward plastic pipe systems which is reflected in the same margin range
- Aliaxis performs really well with similar margins as Uponor but with a much larger share of products targeting the civil engineering construction market
- The different characteristics of countries and/or markets have strong influence on margins

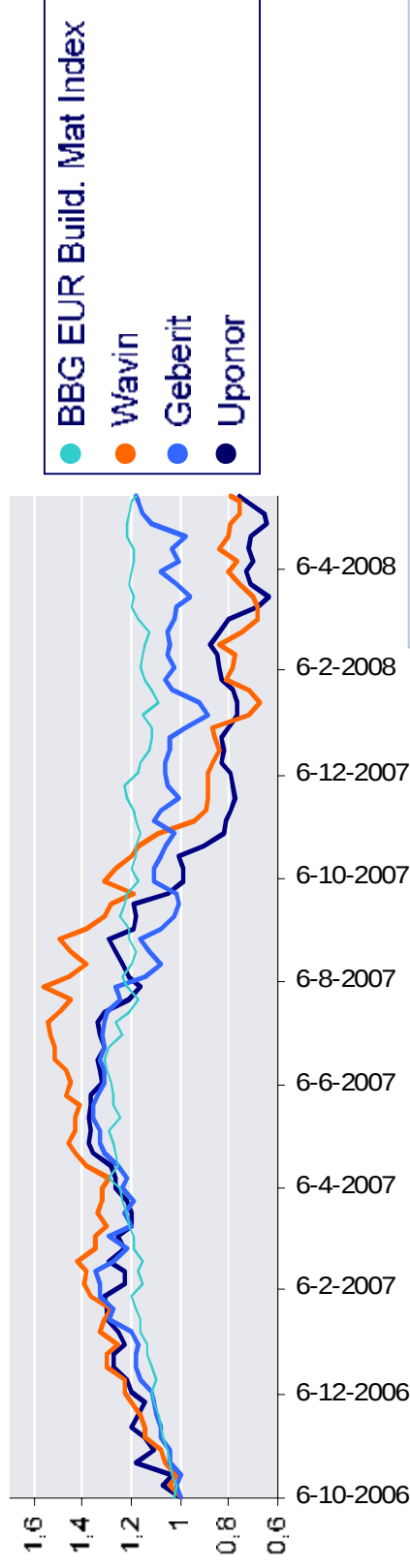
Aliaxis Wavin Geberit Uponor



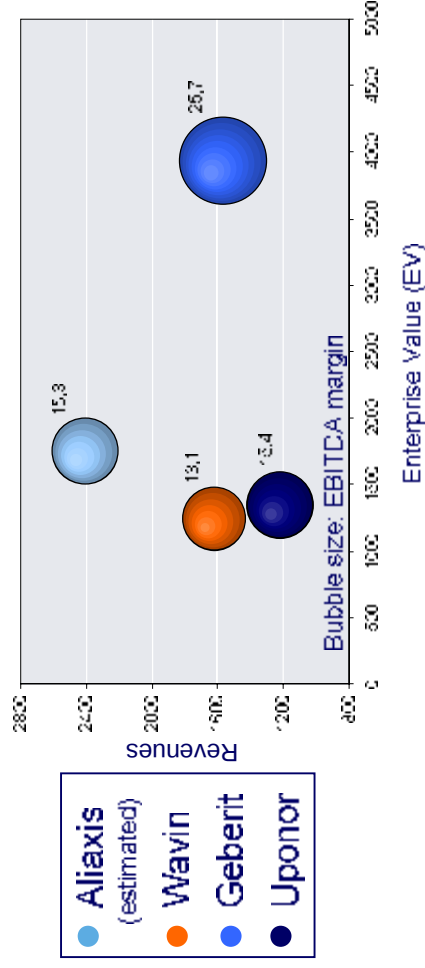
■ Residential and Non-residential construction market (Above ground products)
□ Civil Engineering construction market (Below ground products)

