

Assessing financing mechanisms in EU shipbuilding

25 February 2011

Study on the need for a European shipbuilding pre-delivery guarantee scheme

This report expresses the views of researchers of PwC and does not necessarily reflect the views of the European Commission.



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1. Introduction

1.1 Background to the study

Shipbuilding in the European Union provides many thousands of jobs at shipyards and suppliers, has a long history and is known for its innovation capacity and ability to construct the most complex vessels in the world. In many coastal areas, shipyards are the cornerstones of regional economies.

Today's shipbuilding industry consists of yards, subcontractors, different sorts of suppliers, classification agents and other professional service providers. The shipbuilding sector is an intensively clustered sector. A large network of different players, each with their specific expertise and knowledge, is closely intertwined and highly interdependent. The yards are central in these networks and play an essential role in bringing together different parties throughout the shipbuilding value chain: from design, procurement and production to testing, certification, after-sales, maintenance and repair.

1.1.1 Commercial shipbuilding in the EU

At the dawn of 2011, the EU shipbuilding industry is characterised by specialisation and innovation. This results in a focus on optimised custom-made products or small series at most. Standardisation is relatively limited compared to shipbuilding in other parts of the world. Vessels are often one-of-a-kind, due to their size, complexity, degree of specialisation and variable functionality and hence their long building time and high costs.

These circumstances contribute to the fact that EU yards are relatively small, both in gross tonnage (GT's) as in production volume in euro's. Even though EU yards generate approximately €12 billion in commercial newbuildings in 2009, only five EU yards have a production volume in commercial newbuildings that exceeds €500 million.¹ The size of the world's largest shipyard – Hyundai Heavy Industries – has a higher tonnage output in GT's than the EU's twenty largest yards added together.

Consequently, this relatively small size of EU yards, and the complexity of the vessels produced, have resulted in the creation of large and diverse shipbuilding clusters. Processes and parties within the shipbuilding clusters are extremely interconnected. Because of this interdependence, and the relative absence of strategic government regulation and stimulation, the EU shipbuilding clusters are extremely fluid and volatile. This vulnerability has become particularly evident since the financial crisis.

1.1.2 The need for pre-delivery guarantees

The EU shipbuilding sector is faced with many challenges. Competition from new shipbuilding markets, imbalances in supply and demand, relatively high labour costs, and increasing requirements for environmentally friendly and energy saving vessels are important to the sector and will remain so. These challenges are to be met by the sector itself.

Yet, they are intrinsically related to another difficulty: the availability of financing for shipbuilding projects. The shipbuilding sector requires in many cases guarantees for the pre-delivery financing of the project, covering the necessary working capital during the construction phase and refund guarantees issued by the yard's banks or a similar institution.

Post-delivery guarantees are used in the shipbuilding sector to facilitate customers with guarantees on their loans with which they pay the contract price to the yard.

This study focuses on pre-delivery guarantees. Although post-delivery guarantees are not in the scope of this study, the instrument will be taken into consideration as it can have effect on the pre-delivery financing process.

¹ Source: Internal CESA statistics (2009) and analysis of PwC

During the financial crisis commercial banks reconsidered their activities in financing the shipbuilding and ship owning sector, as they did in many other sectors. Some banks withdrew totally from the sector, others reduced their activities significantly. This could result in a decreased level of expertise, which in turn further accelerates the withdrawal process. Because of this vicious circle, arranging pre-delivery guarantees has become harder and harder. Banks are more reluctant to finance working capital and refund guarantees, since risks in the volatile shipbuilding market are high.

1.1.3 The role of LeaderSHIP 2015

The study can be seen in relation with LeaderSHIP 2015. LeaderSHIP 2015 was set up in 2003 by the European shipbuilding industry as an ambitious programme to ensure its long-term prosperity in a dynamic growth market.

In 2003, the LeaderSHIP 2015 Advisory Group stressed that securing financing in the pre-delivery phase is crucial for shipbuilding projects to come about. Without these pre-delivery guarantees, commercial newbuilding projects cannot come into being.

The assumption of many stakeholders in the shipbuilding sector is that this exogenous problem should be solved through governmental assistance. As early as in 2003, LeaderSHIP underlined the importance of exploring the possibilities of establishing an EU-wide scheme for pre-delivery guarantees. An alternative for such an EU scheme could be the harmonisation of standards and – if existing – pre-delivery guarantee schemes in EU member states, in line with common market and OECD rules.

At present, four EU Member States have set up their own public pre-delivery guarantee schemes that can provide the yards within those Member States with guarantees in case commercial institutions are not willing to do so. These schemes are in line with the EU Notice on guarantees and are approved by the EU Commission.

1.2 The objective of this study

The objective of this study is to analyse European industry's needs for pre-delivery guarantee schemes, in consideration of the current situation.

The question is, to what extent are the current schemes at Member State level sufficient when it comes to pre-delivery guarantees? Should the other Member States with a substantial shipbuilding industry also be covered by public pre-delivery guarantee schemes? And if so, should such public schemes be set up by individual Member States or should they be set up more centrally? In January 2010, the European Commission, DG Enterprise and Industry asked PwC to investigate the current pre-delivery guarantee schemes and – if necessary – to give advice on ways to improve the availability of pre-delivery guarantees. This report is the result of that investigation.

The figure below gives the content of the respective chapters.

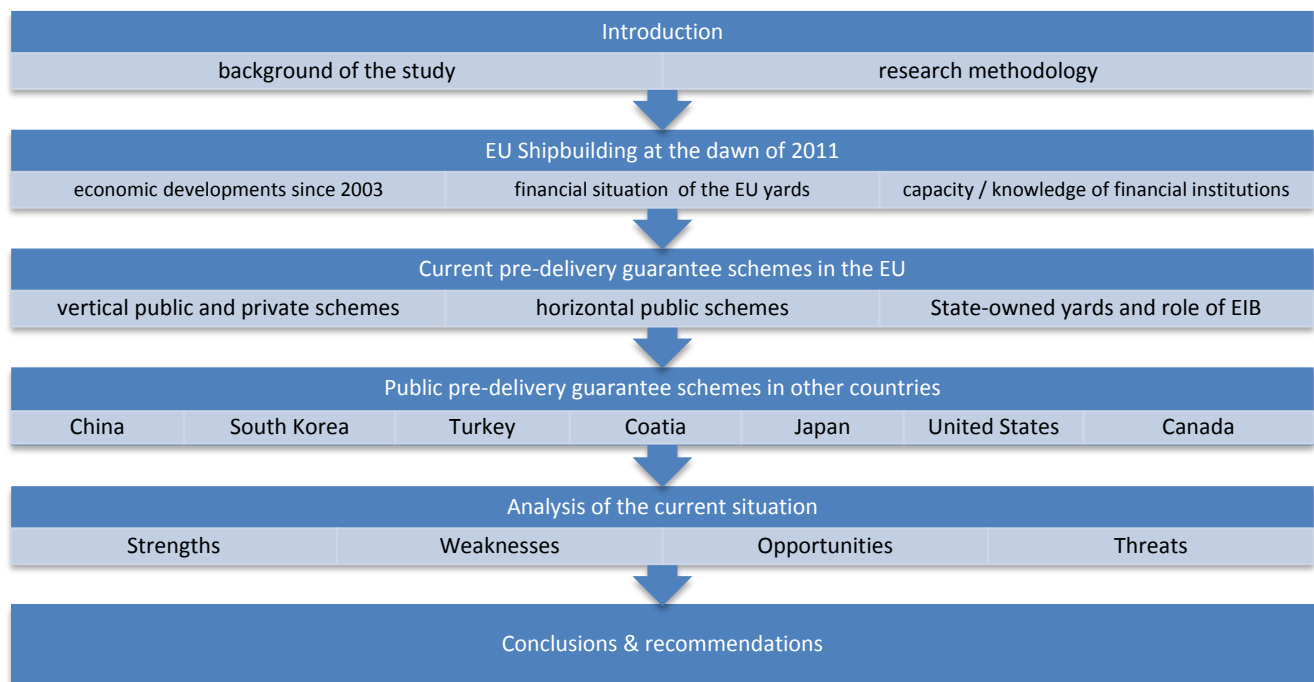


Figure 1: Content of the study

1.3 Research Methodology

1.3.1 Scope of the study

This study elaborates on a large variety of characteristics of the EU commercial newbuilding sector. The scope of the study is determined along two dimensions:

1. **Countries included.** The scope of the study is limited to those countries that are part of the EU-27 and that have country representatives as member associations of the Community of European Shipyards' Associations CESA. In other words, it contains all those countries that the EU and CESA have in common. These are Bulgaria, Denmark, Finland, France, Germany, Greece, Italy, Lithuania, The Netherlands, Poland, Portugal, Romania, Spain, and the UK.
2. **Type of yards.** The study focuses on the commercial newbuilding of larger vessels. This criterion does not exclude yards that are also active in naval shipbuilding or that do repairs. It does however exclude yards that are only active in naval shipbuilding or in repairs or smaller yards that only construct small vessels such as fishing or pilot vessels. Moreover, from yards that are active in both commercial newbuildings and naval shipbuilding or repairs, production volumes of non-commercial newbuilding activities are excluded.

1.3.2 Sample characteristics

For this study we analysed the number of companies active in commercial newbuildings of larger vessels within the countries in scope. From the 52 companies active in commercial newbuildings 33 were interviewed in October and November 2010. The yards interviewed are based in Bulgaria, Denmark, Finland, France, Germany, Italy, The Netherlands, Poland, Romania, Spain, and Greece. In 2009, the yards interviewed had a total commercial newbuilding production value of €9,1 billion. Hence, 75% of the total European commercial newbuildings turnover is covered in the analysis.

The yards form a representative distribution among constructors of the following types of vessels²:

Vessel type	Definition	N³
Cruise and ferries	All are large vessels constructed to move passengers.	6
Cargo vessels	Large vessels that carry cargo, goods, and materials. This category includes – besides general cargo – tankers, dry-bulk carriers, container and multi-purpose vessels.	15
Dredgers	Vessels used for excavation activities underwater with the purpose of moving sediment.	2
Small vessels	Several types of vessels primarily meant for local services and produced by small local yards. ⁴	5
Mega yachts	Relatively expensive –and often privately owned- vessels used for leisure. Mega yachts can be either sailing or motor yachts	5

Table 1: Types of vessels included in this study

These interviews were held to collect up-to-date information on the current use of pre-delivery guarantees, the financial situation of the EU shipyards, market volumes, and the needs and demands of the shipbuilding industry. Interviews were held with top executives of these yards, most often the CFO. All yards interviewed are active in commercial newbuildings.

1.3.3 Stakeholder interviews

Beside the interviews with the shipyards, 25 semi-structured interviews were held with various stakeholders in the shipbuilding industry. Through these interviews rich data was gathered on various aspects of current national schemes, such as eligibility criteria, governance, risk assessments, et cetera.

These stakeholders included shipbuilding sector representatives, banks, insurers, governmental representatives EIB representatives, OECD representatives, ECA representatives, members of CESA's Financial Expert Committee, ship owners, and representatives from other sectors.⁵

1.4 Acknowledgements

The underlying report offers unique and rich information on the EU shipbuilding industry in general. Within this context it focuses on various aspects related to pre-delivery guarantee schemes. This level of richness and representation would not have been reached without the help of several important parties in the shipbuilding sector. Special note should be made of Mr. Wolfgang Hehn, policy officer at DG ENTERPRISE, dr. Reinhard Lüken secretary general of CESA, the members of CESA's Financial Experts Commission and the representatives of the Member Associations. All contributed in a critical and constructive way to the underlying report.