Main European market players: Financials

Relative Share Prices



Relative Position

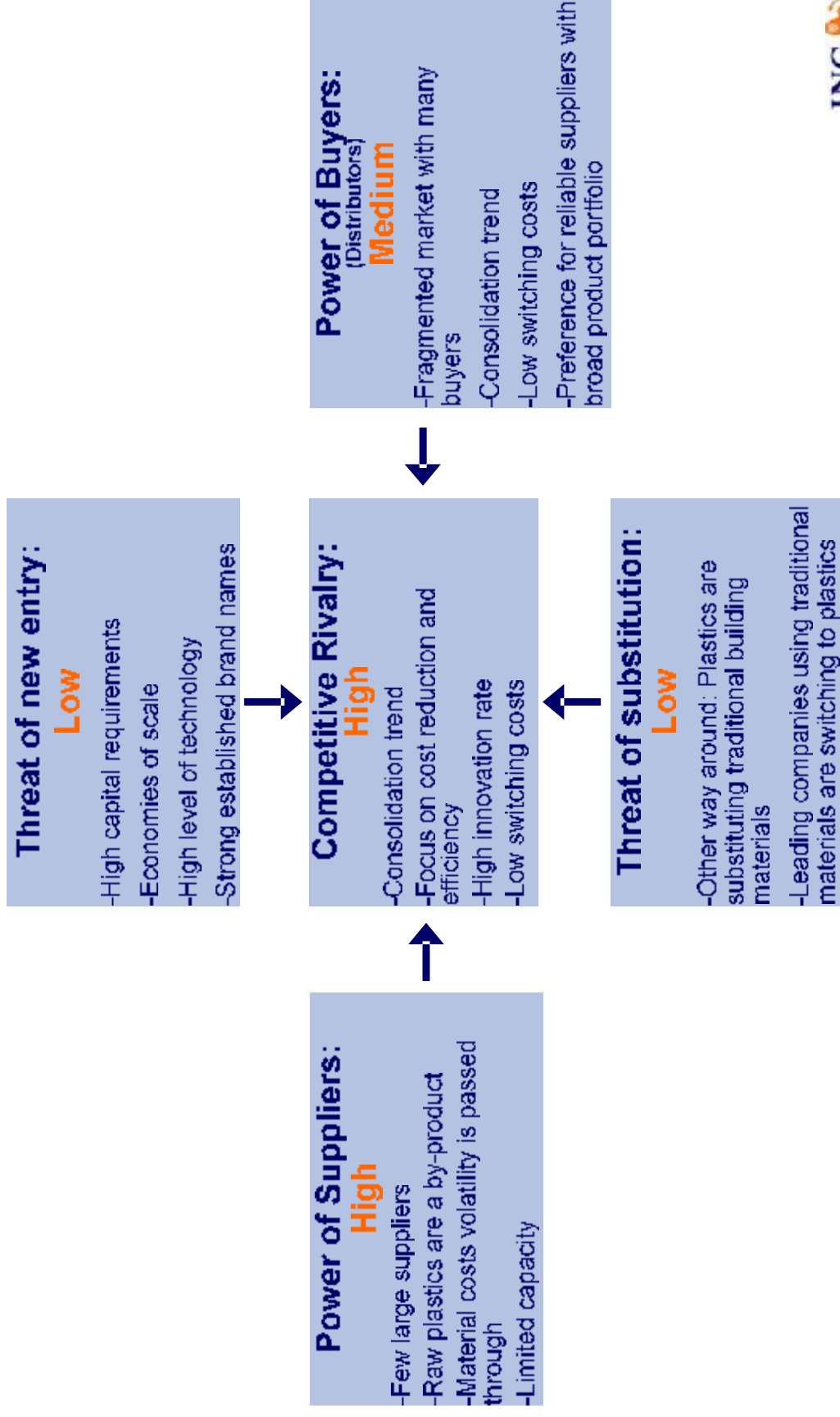


Figures are in €x1 million

- Because of the strong correlation between plastic pipe systems and the construction sector, share prices reflect the recent softening of the market.
- Position in high value added or straightforward markets is illustrated by both Economic Value and share price
- Wavins relative low Ebitda margin and EV can partly be explained by its revenue breakdown (62% attributed to civil engineering sector)
- Aliaxis has a similar breakdown as Wavin but has specialized itself in fittings. Aliaxis generates twice as many revenues as Wavin using the same tonnage of plastic reins