This report expresses the views of researchers of PwC, and does not necessarily reflect the views of the European Commission.

² For confidentiality reasons we are not allowed to present the names of the yards interviewed. Since the number of yards in the EU is relatively small, especially within certain segments, anonymity would be lost. Both PwC and the EC, DG INDUSTRY, have a list of yards interviewed.

³ One should be aware that the distinction between the vessel types produced is not too rigid. Even though the concept of universal yards has not emerged in European shipbuilding, yards construct the type of vessel the market asks them to.

⁴ Definition based on CESA input in OECD WP6 of December 18th, 2006.

⁵ For confidentiality reasons we are not allowed to present the names of the interviewed stakeholders. Both PwC and the EC, DG INDUSTRY, have a list of stakeholders interviewed.

2 The EU shipbuilding sector at the dawn of 2011

2.1 The shipbuilding industry is a sector where strategic interests and high risks go hand in hand

This chapter sketches an image of the European commercial newbuildings sector at the dawn of 2011. It will show how:

1. the sector in Europe has constantly lost market share to all competitors in the Far East;
2. this loss of market share is concentrated in the particular market segments in which Europe's high tech's value added is relatively small: cargo vessels⁶;
3. EU yards are facing major micro-economic challenges and the financial structure of most yards shows that work in progress is mainly short term financed.

The shipbuilding industry is not an ordinary sector, for the following reasons:

1. Shipbuilding is a high risk business. Building a ship requires tremendous investments, both for the yards and the ship owner.
2. There is a constant pull for low-cost shipbuilders into the market. This has a downward effect on vessel prices and causes overcapacity.
3. Many governments consider the shipbuilding sector to be of strategic importance and are willing to invest in its development.
4. There is the multiplied dependence of the shipbuilding cycle on the cargo demand cycle: small changes in sea trade can have a massive effect on shipbuilding demand figures.
5. Because of relative long lead times, shipbuilding is a typical late-cyclical industry.

The combination of the latter two factors implies that the effects of economic downturns need to work their way through the global demand and supply chain before completion levels for new vessels are affected.⁷ The combination of all five characteristics causes an institutionalised 'bounded rationality' when it comes to anticipating on developments on the demand side.

Over recent decades, this bounded rationality in the shipbuilding market has gone hand in hand with a constant entrance of low-cost shipbuilders into the global market. The capacity effects on the global shipbuilding market are evident. The OECD recently stated that structural overcapacity in the global shipbuilding is a major problem that is increasing as well. The effects of this overcapacity on the global shipbuilding sector is further stressed by oversupply in the commercial fleet⁸, the continued deliveries of new vessels, and governmental policy measures that increase protectionism and distort the shipbuilding market.

⁶ E.g. container ships, RORO ships, tweendeckers, bulk carriers, crude oil tankers, LPG tankers, pure car carriers, et cetera

⁷ See also: OECD WP6 (2009). OECD bemoans shipbuilding overcapacity

⁸ The Baltic Exchange Dry Index (BDI) is the main measure of the demand for dry bulk capacity. It fell from over 11,000 in 2008 to below 1,000. It has remained around 2,700 since the beginning of 2010.

The competition effect on the EU shipbuilding market over the last few decades is evident. Subsequently Japan, Korea, and China have entered the market and hence, substantially increased the world's shipbuilding capacity. After the second world war, Europe's market share in CGT production has decreased dramatically.⁹

In 2003, the starting point of LeaderSHIP 2015, the global shipbuilding sector was again at the beginning of a period of worldwide growth of demand. About 30 countries in the world had a substantial commercial shipbuilding industry with an active newbuilding component. The point of departure of shipbuilding in the European countries could be summarised as follows:

1. *In 2004 they built 306 commercial vessels with a production value of approximately €9,5 billion.¹⁰*
2. *Compared to competitors in other parts of the world, the EU yards focus on specialised vessels, dredgers, passenger ships, et cetera.¹¹ Nevertheless, the bulk of the vessels constructed were commodities, such as general cargo vessels, full container vessels, and product- & chemical tankers. For instance, Germany focussed mainly on container ships with a share of 54% followed by passenger ships and ferries with about 27% of all deliveries.¹²*
3. *Most production volume in EUR was situated in Germany (24%), and Italy (23%). Smaller producers were Spain (13%), the Netherlands (11%), Finland (10%), Poland (6%) and Denmark (5%).¹³*

2.2 Turbulent times for EU shipbuilding: from a significant rise in order books in 2003 – 2007 to the lowest level since 1990 in 2010

2.2.1 In terms of order book volume the 2003-2007 period was positive for EU yards

The year 2003 was the starting point of four years of worldwide trade growth up to 2007. Between 2003 and 2007, new orders in CGT worldwide more than doubled from 41 million CGT to 85 million CGT. As the completions in CGT's increased from 23 million CGT in 2003 to 34 million CGT in 2007, the world's order books increased from 70 million CGT in 2004 to 184 million CGT in 2007.¹⁴

The figure below shows that in this period Europe also experienced a strong rise in new orders, combined with a relative stable output in completions.¹⁵ Hence, order books increased by some 70%.

⁹ Lloyd's Register of Shipping, Clarkson *World Shipping Monitor*, as reported in: Stopford, Martin (2009). *Maritime Economics*, Routledge, p. 614

¹⁰ Source: Internal CESA statistics (2010), further calculations: PwC

¹¹ The European market share in these complex vessels is 64% (AWES Annual Report 2003-2004).

¹² AWES Annual Report 2003-2004, p. 56

¹³ Source: Internal CESA statistics (2010), further calculations: PwC

¹⁴ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*.

¹⁵ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*.

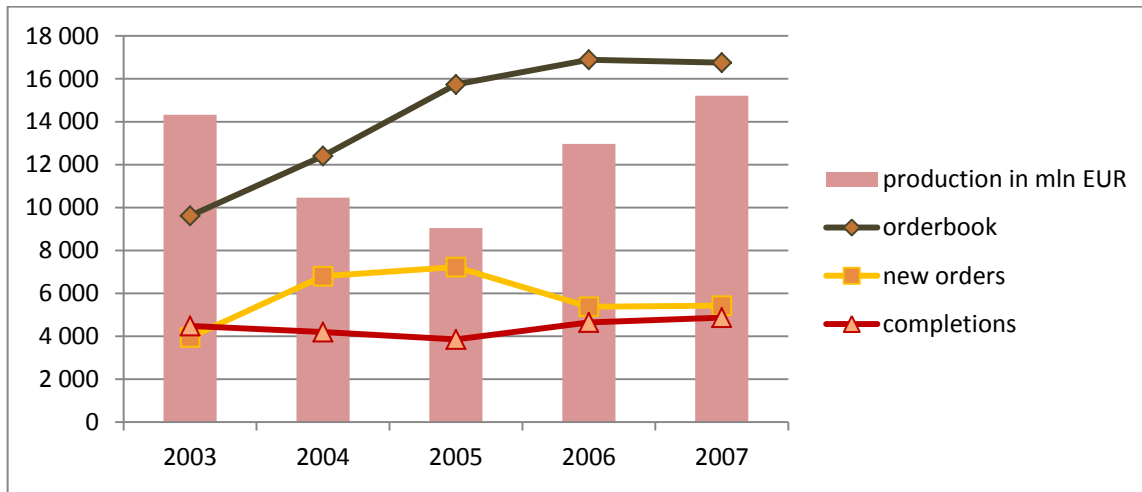


Figure 2: Commercial newbuilding activities in Europe in 1,000 CGT (2003-2007)

2.2.2 However, serious problems turned out to be underlying the growth in the EU

The prosperity mentioned above conceals the fact that new orders in Europe reached their peak in 2005, while the worldwide average figures kept on growing until 2007. The figure below shows the indexes of order books in CGT's.¹⁶

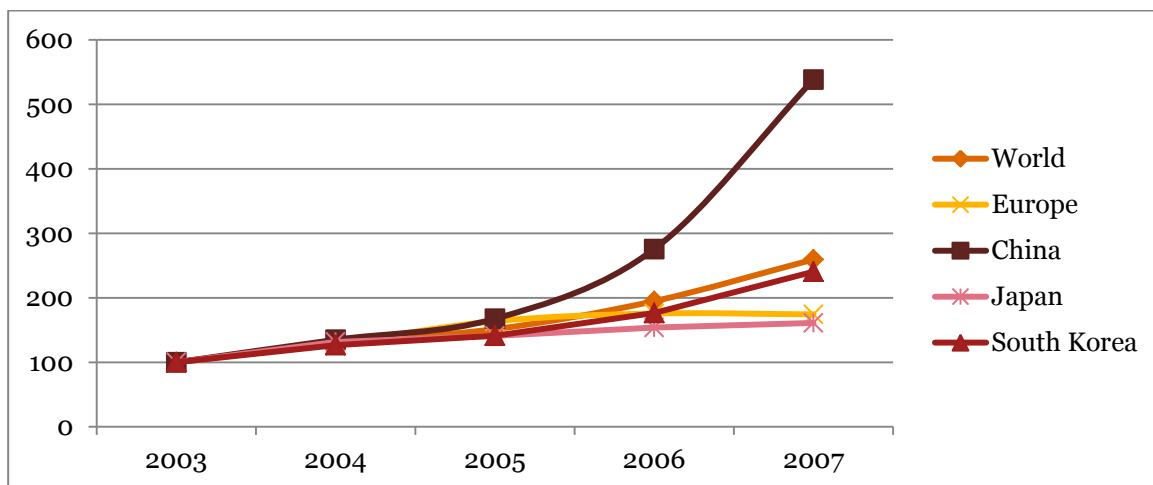


Figure 3: Index of order books in the major shipbuilding markets in CGT's (2003-2007)

It is clear that especially the Chinese order books have shown tremendous growth. To a lesser extent this also goes for South Korean order books. In order book growth, Europe has been lagging behind on the world average since 2005. In this regard, three crucial observations can be made retrospectively on the period 2003-2007.¹⁷

1. Europe also would have lagged behind even if the explosive Chinese growth were excluded from the analysis. If this were the case European market share would have dropped 13% instead of 33% between 2003 and 2007.
2. In the last two years of that period, growth in China came at a cost of decline in European market share. In 2007, the Chinese market share rose by 46%. The European market share fell by 25%, while the Japanese market share fell by 20%.

¹⁶ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*.

¹⁷ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*. Further calculations: PwC.

3. Europe is the only one of the four major producers that has evidenced a stabilisation of the order book at the end of the period between 2003 and 2007, due to a reduction of new orders. This implies that the relative loss of market share is more than a situation in which production volume leaks away towards China, a new market that is showing revolutionary growth.

In other words, between 2003 and 2007, EU shipbuilding has reaped the fruits of a period that is characterised by trade growth and a boom in the shipbuilding industry. However, this has also concealed a declining market share vis-à-vis shipbuilders in Korea, Japan, and China in particular. This leak of market share was topographically focussed towards China, and to a lesser account towards Korea and Japan respectively. The loss was most severe in the cargo vessel segment.

2.2.3 New orders intake in the EU dropped by 90% in the 2007 – 2009 period

In the summer of 2008, the global shipbuilding sector hit the top of the cycle in order intakes. By that time Fannie Mae and Freddie Mac had already been taken over by the US federal government and Merrill Lynch had been sold to the Bank of America. Starting in the autumn of 2008 the new order intake fell by 90%. Consequently, ordering activity in 2009 reached its lowest level since 2000. With a more or less stable output in completions, order books emptied at a rate of 22% per year. The figure below shows the direct consequences for the EU shipbuilding industry.¹⁸

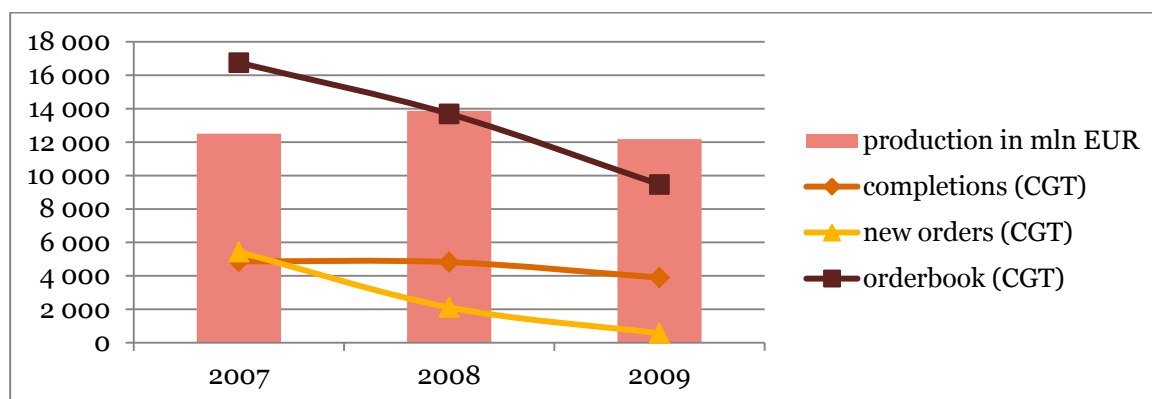


Figure 4: Commercial newbuilding activities in the EU in 1,000 CGT (2007-2009)

2.2.4 EU shipyards are hit the hardest

This decline in European order books can also be witnessed in the figure below. It shows the development of order book growth in percentages between 2008 and 2010.¹⁹ It is clear that the average European order book decline of 22% per year is more substantial than the decline in the other shipbuilding markets.

¹⁸ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*. Further calculations: PwC.

¹⁹ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*. Further calculations: PwC. 2010 calculations are based on IHS Fairplay estimates.

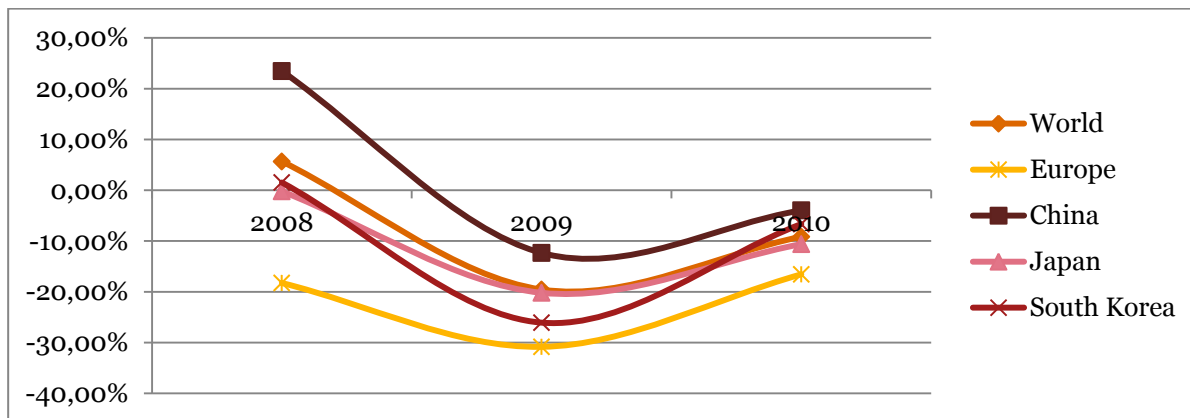


Figure 5: Order book decline in the major shipbuilding markets (2008-2010)

Our calculations show that European shipbuilders have further lost substantial market share in the 2007-2010 period, partly due to the massive capacities built up in Asia. Our interviews indicate that even though many EU yards have further increased production technologies, labour productivity, and increased their focus on high-tech niches in the 2007-2010 period, they still face major difficulties in coping with fierce competition from Asian yards. Especially in commodities, such as cargo vessels, EU yards cannot overcome their high labour costs. Precisely in those segments, losses to Chinese competitors are most severe. The Chinese combination of low labour costs, enormous capital investments, and an impressive labour force makes it an unbeatable competitor for the EU shipbuilding in the low-end segments.

Despite the general loss of EU market shares to competitors in the Far East, market shares within the EU changed only marginally compared to 2004. Within the EU, most production volume is still situated in Germany (22% in 2010, 24% in 2004), and Italy (20% in 2010, 23% in 2004). Other substantial producers are The Netherlands (15% in 2010, 11% in 2004), Spain (15% in 2010, 13% in 2004), Finland (10% in 2010 and 2004), Poland (4% in 2010, 6% in 2004) and Denmark (4% in 2010, 5% in 2004).

2.2.5 EU order book in CGT's is now at its lowest level since 1990

Order books are shrinking worldwide, most dramatically in the EU. For the global shipbuilding industry, 2011 is well covered in terms of order books. At the end of May 2010, about 60% of 2012 was covered as well²⁰. In Europe, the new orders gained in the first half of 2010 surpassed those in 2009. At first sight this seems a good development. However, in absolute terms, the intake of new orders is not larger than 27 vessels.

The results of this can be seen in the figure below. It presents the order book-completion ratios in the most important shipbuilding markets.²¹

²⁰ Stopford, dr. Martin, SMM 2010, Advance Press Conference, 26th May 2010

²¹ IHS-Fairplay, as reported in CESA (2010). *Shipbuilding Market Monitoring – October 2010*. Further calculations: PwC.

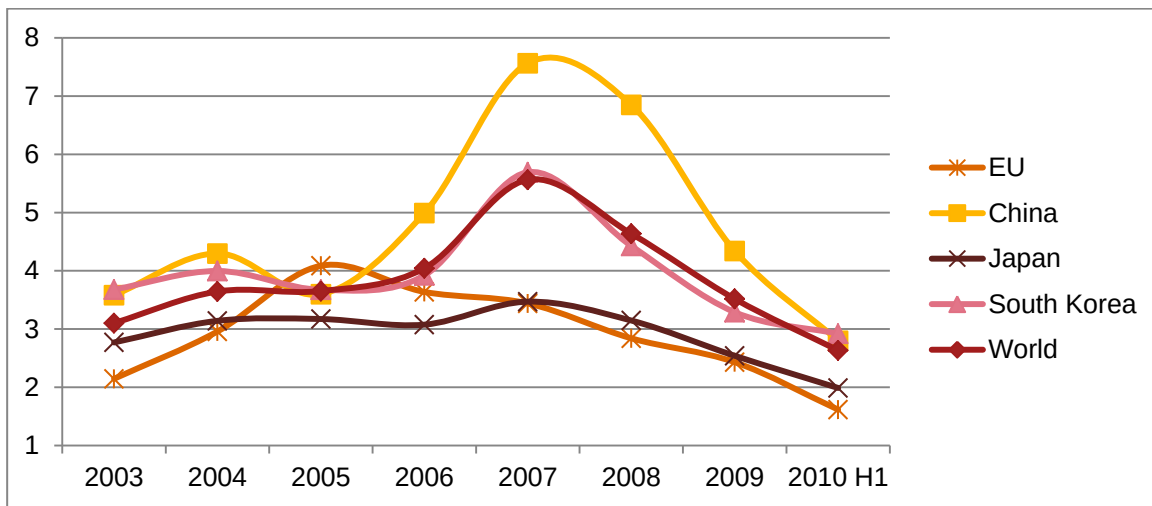


Figure 6: Order book-completion ratios

EU order books have decreased to a total of 7.4 million CGT's in June 2010. This is the lowest level since 1990.²² Furthermore:

1. The EU order book-completion ratio has dropped to 1.62 in the first half of 2010. This is the lowest ratio in the world.
2. European yards hold no more than 5.2% of the world's order books in terms of CGT's in June 2010. This is a clear indicator that –at least in terms of CGT's- the loss of market shares of the EU yards vis-à-vis competitors in the Far East in terms of cargo vessels continues.

In terms of number of vessels the European share in the world's order books (6.69%²³) is higher. The CGT/vessel ratio has decreased by 17% over the last six years. This proves that certain segments of the European shipbuilding industry seem to be relatively successful in clear niche markets, focussing on specialised segments. This process was guided by initiatives such as WATERBORNE.²⁴ Nevertheless, EU shipbuilding is dramatically losing market shares. In particular, builders of cargo vessels will face difficulties and a further loss of market shares.

2.2.6 Relative optimistic prognoses for the 2010 – 2013 period by yards themselves

In the interviews with the respective yards, they were asked about their business plan prognoses. When questioning the yards on their business plans a clear distinction between the cargo and non-cargo sectors appears. Figure 7 shows this distinction clearly.

Most EU yards expect that they have hit the bottom of the market in 2010. An upturn is expected to commence in 2011. This recovery is expected to continue in 2012 and in 2013. When correcting for inflation it seems to flatten out in 2013. In 2012 production volumes are expected to reach the level of 2006 again. However, the level of 2008 will not be achieved again in the short term.

The trend in Figure 7 is based on the prognoses reported in the yard interviews and CESA statistics. Together the reporting yards represent 75% of European production volume in 2009. Data from the business plans of the yards were coupled to CESA statistics covering the 2003-2009 period and translated into indexes and corrected for inflation.

²² CESA, *Shipbuilding Market Monitoring*, Report N° 20 – October 2010, p. 4, calculations: PwC.

²³ CESA, *Shipbuilding Market Monitoring*, Report N° 20 – October 2010, p. 26, calculations: PwC.

²⁴ The Waterborne Technology Platform brings together the industry, trade associations, the 25 European Union member states, a number of non-EU members including Norway and the European Commission services. The Platform aims at strengthening the European maritime industry at research, development and innovation level.

Even though Figure 7 does not represent a genuine forecast, two aspects are striking:

1. Despite the low order book situation in May 2010 as described earlier, in October 2010 most yards expected that in 2010 they have hit the bottom of the crisis in terms of production volume. They are relatively optimistic about the nearby future. Yards assume that a substantial part of the missing 40% of the 2012 order books will be filled, or know that it has already been filled between May 2010 and October 2010. Nevertheless, they do not expect the pre-2009 levels to return.
2. There is a clear distinction between different categories of builders. Builders of cargo vessels have rather pessimistic business plans. Builders of other vessels are far more optimistic.²⁵ The pessimism of builders of cargo vessels can be attributed to certain individual yards in segments that have been hit most by the Asian competition illustrated in the previous section. This corresponds to the substantial fall in CGT market shares in the order books.