Porter's five forces analysis

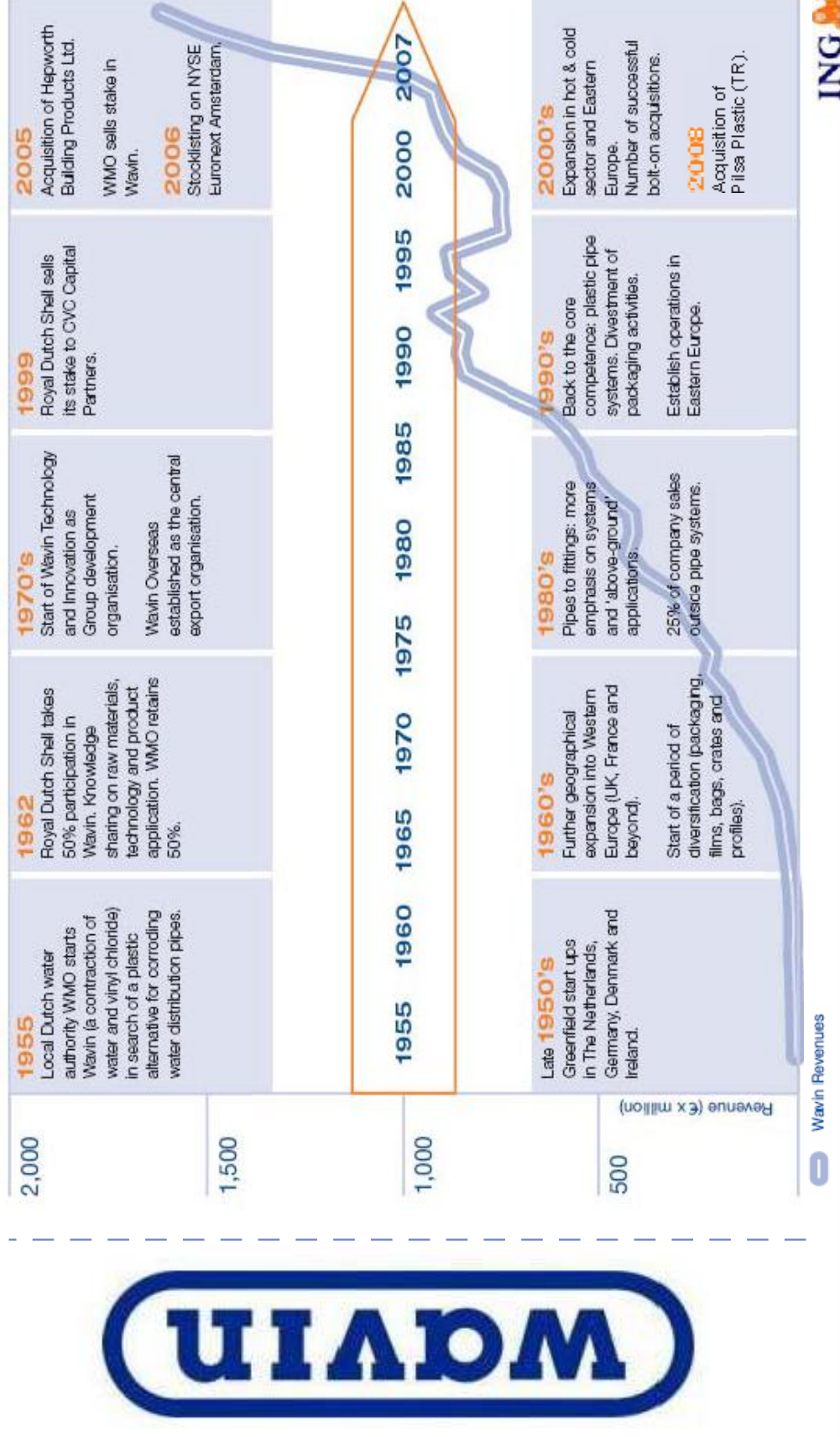


Recent trends

Suppliers	• Upward pressure on raw material prices continues as a result of shortages • New refinery capacity is coming from the Middle East in the mid/long run • Consolidation trend ongoing, being the biggest is key • Consolidation of competition, mainly by bolt on acquisitions. • Focus on high-growth, high value-added sectors especially the Hot & Cold segment. • Leading Companies are moving from selling inches pipe to selling complete systems. • Growth of plastics in high value-added sectors leads to new competitors who are changing their product portfolio (e.g. acquisition of Henko by Aalberts)
Rivalry	
Buyers (Distributors)	• Consolidation trend • Emphasis on reliable suppliers with broad product portfolio, Just in time deliveries • R&M activities are becoming more important in the mature markets • Construction sector of WE slows especially in Ireland, UK and Spain • Construction sector of CEE is still growing, driven by GDP growth and large investments in infrastructure of governments • Total costs installed is key in WE. Speed and ease of installation is considered best way to keep costs down. Plastics are becoming first choice due to their low maintenance, long life time and ease of installation • High innovation rate of new products/solutions enforced by: - climate change (e.g. irregular rainfall patterns and flooding require new disposal/drainage solutions) - energy efficient building (e.g. airco's are replaced by cold water plastic pipe systems) • Substitution trend of traditional building materials with plastics ongoing • Continuous improvement of plastics characteristics and its applications
Market Conditions	
Product	

Part 2: Wavin

History



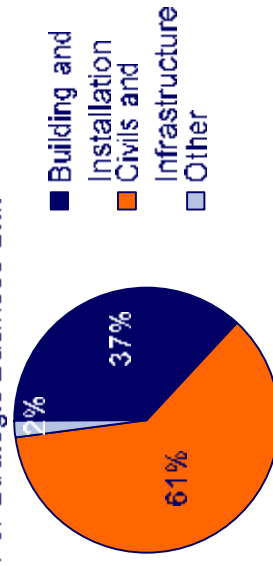
Company Overview

Wavin

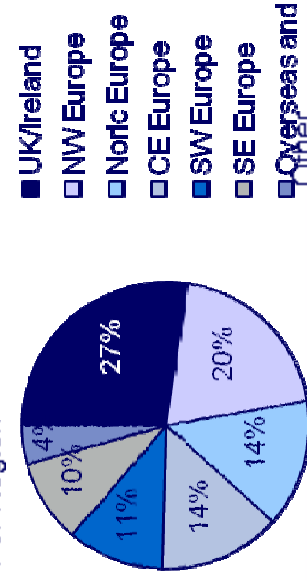
Wavin is one of the largest suppliers of plastic pipe systems and solutions in Europe. The company provides products for all building segments: systems and solutions for tap water, surface heating and cooling, soil and waste, rain- and storm water, distribution of drinking water and gas and telecom applications.

Revenues 2007: €1.618,5 mil.