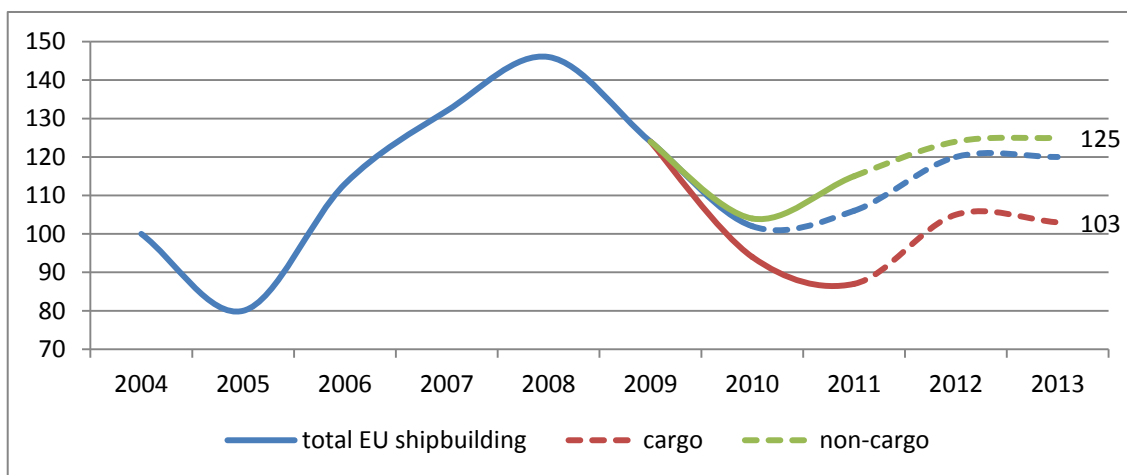


Figure 7: Index of production value (2004-2013, est.), corrected for inflation (HICP-values, 2004 = 100)

2.2.7 At the dawn of 2011, 52 companies within the EU are active in commercial newbuilding of larger vessels

As a result of consolidation within the industry, combined with some closures and bankruptcies, the number of independent yards has decreased significantly since 2003. As part of our study we made a thorough analysis on the present number of (independent) companies within the EU. The scope of the study is limited to those countries that are part of the EU-27 and that have country representatives as member associations of CESA, and to the commercial newbuildings of larger vessels. From yards that are active in both commercial newbuildings and naval shipbuilding or repairs, production volumes of non-commercial newbuilding activities are excluded.

These two scoping dimensions result in the following table. This table shows the number of companies active in commercial newbuildings in the countries in scope. The number of yards exceeds the number of companies, since a number of companies have several yards. The production volume is based on 2009 CESA statistics. The other data were checked in interviews with all relevant CESA member associations and national shipbuilding representatives.²⁶

²⁵ We can also find clear differences between shipbuilding segments. Due to the small number of yards and the necessary anonymity we only present these figures in a semi-aggregated way.

²⁶ Hence, potential Slovakian and Swedish shipbuilding capacity is not included. Data on these industries would be lacking.

Country	Number of companies	Production volume (in EUR mln)²⁷	Number of Vessels
Bulgaria	3	30	4
Denmark	1	500	9
Finland	1	1,190	3
France	2	750	13
Germany	12	2,618	52
Greece	2	11	2
Italy	4	2,391	32
Lithuania	1	63	2
Netherlands	11	1,786	176
Poland	3	432	25
Portugal	1	90	3
Romania	3	482	31
Spain	7	1,825	50
UK	1	9	2
Total	52	12,177	404

Table 2: Companies active in commercial newbuilding per Member State

The variety of companies and yards within the EU is huge, they vary from very large (for example: STX Europe, Fincantieri) to small (for example: Pirion in France and Mariotti in Italy), from independent small companies with one yard to large conglomerates and from yards focussed on general cargo vessels to yards focussed on highly specialized vessels. The characteristics of these companies, relevant to the scope of the study (the need for a shipbuilding pre-delivery scheme in Europe) , will be discussed in the next paragraphs.

To conclude this paragraph on the macro-economic development of the shipbuilding sector in general and within the EU in particular, it can be said that the financial crisis has affected the industry very strong. If no new orders can be concluded in time, too low utilization of the yards' staff and equipment will cause losses, which will consequently influence the financing capacity of individual yards. Yards that have to focus on other, more specialized, vessels will have difficulties to find adequate financing under such circumstances and certainly will have to pay higher prices for loans and guarantees.

2.3 The financial situation of EU shipbuilding at the dawn of 2011 is vulnerable

2.3.1 Work in progress is short term funded with two types of progress payments schemes

2.3.1.1 General financial structures

The general way for financing the construction of newbuildings is through a special project financing arrangement with a commercial bank. Such arrangements include financing of the construction costs through construction loans and providing performance guarantees and refund guarantees for advance payments made by the customer. After delivery and payment of the vessel the construction loan is fully repaid and the arrangements end.

²⁷ In million €'s, Source: Internal CESA statistics (2009), further calculations: PwC

Banks are performing normal risk assessment procedures for financing shipbuilding projects. Key elements in the assessments are the solvency and the profitability of the yard (its track record), items we will take a closer look at for the companies within the EU in this paragraph. The degree of complexity of the vessel to be built and an assessment of the creditworthiness of the customer are also a standard part of the risk assessment process. The ability of the customer to pay the remaining progress payments during construction and at the moment of delivery is an essential element. Based on this total risk assessment an interest rate and a guarantee premium are agreed.

If banks consider one or more elements (e.g. complexity of the vessel, amounts involved, duration of the loans, risk profile of the country of the customer) of the project too high, the yard and her bank could seek additional support (= guarantees) from credit guarantee institutions. These guarantees can be obtained from commercial credit insurance companies or, especially if they consider the risks also too high, from credit insurance provided by governments, or dedicated financial institutions.

Some yards offer their customers post-delivery financing facilities as part of their commercial proposal. In most cases it regards guarantees provided by a bank or a financial institution that enable the customer to get a loan at attractive conditions. Frequently credit facilities from Export Credit Agencies (ECA) are used in these cases. The costs of these schemes usually are included in the vessel price.

2.3.1.2 Shipbuilding Work in Progress is short term funded

The EU shipbuilding industry is producing expensive capital goods sold on a world-wide market. The lead time from the signing of the contract to delivery of the vessel is on average between 1.5 and 3 years. Prices vary between €5 million for a small seagoing vessel and more than €500 million for a large cruise vessel. During these 1.5 to 3 years, newbuilding projects have a large impact on the balance sheet of both the ship owner and the yard.

The financial position of yards is important in the risk assessment process applied by banks in considering the financing of newbuilding orders. The financial structure of shipbuilding companies is highly dominated by the work in progress and progress billings. In their balance sheets yards present the net of work in progress and progress billings as current assets according to the regulations of their national accounting principles or IFRS. In order to get a good insight in the size of work in progress and progress billings as separate items we asked the yards interviewed to report them separately for the balance sheet at the end of December 2009. In the graphs below the outcome for all balance sheet items is presented. This balance sheet of “the European shipyard” represents the sums of all yards interviewed. Even though individual yards might often be incomparable, this figure gives interesting information on the financial state of the European shipbuilding sector.

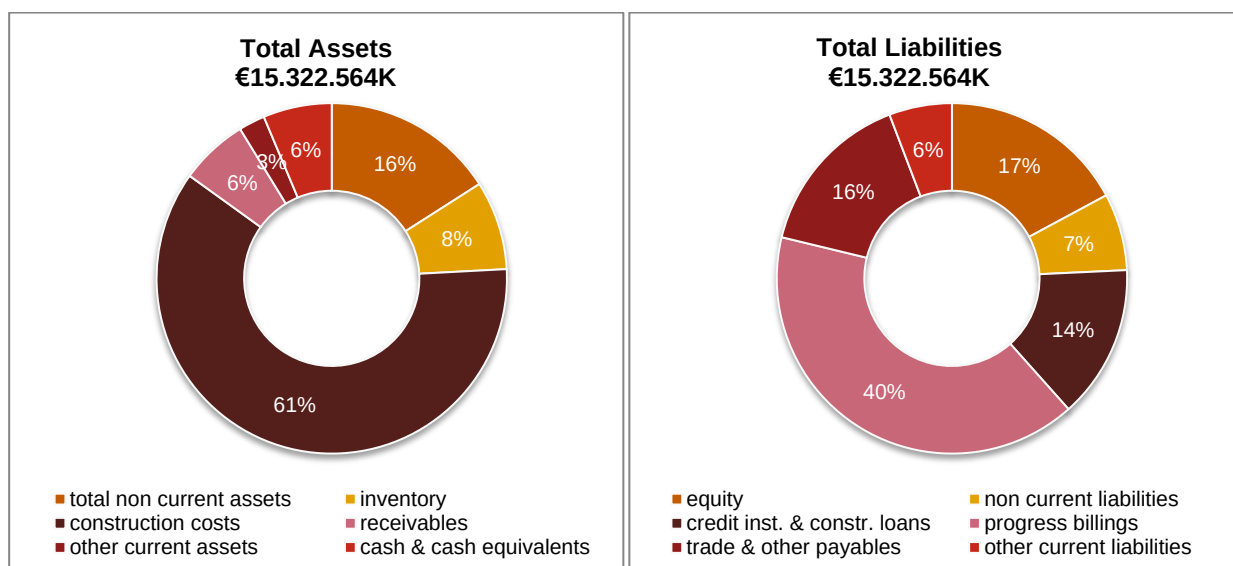


Figure 8: Cumulative balance sheet for ‘the European shipyard’

Total assets of the EU yards interviewed are €15.3 billion. The reported commercial newbuilding turnover for 2009 from the same group of yards is €9.1 billion. Assuming turnover is equal to completions the yards

interviewed represent about 75% of the reported total value of completions of €12.2 billion in the CESA statistics in 2009.

On average work in progress is 61% of total assets and the related progress billings 40%. So 66% of work in progress is financed by progress billings and 23% by construction loans. If the work in progress is put together with the other elements of the working capital it includes 76% of total assets and it is financed with 76% by short-term finance. The remaining long-term financing (equity and noncurrent liabilities) is used for financing the non-current assets (property, plant and equipment and financial fixed assets).

For the industry as a whole this financial structure bears some risks as no equity and/or non-current liabilities are available for short-term financing. Unexpected increases of working capital needs may therefore cause immediate pressure on financing.

These figures are based on the weighted average of the shipyards interviewed together. Further analysis shows rather great differences between segments of the industry. The details are presented in appendix 5. The most important differences are summarised in the table below.

Category	Progress billings/ construction costs
Small EU yards ²⁸	108%
Large EU yards ²⁹	59%
Cruise vessel/ferry yards	44%
Cargo vessels yards	84%
Dredger yards	108%
Mega yacht yards	133%
Small vessel yards	200%

Table 3: Work in Progress financing ratio's, per size and segment

The table above shows that small and specialized yards, excluding the cruise vessel builders, use high Progress Payment Schemes that almost complete covers their costs. The customers receive refund guarantees for these advance payments. In these segments most customers will have limited access to the financial markets for their capital expenditure.

In most European countries a mortgage can be established on a vessel under construction, even before launching. As soon as the vessel can be identified (at steel cutting or keel laying) the notary public will mark the official registration number of the vessel in the relevant components. From that moment on the customer is the legal owner of the vessel under construction and can exercise his rights on the vessel in case of bankruptcy of the yard. In exchange the yard has no longer to provide refund guarantees. Some yards reported in our interviews to use this option to avoid the costs of refund guarantees.

The cruise vessel builders have a different approach. Their customers pay an advance of 25-30% on signing the contract and the remainder on delivery of the vessel, which implies a rather high proportion to be financed by the yard. Under normal economic circumstances the related interest costs would be charged to the customer separately or as a part of the agreed contract price. In general the cruise industry will have access to the financial market to acquire capital for their newbuildings.