Per Strategic Business Unit



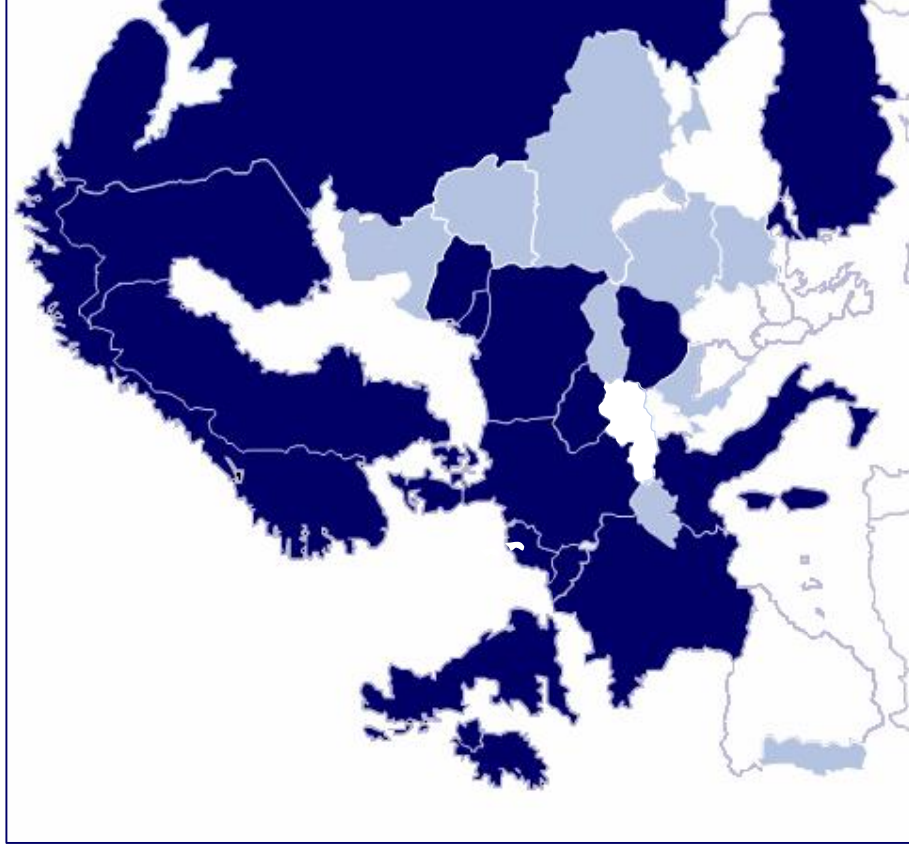
Per Region



Key Data

- Headquartered in Zwolle
- Presence in 28 European countries, with manufacturing sites in 17 of those
- Mainly operating in the business-to-business market.
- Products are allocated to two SBU's:
 - Building & Installation (above ground products)
 - Civils & Infrastructure (below ground products)
- Approximately 7000 Employees
- Listed on the NYSE Amsterdam stock exchange (WAVIN).
- Market cap. of €615.2 m. (June 2008)

Footprint Europe



 **Present with production plant and sales office**

 **Present with sales office**

 **No physical presence**

- In the past Wavin was also present in Spain but withdraw because the market was too fragmented. Wavin is carefully considering to return in the future
- 20 years ago, Wavin was the first of the European plastic pipe producers to move to CEE countries. It is still strengthening its position there through both acquisitions and organic growth
- Wavin has a strategy of expanding to neighbouring countries based on logistic and managerial reasons
- The acquisition of Pilsa plastics (Turkey) in January 2008 can serve as a bridge to central Asia

Financial performance

	2004	2005	2006	2007	2008F*
Revenues	1020	1331	1502	1619	1670
Net profit	35.4	29.7	73.4	93.0	88
EBITDA	108.3	163.4	196.3	212.1	185
EBITDA margin	10.6	12.3	13.1	13.1	11.0
Total assets	814	1596	1464	1492	1537
Net debt	332	909	598	542	503
NWC	150.4	197.7	205.1	219.3	n/a
Leverage (Net debt/EBITDA)	3.1	5.6	3.1	2.6	2.3
Employees (x1) (average number)	5239	6998	7069	7308	n/a
Rev per employee	0.19	0.19	0.21	0.22	n/a

Figures are in €x1 million

*Forecast based on trading update Wavin H1 2008

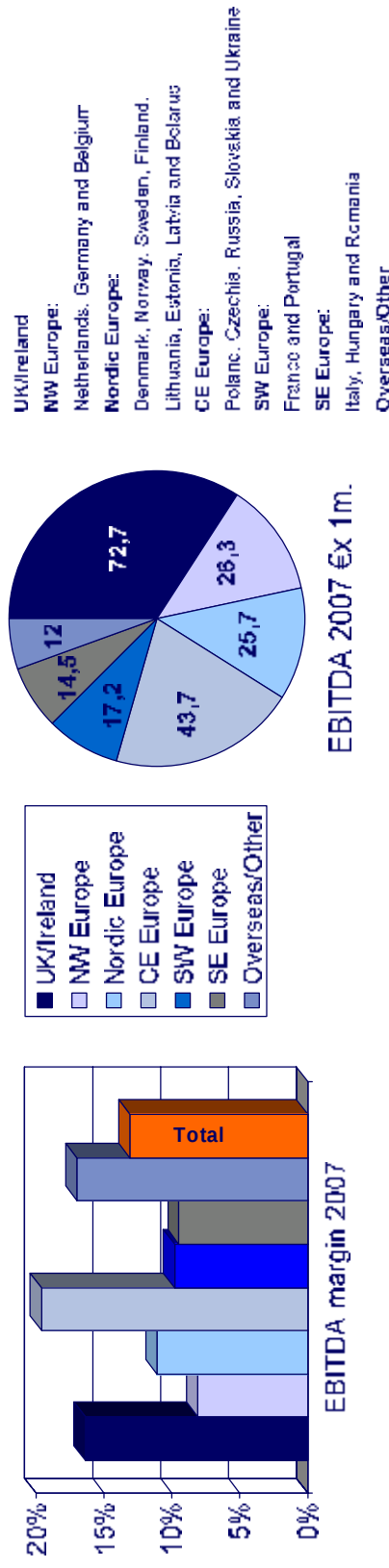
CAGR 2004-2007

Revenue	17%
Net Profit	38%
EBITDA margin	7%

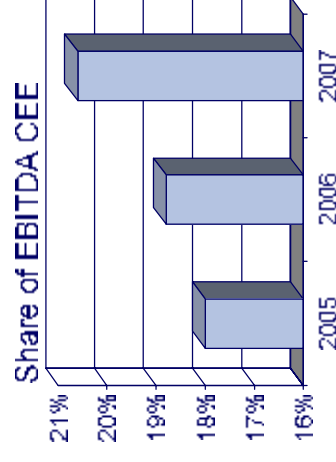
Wavin performed excellent in 2007. It was, however, a year of significant contrast.

- The first half of 2007 showed exceptional growth thanks to favourable weather conditions and strong demand from all markets
- The second half of 2007 was marked by a sharp drop in demand and high raw material costs.
- 2008 circumstances resemble the second half of 2007. Construction output is still below normal levels and raw material prices are all time high

Financial performance per region

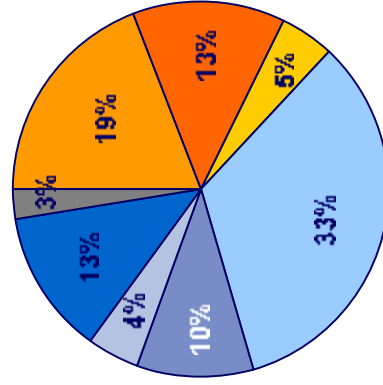


- CEE is not only the region with the **highest** growth potential but has also the **highest** EBITDA margin (19.6%)
- Upward trend in EBITDA share of CEE reflects Wavins strong presence in these emerging markets
- When the revenues off all "emerging countries" are combined they account for 24% of total sales (CEE, eastern Nordic countries, Hungary, Romania and Turkey).
- Wavin has a top-3 position (often leading) in all countries they are present, except Germany (top 5)
- Top-3 position in each country is important because almost all business is local to local. High transport costs combined with **different** purchase rules, per country, lead to "separate" markets. Top 3 position implies pricing power, advantage of scale and attracts large customers who are looking for reliable partners with broad product ranges