2.3.1.3 There are two major Progress Payment Schemes

In the shipbuilding industry it is usual that yards conclude construction contracts with their customers.³⁰ Such contracts describe in detail the subject and conditions of the project. Of course, the price to be paid is agreed. But almost as important is the agreement on a scheme of (progress) payments. Basically, these payments should cumulatively cover the costs incurred by the yard during the construction process. The scheme in which the progress payments are structured is referred to as a Progress Payment Scheme (PPS).

²⁸ 2009 production volume < €350 mln

²⁹ 2009 production volume > €350 mln

³⁰ Terminology derived from IFRS, IAS 12 Construction contracts

Depending on the economic situation or customs in certain segments of the industry, yards are financing parts of the construction costs themselves. If all works well the yard will charge the customer interest costs for the part that is financed by the yard. Even though most Progress Payment Schemes consist of standard milestones, such as the signing of the contract, steel cutting, keel laying, launching and delivery, most yards use their own combination of these milestones and attach personalised down payments to them. Moreover, the PPS's are almost always subject to negotiations with the ship owners and other investors.

Based on information from the yards interviewed two basically different PPS's can be recognised: a low down payment and a high down payment scheme.³¹ In the table below some important characteristics of the two PPS types are presented.

PPS	Low down payment	High down payment
Example	1. Signing contract (10%) 2. Keel laying (10%) 3. Delivery (80%)	1. Signing contract (20%) 2. Steel cutting (10%) 3. Keel laying (10%) 4. Main engines (10%) 5. Launching (20%) 6. Sea trials (10%) 7. Delivery (20%)
No. of yards	6 yards in the sample	26 yards in the sample
Market segments	• cruise & ferries	• cargo vessels • mega yachts • small vessels • dredgers
Estimated average production value per yard ('09)	€ 900 mln	€150 mln

Table 4: The two main Progress Payment Schemes

In the interviews with the yards, some reported since the financial crisis a further tendency towards low down payments. As we understand, the same trend can be identified in the Asian shipbuilding market. This requires less refund guarantee capacity of course, but is far more expensive on interest costs, all-in financing costs are more than double compared to the high down payments scheme. Under favourable market conditions it might be possible for the yards to charge part of the extra costs to the customer. Otherwise the extra charge is nearly half the net profit margin.

From the perspective of the ship owner, a low down payment scheme is often preferred. However, in actual practice, the yards have their hands and feet tied. Most yards cannot negotiate on implementing a low down payment scheme since the structure of their balance sheets and lending capacity simply does not allow them to.

2.3.1.4 Both Progress Payment Schemes have a large impact on financing and costs

In the graphs below the impact of the two schemes is illustrated, given the same pattern of "construction costs incurred".

³¹ This distinction is based on the down payment percentage attached to the latter milestone. High PPS's have down payments below 50%. Low PPS,s have down payments above 50%.

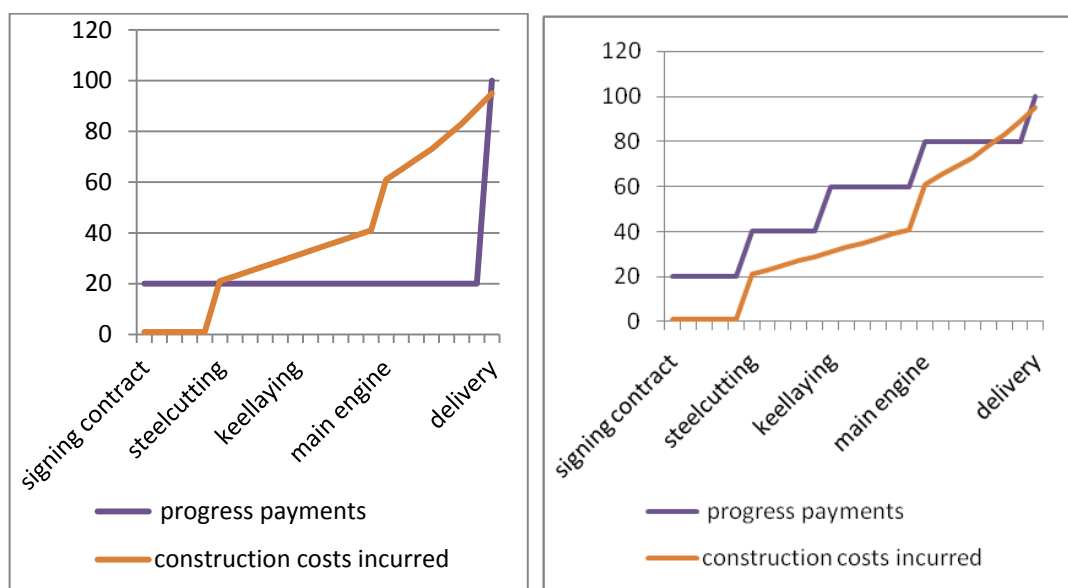


Figure 9: The consequences of low down payment schemes (left) and high down payment schemes (right)

In the model below the effects on the costs of both models are compared. The contract price of a vessel is 100, total cost is 95. Interest rate is 5% and the premium for refund and performance guarantees is 1%. Costs and revenues are calculated as a percentage of the contract value. It shows that the low down payment scheme costs twice as much as the high down payment scheme:

PPS	Low down payment	High down payment
refund guarantee	0.4%	1.08%
performance guarantee	0.6%	0.6%
net investment	2.0%	-0.26%
total	3.0%	1.42%

Table 5: The differences between the two PPS's given the same pattern of 'construction costs incurred'

As can be seen in table 5 the financial impact of the choice of the PPS is large, in the example the low down payment scheme costs 3.0% and the high down payment scheme 1.4%. Compared to an average net profit margin of between 1% and 3% over a longer range of years the choice of the PPS is determining for the profitability.

2.3.2 Solvency of many companies in EU shipbuilding is low

According to Figure 8, the interviewed yards shows an *average* solvency ratio of 17%. Further analysis shows rather small differences between segments of the industry and between the size of the yards. The details are presented in appendix 5. The most important differences are summarised in the following table:

Category	Equity/ total assets
Small EU yards ³²	18%
Large EU yards ³³	17%
Cruise vessel/ferry yards	19%
Cargo vessels yards	18%
Dredger yards	11%
Mega yacht yards	13%
Small vessel yards	15%

Table 6: Solvency ratios, per size and segment

The spread over the interviewed yards shows larger differences as is shown in the graph below, representing the number of yards within the indicated ranges.

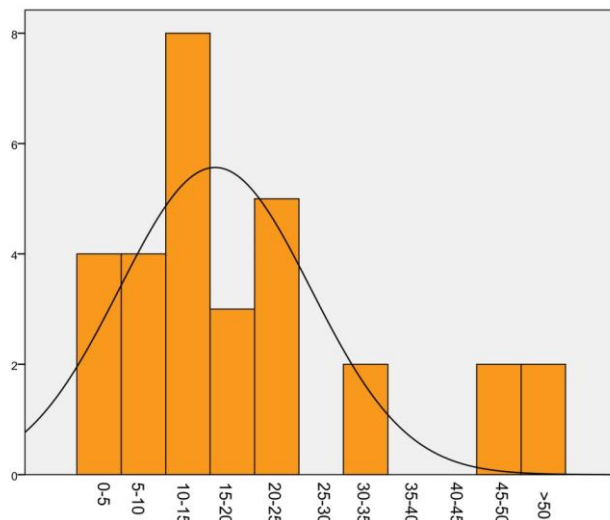


Figure 10: Relative frequencies of solvency ratios

The graph shows a very good solvency rate of 30% or higher for 6 yards at the right end of the scale. The other yards have a solvency ratio that could, at short notice, bring them in financial problems under certain circumstances. In general these yards might have difficulties in the risks assessment process for acquiring new project financing for orders.

To make the solvency rates comparable to general industry averages the balance sheet is presented in the table below with progress billings balanced against work in progress.

Balance sheet (net work in progress)			
Non-current assets	27	Equity	28
Work in progress	35	Non-current liabilities	12
Other current assets	38	Construction loans	23
		Other current liabilities	37
Total	100	Total	100

Table 7: The balance sheet of the EU yards, presented with progress billings balanced against WiP.

If the balance of work in progress and progress payment is posted on the asset side the solvency ratio is 28%. An average industry score would be between 30% and 50% whilst poor performers can generate scores of below 10% or even show a negative score. Exceptionally performing businesses could reach a value in excess of 65%. So the yards interviewed show on average a solvency ratio of just below the industry standard.

³² 2009 production volume < €350 mln

³³ 2009 production volume > €350 mln

This situation gets worse when looking at some individual yards. From our analysis of the solvency ratios of the yards interviewed, it can be concluded that in nearly every country and every specialised segment one or more yards have low to very low solvency rates.

2.3.3 Net profit margins in EU shipbuilding are decreasing

The profitability of EU shipbuilding has been decreasing over the last few years. Moreover, even at the top of the cycle, profitability was relatively low.

For this study, profitability of EU yards was measured as the net profit margin as a percentage of the revenue as presented in the profit and loss account as reported in the publicly filed annual reports of 10 larger yards with a total revenue (all included) of over €10 billion. These revenues include all activities as commercial and naval newbuilding, repair et cetera.³⁴ The net profit margin decreases in this 4-year period from a positive 2.9% to negative 1.4% as the production volumes increased strongly in the same period. As shown in Table 8 this percentage is an average of very positive profit margins and rather negative profit margins. The selected companies vary from very large to rather small and are from different countries. The profit margins seem therefore to be representative for the sector, but are not statistically proven and (substantial) differences may occur.

The solvency ratio of this group of companies is rather stable.

Year	Net profit margin
2006	2.9%
2007	2.4%
2008	1.9%
2009 ³⁵	-1.4%

Table 8: Profitability of EU yards (2006-2009)

2.3.4 Net profit margins are low compared to other parts of the world

It was shown above that the profitability of EU yards has decreased substantially since 2006. This section shows that the profitability is relatively low in comparison to yards in the rest of the world. The table below shows the global top 10 in sales, more than €71 billion, and the net profit margin, on average 6.0%, and the 2008 figures from 10 EU yards from the benchmark.

³⁴ Yards in general do not report profitability per segment. So comparisons of profitability are always more or less arbitrarily. Nevertheless, profitability is an important issue in the risk assessment process of banks as described earlier in this report.

³⁵ The figures of 2009 are based on those of 5 companies that filed their 2009 accounts at the moment of closing this study (December 2010).

Global top 10 in sales			EU		
Company name	Sales ³⁶	Net profit margin	Company name	Sales	Net profit margin
Hyundai Heavy Industries	19,544	7.3	STX Europe	3,178	0.1
DSME	9,148	4.7	Fincantieri	2,936	0.3
Samsung Heavy Industries	8,786	5.3	Damen	1,631	6.4
STX Offshore & shipbuilding	7,532	-1.4	IHC	1,092	7.2
Keppel	7,251	13.3	Meyer	1,002	3.1
Mitsui Engineering & shipbuilding	7,144	2.6	Hegemann	831	3.0
SembCorp	3,353	12.2	Odense Steel	692	-8.5
Hanjin Heavy Industries	3,136	0.2	Central Industry Group	197	11.9
China CSSC	2,902	9.9	Abeking & Rasmussen	185	2.1
Hyundai Mipo Dockyard	2,692	9.4	Lloyd Werft	162	2.7
Total	71,488	6.0		11,906	1.9

Table 9: Profitability and sales of EU shipbuilding (2008) compared to the rest of the world (2009)

The comparison shows a profitability for the EU shipbuilding industry that is too low to be attractive for structural external financing. We are aware of the limitations of the data on profits and of great differences in the global top 10 in sales (column to the left in Table 9) and EU companies (column to the right in Table 9) but also in connection with the solvency ratios as described above this seems to be a serious problem for a large part of the EU shipbuilding industry.