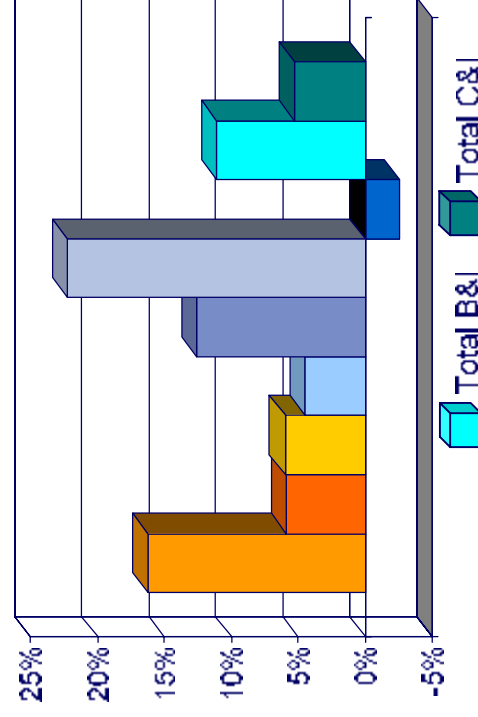


Financial performance Business Units

Share of revenues SBU's

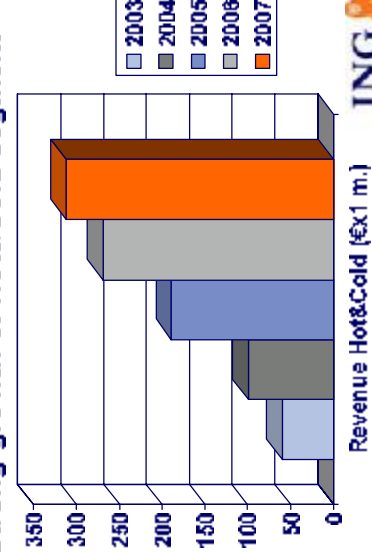


Growth rate SBU's 2006-2007



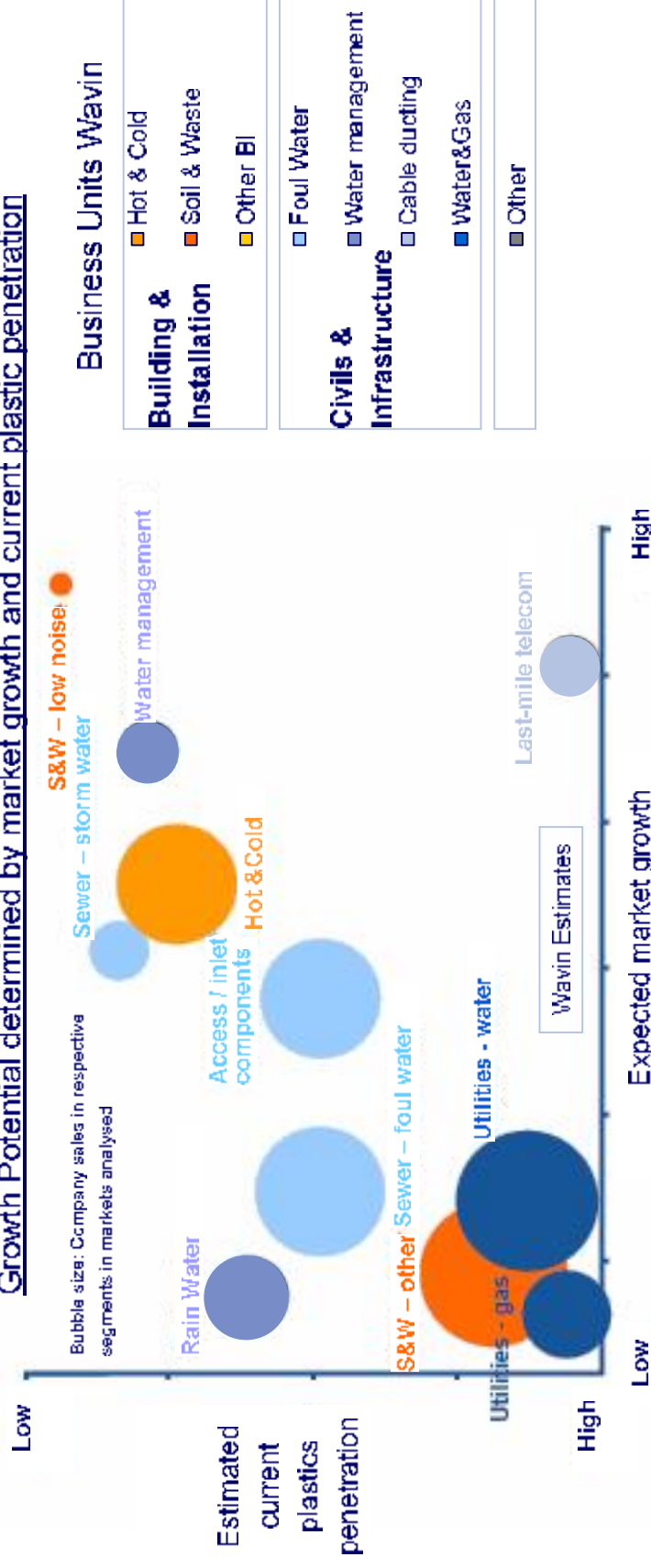
- Growth rates in line with the Strategy of Wavin to expand in the B&I segment. B&I segments offers high growth high margin opportunities
- Growth in the C&I segment was mainly attributable to specialities such as water management systems that can deal with irregular rainfall patterns.
- The low-margin and low-growth operations with which Wavin once started out (Water&Gas), operate in a mature market in WE and only enjoy growth opportunities in CEE. Wavin is reducing its exposure to this market and is focusing on selective sophisticated products. Negative growth rate of Water&Gas is in line with this strategy.
- Being active in both the B&I and C&I segments is a competitive advantage (important customers are also active in both segments) and provides purchasing power and synergies

Strong growth of Hot&Cold segment



Growth Potential Business Units

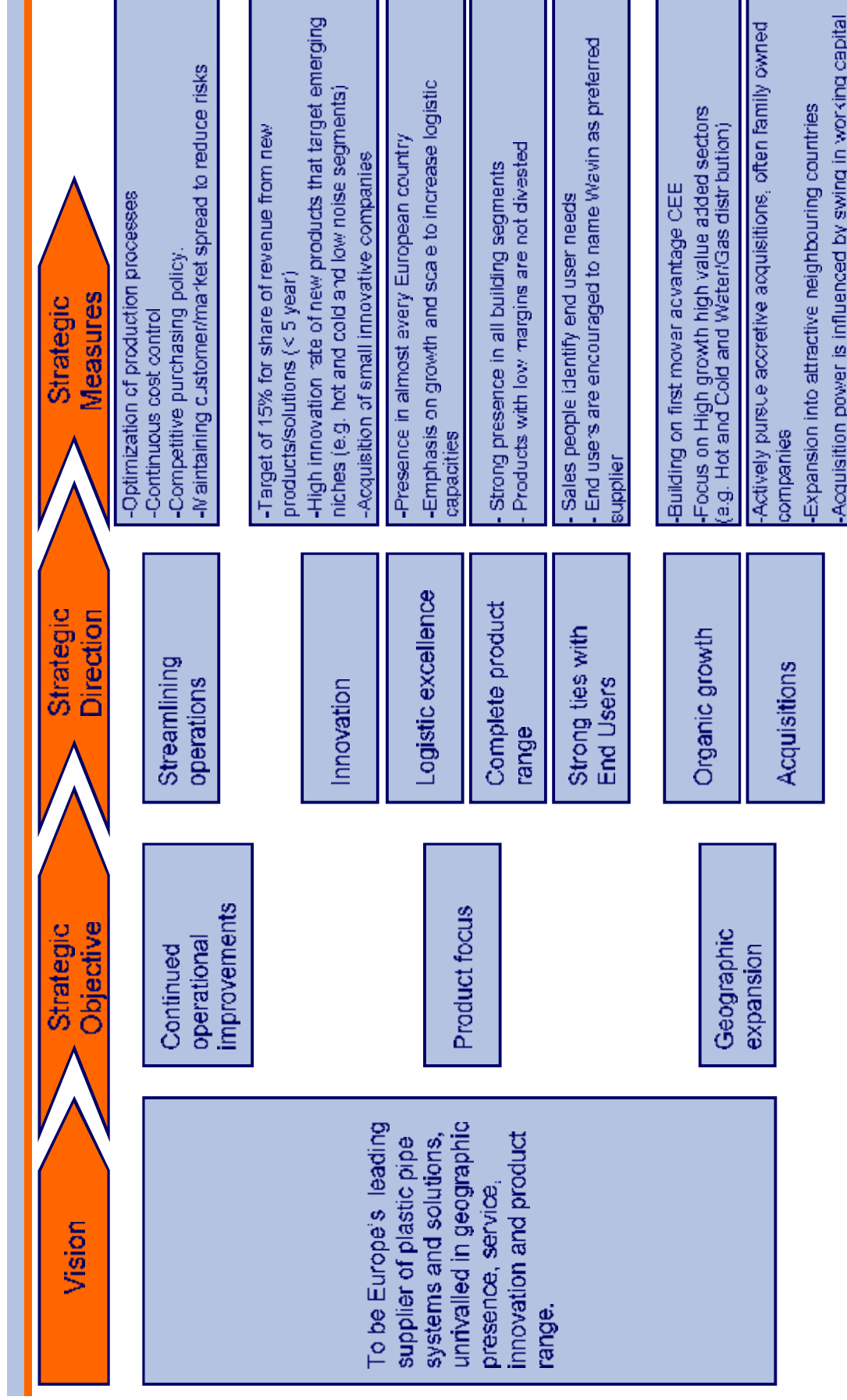
Growth Potential determined by market growth and current plastic penetration



➤ Specialities such as low noise applications and surface cooling systems (Hot&Cold) represent **highest growth potential** and offer high margins. However these segments are also more volatile because of their strong correlation to the housing market

➤ Wavin is currently focusing its investments on these high growth high value added segments. While Wavin has no ambition to expand in the low growth C&I segments they want to offer a complete product range. Low growth/low margin segments (e.g. Water&Gas) are not divested

Corporate Strategy



SWOT Analysis

Strengths

- European market leader in plastic pipes
- Strong brand, footprint and product portfolio
- Relatively high exposure to fast-growing Central and Eastern Europe
- High service ratio and strong logistic system
- High innovative power
- Strong track record of successful acquisitions

Weaknesses

- Low switch costs of customers
- Exposed to cyclical construction market developments
- Absence in Spain
- Buyer doesn't operate in the end market
- High fixed costs

Opportunities

- Substitution of traditional building materials continues
- Growth of renovation and maintenance market (less volatile than new building)
- Growth of high value added markets (e.g. Hot&Cold) with more specific products
- Leveraging on first mover advantage in CEE
- Emerging niches due to climate change and energy efficient building
- Total costs installed becomes key

Threats

- Consolidation trend at customer base continues
- Raw material price volatility continues
- Downturn in important markets continues and spreads

Part 3: Critical Business Issues Identified

- Rise & volatility of raw material prices
 - European footprint and its limitations
 - Habits of installers and plumbers in the Building and Installation segment
 - Share price developments
 - **Structural working capital increase**
- Subject of NISSM 23 June 2008**

Critical Business Issues

Rise and volatility of raw material prices

- Raw materials costs account for approximately 45% of total sales costs and 32% of total revenues.
- Plastic reins prices are correlated to the oil price which has shown a sharp increase and volatility lately.
- So far Wavin has been able to pass on the recent price increases, be it with a certain delay of 2 to 6 months. Small fluctuations are absorbed.
- With oil prices at all time high and rising, the negative impact on Wavins its margins continues.

European footprint and its limitations

- While one of the core aspects of Wavins strategy is "Unrivalled European presence" there are still some blank spots in its footprint. Especially the absence of Wavin in Spain stands out.
- While the absence of Wavin in the Spanish market currently is an advantage, due to the crisis in its housing market, this blank spot remains a weakness on the long run. Many of Wavins important customers are also present in Spain.
- The market in Spain however, is highly fragmented. Obtaining a top-3 position (which guarantees pricing power and advantages of scale) is very difficult.
- Next to the blank spots in Wavin its footprint, the single focus on Europe has also its limitations. There is still a large growth potential in CEE but in the future Wavin will have to look further then Europe if it wants to continue its growth strategy. With the single focus on Europe, Wavin could miss opportunities across the European borders which would benefit them later.

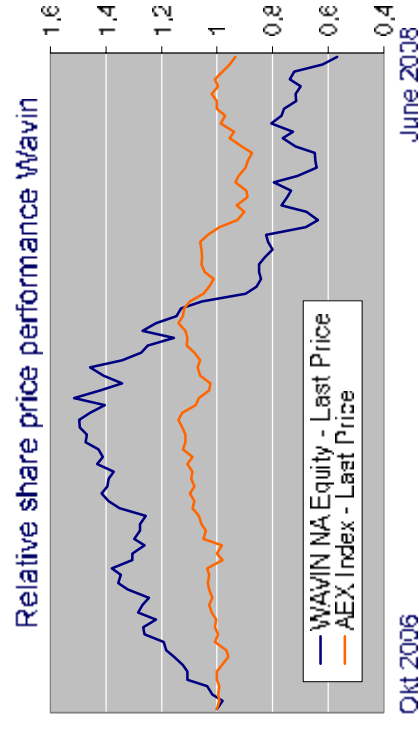
Critical Business Issues

Habits of installers and plumbers in the Building and Installation segment

- End users in the B&I segment are mainly small companies or even single persons (plumbers) who have certain habits, a good example is the fact that they are used to charge by the hour. While Wavins products are easier to install and less expensive (on total costs installed basis) than traditional products these "end users" still favour traditional materials/products because they simply can charge more hours. Another group of "end-users" is still unfamiliar with Wavins products and simply has a preferred choice for traditional materials/products.
- This mindset puts the brake on the substitution of traditional materials/products by plastics. The challenge for Wavin is, to change this mindset and encourage end-users to charge fixed prices for the whole job (solution selling) in stead of working hours. Furthermore Wavin should market their solutions to increase awareness of the advantages.
- The fact that Wavins clients in the B&I segment are distributors and not the "end users" of the products complicates the communication and influence of Wavin with the end users.