2.4 Capacity for and knowledge of shipbuilding at banks and financial institutions is declining

As described earlier financing shipbuilding requires special project financing arrangements with commercial banks or other financial institutions. In the main shipbuilding areas of the world, banks and financial institutions always used to have specialised desks where structures for yards and customers were tailor-made for specific projects. Having adequate capacity and financial infrastructures is an essential element for the maritime industry.

Since 2008 however, much of this infrastructure and capacity has disappeared because banks withdrew from shipping and shipbuilding markets. Some even speak of a “funding gap”. In the last two years the balance portfolio of banks is substantially negatively affected. The situation in Germany is exemplary. Before the collapse of Lehman more than ten banks were active in financing shipbuilding projects. Now there are only two or three left.

The decrease of specialised knowledge at banks and financial institutions as well as a reduction of the number of banks active in this field may affect the competitive position of the EU shipbuilding industry.

2.5 Conclusions

The 2003 – 2007 period was positive for EU yards, a strong rise in new orders, combined with a relative stable output in completions, led to an increase of order books by some 70%. A more thorough look at the growth of the EU order books shows however that the peak was reached in 2005, while the worldwide order books kept growing until 2007, with China as the leading country.

³⁶ 2008, in Euro's, includes also repairs and naval construction.

Since the summer of 2008 new order intake in the EU fell by 90%, which led with a more or less stable output in completions to a reduction of EU order books by 22% per year. This decline was more substantial than the decline in the other shipbuilding markets in the World, which led to a strong loss of market share by the European yards. In the last decade massive capacities were build up in China and Korea, whereas European yards were more careful in their business development and primarily focussed on opportunities in specialised markets.

The EU order book is at present very low:

- It is at its lowest level since 1990;
- The EU order book–completion ratio is the lowest ratio of the world;
- EU yards hold no more than 5.2% of the world's order books in terms of CGT's.

When looking at the EU yards' own prognoses a rather optimistic picture is shown. The yards expect that they have hit the bottom of the market in 2010 and expect an upturn to commence in 2011, which will continue in 2012 and 2013. In this picture, a clear distinction can be made between builders of cargo vessels, who tend to have a more pessimistic view of the future, and builders of non cargo vessels, who are much more optimistic about the future. Generally, the need for new orders was high at the time of the study.

If we take a closer look at the number of yards in the EU that are currently active in commercial newbuilding of larger vessels, we find 52 companies within the countries in scope, mainly concentrated in Germany, the Netherlands, Spain and Italy.

The financial position of these companies is an important element of the risk assessment by banks and other financial institutions. An analysis of the balance sheet of the interviewed yards shows that work in progress, in general, is short-term funded by progress billings and construction loans. These progress billings are known as Progress Payment Schemes (PPS). Based on information from the interviewed yards two different PPS's can be recognized: a low down payment and a high down payment. In the interviews with the yards, some reported a tendency, if possible, towards low down payments. This PPS however, costs twice as much as a high down payment, which can have a serious impact on the net profit of the yard if it is not possible to charge these extra costs to the customer of the yard.

An analysis of the solvency of the average EU yard shows a ratio of 28%, rather low compared to other industries. The vast majority of the interviewed yards has a solvency of less than 25%, and a peak of a number of yards has a solvency of between 10% and 15%. The profitability of EU shipbuilding is low compared to the rest of the world and has further decreased in the last few years.

Considering the specific characteristics and demands of the shipbuilding industry it is essential for yards to cooperate closely with specialised commercial banks and other financial institutions. Since 2008 however, much of this infrastructure has disappeared because banks withdrew from shipping and shipbuilding markets. The decrease of specialised knowledge at banks and financial institutions as well as a reduction of the number of banks active in this field may affect the competitive position of the EU shipbuilding industry.

It goes without saying that all findings may have a negative impact on the risk assessment by banks and other financial institutions which, as a result, can lead to an increase of costs for financing and /or a reduced availability of funding by commercial banks. Therefore, an increase of pre-delivery guarantees by public sector schemes or ECA's can be expected.

3 Access of EU shipbuilding to pre-delivery guarantee facilities

3.1 Three types of schemes are used for guarantees

3.1.1 Guarantees are essential for shipbuilding financing

As described in 2.3.1.1 the general way for financing construction of newbuildings is through a special project financing arrangement with a commercial bank. Such arrangements include financing of the construction costs through construction loans and providing performance guarantees and refund guarantees for advance payments made by the customer. After delivery and payment of the vessel the construction loan is fully repaid and the arrangements end.

Performance guarantees secure the yards' obligation to deliver the vessel according to the agreed specifications in the building contract. Refund guarantees secure the yard's obligation to repay instalments of the price paid by the buyer under the shipbuilding contract in case of non completion of the vessel. Both are usually provided by banks or insurers.

Nearly all EU yards provide refund guarantees to their customers from various sources. Larger groups and state-owned companies in the EU use often corporate guarantees or bank facilities. In some Member States dedicated pre-delivery financing capacity is available in case the banks will not provide guarantees. In other Member States ECA working capital facilities are used, especially for building of cruise vessels and large passenger ferries.

Some yards reported the use of performance guarantees provided by their bank, guarantee institution or parent company. In general performance guarantees of around 20% are usual and remain in place till the end of the guarantee period for the vessel (generally a maximum of one year). The instrument is mainly used for highly specialised vessels.

Smaller yards have more difficulties to obtain the necessary guarantees. Some of these yards offer the customer a mortgage on the vessel under construction instead of refund guarantees.

3.1.2 In case banks or insurers reject a guarantee, alternatives might be provided by three types of schemes

The availability of guarantees from commercial banks or insurers for financing shipbuilding projects is often problematic or impossible. That includes guarantees that cover the gap between the post-delivery financing schedule and the standard mortgage, and guarantees for the pre-delivery financing of the project, covering both the working capital and the refund guarantees issued by the yard's banks or a similar institution. This study focuses on the second type of guarantees: pre-delivery guarantees. Other schemes are only mentioned when relevant for the aim of study.

For several reasons, including the financial crisis, high risks in the shipbuilding sector and the reduced number and capacity of private sector ship financing institutions, arranging pre-delivery guarantees has become increasingly harder in the last few years. Banks have become reluctant to finance working capital, refund and performance guarantees, since risks in the volatile shipbuilding market are considered to be high compared to other industries. This problem can be solved by non-commercial schemes.

Basically three types of schemes used for pre-delivery financing guarantees can be identified:

1. vertical **public** schemes dedicated to shipbuilding
2. horizontal **public** schemes, used by shipbuilding
3. vertical **private** scheme dedicated to shipbuilding

All schemes refer to a facility for the national (shipbuilding) industry, providing guarantees to bankers financing the yards and their foreign or domestic customers.

The vertical public schemes are based on national legislation and approved by the EU Commission. The horizontal public schemes are ECA facilities that can be combined with working capital guarantees for export orders. Both vertical and horizontal public schemes are ultimately guaranteed by the Member State. In Spain a privately owned and operated scheme is available, dedicated to shipbuilding.

In this chapter the availability of pre-delivery guarantee schemes in EU shipbuilding is assessed. Under the “Temporary Community Framework for State aid measures”, Member States were allowed to introduce special measures for guarantee schemes. The available measures are summarised in this chapter under the title “Temporary Framework”.

Relationship with post-delivery guarantees

Besides pre-delivery guarantee schemes, LeaderSHIP 2015 also points at the importance of post-delivery guarantees. These are guarantees that cover the gap between the post-delivery financing schedule and the standard mortgage.

Several schemes used for post-delivery guarantees can be identified. Most often used is the post-delivery guarantee from the national Export Credit Agency (ECA). These ECA guarantees are primarily national instruments used for promoting export business. Post-delivery guarantees are based on the OECD Arrangement on Officially Supported Export Credits. As about 2/3 of the of the EU commercial newbuilding production is exported, it is used on a large scale, especially in the present financial crisis. In two countries (Finland and the Netherlands) we identified working capital guarantees for shipbuilding orders provided by the ECA under a separate horizontal national scheme. Those schemes are guaranteed by the government and are in line with the EU Notice on guarantees. In Germany the same facility is available through the “Landesbürgschaften” both for export and domestic orders.

3.2 Five EU countries have pre-delivery guarantee schemes

We identified active pre-delivery schemes in the following 5 countries. These are both vertical public schemes (dedicated to shipbuilding), horizontal public schemes (used by shipbuilding), and vertical private scheme (dedicated to shipbuilding).

	% of EU production volume in € in 2009
Finland -Act on Export Guarantees and Act on Ship Guarantees -ECA working capital facility	10
Germany -Bürgschaftsrichtlinie (each of the 5 Küstenländer has its own scheme modelled after the general German model that has been approved by the Commission) -Bürgschaften working capital facility	22
France -Regime de garantie de l'Etat en faveur des sociétés du secteur de la Construction navale	6

Netherlands³⁷ -Garantieregeling scheepsnieuwbouwfinanciering -Working capital facility for export orders based on “Kaderwet financiële verstrekkingen Financiën”	15
Spain -Fondo Patrimonial de Garantías, owned and operated by PYMAR	15
Total	68

Table 10: Active pre-delivery schemes in the EU

This means that the five Member States mentioned above have a private or public scheme, either horizontal or vertical. Together these Member States produce 68% of the EU commercial newbuildings measured in euro. The other 9 EU shipbuilding countries produce the remaining 32% of the volume. The bulk of this 32% is produced by Italy.

In two of those nine countries, some activity towards a scheme was identified. Italy intended to implement a vertical public scheme (Fondo speciale di garanzia per il credito navale) in 2005, but decided not to do so because it disagreed with the Commission about the required premium level. The Bulgarian shipbuilding association has been in negotiation with the Bulgarian government on the implementation of a scheme. No further steps have been taken until now.

3.3 Vertical public schemes are used in four of the five countries

Four EU Member States have vertical public schemes dedicated to shipbuilding. The basic principle of these schemes is that the Member State directly or indirectly provides guarantees to bankers who are involved in financing shipbuilding. If the shipyard is unable to repay the loan, the bank can claim part of the damage under the guarantee scheme. In appendix 3, we provide a detailed comparative survey of the main characteristics of the schemes. Information about the size of the national schemes, the degree to which the schemes are used, is in some cases not publicly available.

3.3.1 Vertical public schemes are in line with the EU Notice on Guarantees

The Finnish, German and French schemes are in line with the requirements of the “Notice on application of Articles 87 and 88 of the EC Treaty to State aid in the form of guarantees” of (2000/C 71/07) 11 March 2000 and the Dutch scheme after the revised version of the Notice (2008/C 155/02) of 20 June 2008. The Commission invited the Member States to adjust their existing guarantee measures to the stipulations of the present Notice by 1 January 2010 as far as new guarantees are concerned.