Share price developments

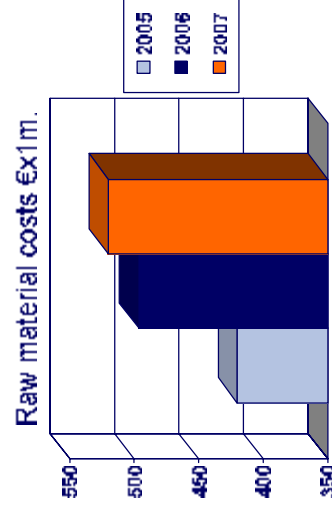
- The continued devaluation of Wavins shares decreases access to capital which is necessary for substantial growth scenarios .
- Market cap. of €615.2 m. (June 2008).
- Share price developments correlate closely with perception and expected performance of both the building materials sector and the company itself.



Critical Business Issues: Working Capital (1)

Structural working capital increase

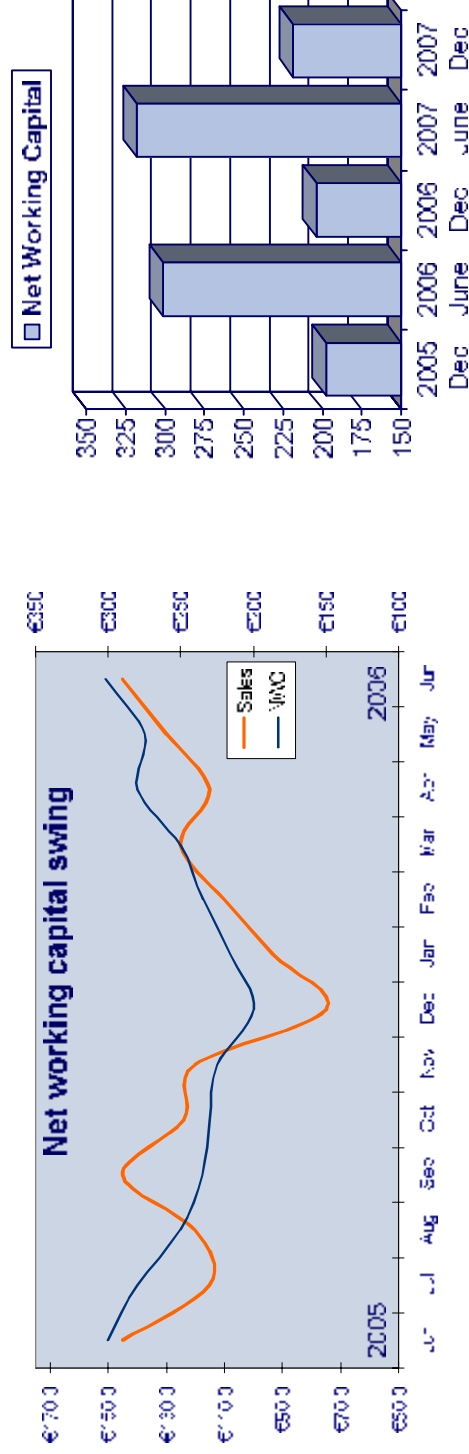
- Next to the high volatility in the raw material prices, the upward trend is ongoing which is also reflected in the increase of the Working capital.
- A structurally higher working capital level can put margins under pressure and has an important influence on the funds available for acquisitions.
- The seasonal net working capital swing further complicates this financing need.
- Since October 2006 (IPO date), Wavin has a five-year loan facility of € 750 million. The facility consists of a € 400 million committed Term Loan and a € 350 million committed Revolving Credit facility. Another uncommitted facility of € 100 million accommodates for the seasonal working capital swing. It also supports the company's growth and financing requirements for possible acquisitions. Furthermore, Wavin has € 141.4 million mostly uncommitted facilities with several banks.



	2004	2005	2006	2007
Inventories	138.6	166.2	200.6	215.1
Trade receivables	193.7	270.7	292	298.2
Trade payables	(181.9)	(239.2)	(287.5)	(294)
Net Working Capital	150.4	197.7	205.1	219.3

Critical Business Issues: Working Capital (2)

- Working capital is at low point at year end. Peak difference amounts to € 90-110 m.
- Consensus of annalists is for an even stronger increase of working capital in 2008



- Wavin has successfully lowered its net debt the past years. As a consequence the leverage ratio was well within the financial ratios agreed with its lenders.
- The Leverage ratio limit of the Facility agreement is 3.5 with an exceptional breach to 4.0

	2005 Dec	2006 June	IPO (12 Oct 06)	2006 Dec	2007 June	2007 Dec	2008F Dec
Net Debt	909.3	905.9	654	597.7	654.2	542.4	503
EBITDA*	163.4	179.2	192.4	196.3	214.6	212.1	221
Leverage	5.56	5.06	3.4	3.04	3.05	2.56	2.28

*EBITDA adjusted for June and IPO

Critical Business Issues: Working Capital (3)

Question:

How to adequately assess Wavins problem of a structurally increasing working capital?