The main requirements for guarantee schemes are summarized in article 3.4 of the 2008 Notice and in article 4.3 of the 2000 Notice. In the below table these requirements are compared. Comparing both sets of requirements shows no principal differences. The descriptions in the EU Notice of 2008 are more in detail, especially with regards to the elements of the premium calculation:

Notice on guarantees 2000	Notice on guarantees 2008
(a) the scheme does not allow guarantees to be granted to borrowers who are in financial difficulty;	(a) the scheme is closed to borrowers in financial difficulty;
(b) the borrowers would in principle be able to obtain a loan on market conditions from the financial markets without any intervention by the State;	(b) the extent of the guarantees can be properly measured when they are granted. This means that the guarantees must be linked to specific financial transactions, for a fixed maximum amount and limited in time;

³⁷Recently a new Dutch scheme has been approved by DG Competition (State aid N 639/2009-The Netherlands). The Dutch government had not yet made the scheme public at the moment of writing this report (February 2011).

(c) the guarantees are linked to a specific financial transaction, are for a fixed maximum amount, do not cover more than 80% of each outstanding loan or other financial obligation (except for bonds and similar instruments) and are not open-ended;	(c) the guarantees do not cover more than 80% of each outstanding loan or other financial obligation;
(d) the terms of the scheme are based on a realistic assessment of the risk so that the premiums paid by the beneficiary enterprises make it, in all probability, self-financing;	(d) the terms of the scheme are based on a realistic assessment of the risk so that the premiums paid by the beneficiaries make it, in all probability, self-financing. The self-financing nature of the scheme and the proper risk orientation are viewed by the Commission as indications that the guarantee premiums charged under the scheme are in line with market prices. This entails that the risk of each new guarantee has to be assessed, on the basis of all the relevant factors (quality of the borrower, securities, duration of the guarantee, etc). On the basis of this risk analysis, risk classes have to be defined, the guarantee has to be classified in one of these risk classes and the corresponding guarantee premium has to be charged on the guaranteed or counter-guaranteed amount;
(e) the scheme provides for the terms on which future guarantees are granted and the overall financing of the scheme to be reviewed at least once a year;	(e) in order to have a proper and progressive evaluation of the self-financing aspect of the scheme, the adequacy of the level of the premiums has to be reviewed at least once a year on the basis of the effective loss rate of the scheme over an economically reasonable time horizon, and premiums adjusted accordingly if there is a risk that the scheme may no longer be self-financing. This adjustment may concern all issued and future guarantees or only the latter;
(f) the premiums cover both the normal risks associated with granting the guarantee and the administrative costs of the scheme, including, where the State provides the initial capital for the start-up of the scheme, a normal return on that capital.	(f) in order to be viewed as being in line with market prices, the premiums charged have to cover the normal risks associated with granting the guarantee, the administrative costs of the scheme, and a yearly remuneration of an adequate capital, even if the latter is not at all or only partially constituted. As regards administrative costs, these should include at least the specific initial risk assessment as well as the risk monitoring and risk management costs linked to the granting and administration of the guarantee. ³⁸
	(g) in order to ensure transparency, the scheme must provide for the terms on which future guarantees will be granted, such as eligible companies in terms of rating and, when applicable, sector and size, maximum amount and duration of the guarantees.

Table 11: Main requirements for guarantee of the four vertical public schemes

³⁸ The Notice 2008 requires a remuneration of an adequate capital whether the capital is constituted or not. The capital required is between 2% and 8% of the outstanding guarantees depending on the rating of companies receiving the guarantees. The remuneration for the capital is made up of a risk premium, possibly increased by the risk-free interest rate. The risk premium for equity amounts at least 400 basis points.

3.3.2 Most premiums paid are in a range of 0.8-1.5%, some are quite high

The four public schemes identified are all in line with the EU Notice on guarantees. The basic rule is that the premium has to cover all costs, operational, cost of default and interest costs of adequate capital needed for the operations. Most premiums are in a range of 0.8-1.5%. The yards reported the actual premium paid for guarantees under the schemes and to their bankers. The actually reported premiums are illustrated in the graph below. Some yards reported quite high premiums, with peaks of 3% - 3.5%.

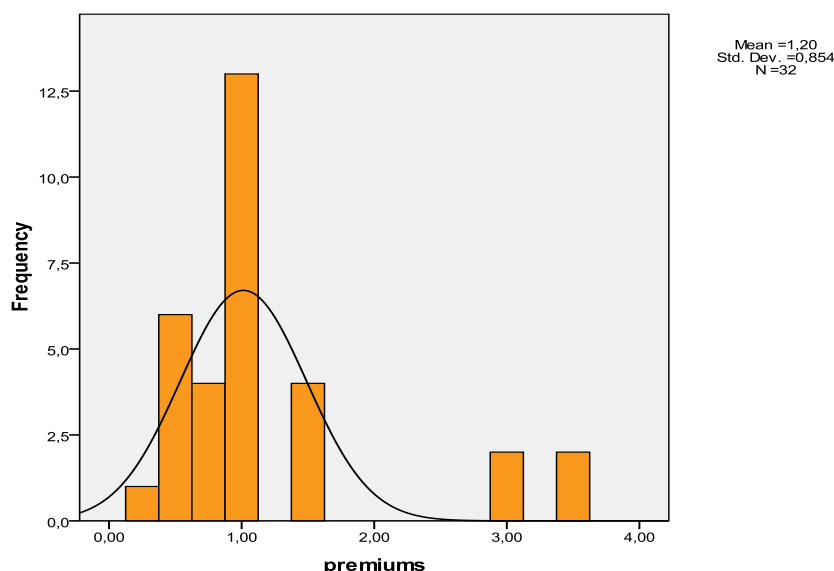


Figure 11: Premiums on guarantees, paid by the shipyards

There is clearly a dilemma as guarantee schemes have to aim at full cost recovery, also in consideration of the state aid rules, while cost of guarantees are at the same time an important element of financing costs which are in turn an important factor for competitiveness.

3.3.3 Historical default rates of the four public vertical schemes are low

An essential requirement of the schemes is to maintain and assess the self-financing character (“full cost recovery”) of the scheme as described under e) above. Given the cyclical character of the shipbuilding industry the real default rates should have to be measured as an average over a longer period, preferably at least over the length of the most recent economic shipbuilding cycle. It is crucial to understand that losses, if any, will be reduced as much as possible by both the financing bank as the guarantor, as it is in the interest of both to minimise their losses and the customer mainly wants the vessel under construction to be finished and delivered.

The German schemes showed, over a 12 year period (1989-2000), a positive balance between premiums received and costs. The revised German schemes of 2000 had no payments made nor received calls for guarantees from 2000 until 30 June 2006. No information is available for the period 2006 - 2010. The Finnish Ministry of Economic Affairs reported a positive balance of their shipbuilding scheme since 1998 of €186 million at 30 June 2010. The historical loss ratio for projects in France over the past 25 years indicates a premium level of 0.8%. Based on these information, the default rates of the longest existing schemes seem to be low.

As the Dutch scheme has not yet been used until now and the French scheme is rather new, no analysis of these schemes is available. It can be expected that since the financial crisis, schemes will have to pay under the existing guarantees for some orders. The effect of such payments on the long-term default rates is unknown at this moment.

For the Dutch programmes, the Dutch government and De Nederlandse Bank (DNB) developed a model called BERB, a cumulative accrual-based result of all the Dutch ECA schemes (so not only for shipbuilding) together for the 10 year period 1999-2008. The model is presented below.

1	Liquid assets	311
1.1	Premium income	548
1.2	Net claims	(95)
1.3	Net exchange risk	(19)
1.4	Net interest	37
1.5	Administration costs	(159)
2	Receivables	69
3	Provisions	(286)
3.1	Outstanding political risk	(164)
3.2	Outstanding commercial risk	(32)
3.3	Expected claims	(60)
3.4	Receivables	(27)
3.5	Exchange risk	(4)
	Total	93

Table 12: The Dutch BERB Model (in € million)

As the analysis shows a positive balance of 93 (=17% of the premium income) over a 10 year period their conclusion is: "As in previous years, it is evident that the surplus is not sufficiently robust to cope with a substantial adverse shock."

The German and the Finnish balances were calculated on a cash basis.

3.3.4 The Finnish scheme is mainly used for cruise vessels and ferries

The Act on Export Guarantees and the Act on Ship Guarantees provide pre-delivery finance guarantees and bond guarantees for foreign and domestic customers respectively.

The scheme has a limit of €12.5 billion and covers the needs for the present volume of Finnish commercial newbuilding, especially cruise vessels and passenger ferries.

The scheme is operated by Finnvera, a 100% state owned company, whose main task is operating the Export Credit Agency (ECA) for Finland. Finnvera performs the credit assessment for both the shipyards and their customers. Finnvera reported that over a period of 12 years the scheme shows an excess of €186 million over the operational expenses and default costs under the scheme. The fee structure is an upfront payment of between €15.000 and €30.000 and a minimum rate of 0.8% of the outstanding amount. The citation below from Finnvera's Annual Review 2009 illustrates the importance of the ECA facility for Finnish shipbuilding:

"The shipyard industry still had Finnvera's greatest individual concentration of commitments. In 2009, the coverage of the Buyer Credit Guarantees associated with two ships, the Oasis of the Seas and the Allure of the Seas, was raised to 95 percent. For the first vessel, the guarantee came into effect. The order for and delivery of the world's largest cruise vessel to date from Finland would not have been possible without our guarantees."

The table below shows the current guarantees that have come into effect in the period 2005 to 2009. The commercial newbuilding deliveries amount to an annual average of €1.1 billion in this period.

	2009	2008	2007	2006	2005	2009	2008	2007	2006	2005
(MEUR)	Offered					Current guarantees that have come into effect				
Ship Guarantees	-	-	-	-	176.0	-	-	-	-	-
Finance Guarantees										
Shipyards industry	-	1,750.0	130.0	-	809.1	900.0	930.0	-	-	1,164.2
Other	240.0	-	-	-	-	240.0	-	-	-	-
Total	240.0	1,750.0	130.0	-	809.1	1,140.0	930.0	-	-	1,164.2
Bond Guarantees										
Shipyards industry	35.6	182.8	59.4	132.3	132.5	126.9	75.4	58.2	58.1	74.4
Other	46.3	119.7	-	-	-	46.3	119.7	-	-	-
Total	81.8	302.5	189.4	132.3	132.5	173.2	195.1	58.2	58.1	74.4
Grand Total	321.8	2,052.5	319.4	132.3	1,117.6	1,313.2	1,125.1	58.2	58.1	1,283.6

Table 13: Export credit guarantees and special guarantees covering the domestic risks of major companies (in € million)

The following citation also from the Finnvera's Annual Review 2009 illustrates their role in shipbuilding financing:

“The shipyard industry: a pivotal sector for domestic and foreign risk-taking Finnvera participates in the pre-delivery and post-delivery financing of the world’s largest cruise vessels, the Oasis of the Seas and the Allure of the Seas. The Oasis of the Seas was delivered by the Turku shipyard in October 2009. Finnvera has granted a Buyer Credit Guarantee for its post-delivery financing. The sister vessel, the Allure of the Seas, will be delivered by the Turku shipyard of STX Finland Oy in November 2010. Through a Buyer Credit Guarantee, Finnvera also participates in the post-delivery financing of this vessel. When these guarantees are included, Finnvera’s outstanding commitments for the Royal Caribbean Cruises shipping company will rise at their highest to about EUR 1.5 billion.”

3.3.5 The regional German schemes have been successful for decades

Each of the five Küstenländer has its own scheme, modelled on the general German model that has been approved by the EU Commission. The German Bürgschaften scheme has already been in use for decades for all kinds of economic activities, not only shipbuilding; however, for shipbuilding specific rules have been made, in particular on the calculation of the premium (Entgelt). The 5 coastal areas (Mecklenburg-West Pomerania, Lower Saxony, Free and Hanse City of Hamburg, Free and Hanse City of Bremen and Schleswig-Holstein) each have their specific rules for shipbuilding. In this study the scheme of Mecklenburg-West Pomerania has been used as an example. The other German schemes are comparable.

In 2003 the Bundesregierung negotiated a new agreement with the Commission on the conditions for pre- and post-delivery guarantees for the shipbuilding industry. The state aid decision of the Commission on this scheme gives a comprehensive description of the model, including the risk assessment, premium tables and evaluation criteria. The German scheme has been applied successfully.

The fee structure is an upfront payment (€2,500 to maximum €25,500) for the approval process and an annual premium of 0.8-1.50% of the outstanding amount. In some Länder, management of the scheme is assigned to PwC and in others to the regional Landesbank.

As in other countries, the ECA plays an important role in Germany in both pre- and post-delivery. The German ECA (AuslandsGeschäftsAbsicherung der Bundesrepublik Deutschland, short AGA), reports in its 2009 Annual Report the following guarantee volumes for specific industrial sectors:

Industrial sector	2008	2009
Infrastructure	1,611	1,496
Aircraft	1,029	3,244
Ships	2,730	2,919
Manufacturing industry	3,026	3,046
Energy	1,623	1,852
Paper, timber, leather and textile industry	634	943
Service industry	270	611
Mining industry	834	503
Agriculture and food industry	343	338
Environmental engineering	10	149
Oil and gas production	90	33
Chemical industry	981	22
Total	13,181	15,156

Table 14: Single transaction policies per industrial sector (in € million)

The figures refer to new orders fixed in 2008 and 2009 so they cannot be compared to production volumes in those periods, but in the period 2004-2009 the average volume of the German yards was €3 billion. This clearly illustrates the importance of ECA facilities for the German shipbuilding industries. This table does not illustrate the pre-delivery guarantees separately.

The combination of ECA facilities and the Landesbürgschaften covers a large part of German shipbuilding, in particular because there are no actual limitations on the ceilings of the schemes. Financing problems will arise where the customer and/or the yard have difficulties to pass the risk assessment of the bank and the guarantor.

Since the financial crisis the German government took several horizontal measures to cope with the problems of the economy.

- The limit of guarantees has been increased from 80% to 90% of the credit;
- In 2009 a € 115 billion special fund, the Wirtschaftsfonds Deutschland, was established. This fund is also open to pre-delivery financing of shipbuilding inside Germany for up to 90% of the credits. German yards and their subcontractors can also make use of special purpose programs of Kreditanstalt für Wiederaufbau KfW.
- The limit of export credits per company has been increased from € 80 million to € 300 million.

3.3.6 The French scheme is mainly in use for cruise vessels

The French scheme is mainly used for the building of cruise vessels. It was introduced in 2006 and provides guarantees for construction financing, down payment guarantees and performance guarantees for vessels with a contract value of over €40 million, which indicates rather large or complex vessels.

The fee structure is 0.05% annually for administrative costs and an annual premium of 20 basis points above comparable bank charges - including the commitment fee - and ultimately not below 0.8%. The management of the scheme is assigned to the Caisse Française de développement industriel (CFDI).

3.3.7 The Dutch schemes have not been used so far

The 2005 Dutch scheme has been in place since 2005 but was never used because banks and the government disagreed about the conditions under which damages could be claimed. Nevertheless no significant financing problems of newbuilding orders were reported in our interviews.

A new scheme has been approved by DG Competition (State aid N 639/2009-The Netherlands). The Dutch government has not yet made the scheme public at the time of writing this report (February 2011). Momentarily the Dutch Government is in consultation with the shipbuilding industry and the banks on the precise consequences of the approval of the scheme³⁹.

Therefore, the information about the new scheme is based on a draft of the version of the scheme that is available, now supplemented with information from the public version of the letter of the Commission.

The scheme provides guarantees of up to 80% of construction loans to shipyards for orders between €3 and 100 million. The premium calculation method is new: the higher of two schemes has to be applied: (1) premium calculation based upon the credit rating of the yard or (2) a State assessment on 13 criteria of the project.

The premium scale of option (1) varies between 1.125% and 5.4575% and that of option (2) between 0.8% and 4.5%. The scheme is limited to a guaranteed amount of €1 billion. Management of the scheme is assigned to Agentschap NL, a government agency.

The Dutch government introduced in 2009 a horizontal fiscal scheme that allows accelerated depreciation of capital goods, including vessels. The scheme allows Dutch ship-owners to gain a temporary cash advantage of up to 20% of the contract value. The scheme is until 2010 used by approximately 60 newbuilding projects at Dutch yards with a total value of € 800 million.

3.4 Some horizontal public schemes are also applicable to pre-delivery guarantees

In Finland, Germany and the Netherlands public horizontal schemes are also used for guarantees on the pre-delivery stage of the export orders. This facility enables the shipyard to use the facilities for financing of the working capital and the refund guarantees of the relevant export order. The scheme is, in this way, comparable to a vertical dedicated scheme for pre-delivery guarantees. In all three countries the schemes are actually used in this way for large export contracts. The premium charged is related to the premium of the financing bank(s).

3.5 Spanish shipbuilders have the only private scheme dedicated to shipbuilding

Spain is the only country where a private scheme has been set up. The Spanish private scheme Fondo Patrimonial de Garantías FPG (a subsidiary of PYMAR) provides pre-delivery guarantees exclusively to the 23 member yards. The fund exists since 1988 within PYMAR as an independent Fund with its own structure and means. PYMAR is owned by its shareholders, the Spanish yards. The purpose of the Fund is to promote ship contracting through the issuance of guarantees. The FPG issues guarantees against its Fund value, on a basis of a realistic and individual risk assessment. The FPG provides pre-delivery guarantees to shipyards that may be refund guarantees, performance bonds or others.

The scheme has a capital of €217 million and the outstanding guarantees have been 2.8-4.2 times this amount. As a private company Pymar has a Fitch rating A+. However, PYMAR is a privately owned company, and recently Fitch lowered its rating of PYMAR because the ratings of the main shipbuilding provinces of Spain were lowered. This reflects a dependency of PYMAR on the Spanish (regional) authorities.

³⁹Article in Financieel Dagblad, 17 January 2011.

3.5.1 The Spanish vertical private scheme serves as mutual insurance for its member yards

If the shipyard fails to perform the shipbuilding contract, FPG will guarantee the refund of the amounts actually paid by the owner to the shipyard as part of the price of the vessel. Guarantees may be assigned to the owner's financing bank. Upon the shipyard's failure to deliver the vessel, FPG guarantees completion of the vessel in the contractual shipyard or in any other shipyard member of the Fund (based on the principle of solidarity among Fund members) and FPG will cover possible extra costs up to a limit of 30% of the contract price. FPG can issue guarantees up to 7 times its Fund value. It means a complete failure coverage of up to 14.3%.

There are also individual limitations for each operation: internal regulations, criteria of non-risk concentration, criteria of efficiency, criteria of financial viability. The guarantees are issued on a basis of a realistic and individual assessment, due to the fact that PYMAR has a very good knowledge of the Fund shipyard members' characteristics and performances.

3.5.2 The default rate of the Spanish private vertical scheme is below 1%

Every year, the Fund has obtained benefits since its constitution. The Fund has a very low default rate (less than 1%). PYMAR and its Fund have technicians specialised in the shipbuilding sector. This enables them a technical and economic monitoring of the construction of the guaranteed ship. All money (from owner, bank, et cetera) intended for financing the construction of the guaranteed vessel is deposited on a shipyard's bank account controlled by PYMAR, so that the money will necessarily be allocated for that purpose.

In each operation, the beneficiary has to pay an opening commission and an annual risk premium, which depend on a realistic and individual risk assessment. Also, the FPG requests the issuance of counter guarantees by the beneficiaries (pledge of payments, mortgages, et cetera). The guarantee capacity of FPG is, with the present capital of €217 million and a ratio of 7, nearly €1,5 billion. It can cover about 82% of the commercial newbuildings (level 2009) in Spain.

The Spanish government introduced in 2009 a € 200 million loan program for Spanish shipyards with a maximum of €30 million per yard and an interest rate of ICO reference + 2.2%. PYMAR has been appointed as manager of the program.

3.6 State owned yards seem to have access to guarantees

In Italy, Portugal, Spain and France (partly) state-owned yards, active in commercial newbuilding, were identified. In several cases, their holding companies provide financing and guarantees if necessary. There are no indications that these transactions contain elements of state aid. Fincantieri explicitly states in its Annual Accounts that

“intragroup transactions and transactions with Fintecna and its subsidiaries, and with other related parties in general, do not qualify as either atypical or unusual, since they fall within the normal course of business of the Fincantieri Group and are conducted on an arm's length basis.”

Our data show that state-owned yards in general have had relatively good access to financial markets for financing and guarantees in the last two years. From our interviews with stakeholders in the shipbuilding sector we understood that the risk profile of state owned yards is considered to be low due to the availability of (additional) equity. This was confirmed by the fact that none of the state-owned yards in our sample had deals failed because of a lack of financing by banks. Premiums paid for guarantees however seem comparable with other yards, and all can afford to offer low down payment schemes to customers.

3.7 This means that nearly 90% of EU production volume has access to pre-delivery facilities

If we put together the yards with a public or private scheme and (partly) state-owned yards active in commercial newbuilding, they represent 88% of the total EU production volume. This implies that there is access to financing and guarantees capacity for 88% of the EU newbuilding orders. The non-covered part is currently 12%.

3.8 Temporary Framework has been set up to cope with financial crisis

In addition to the above requirements, the following new measures on guarantees are allowed under the recently renewed Temporary Framework (valid until 31 December 2011) The Temporary Framework is a horizontal measure that can be used by the shipbuilding industry. In the figure below the main characteristics of the Temporary Framework are presented.

- a) for SMEs, Member States grant a reduction of up to 15% of the annual premium to be paid for new guarantees granted in accordance with the safe-harbour provisions as set out in the Annex;
- b) for large companies, Member States may calculate the annual premium for new guarantees on the basis of the safe-harbour provisions as set out in the Annex;
- c) when the aid element in guarantee schemes is calculated through methodologies already accepted by the Commission following their notification under a regulation adopted by the Commission in the field of State aid, Member States may also grant a similar reduction of up to 15% of the annual premium to be paid for new guarantees for SMEs;
- d) the maximum loan does not exceed the total annual wage bill of the beneficiary (including social charges as well as the cost of personnel working on the company site but formally in the payroll of subcontractors) for 2010. In the case of companies created on or after 1 January 2010, the maximum loan must not exceed the estimated annual wage bill for the first two years in operation; for investment loans, Member States may choose to calculate the maximum loan on the basis of the annual EU 27 average labour costs;
- e) guarantees are granted until 31 December 2011 at the latest;
- f) the guarantee does not exceed 80% of the loan for the duration of the loan;
- g) for SMEs, the guarantee may relate to both investment and working capital loans; for large companies, the guarantee may relate to investment loans only;
- h) the reduction of the guarantee premium for SMEs is applied during a maximum period of two years following the granting of the guarantee. If the duration of the underlying loan exceeds two years, Member States may apply, for an additional maximum period of eight years, the safe-harbour premiums set out in the Annex without reduction; for large companies, Member States may apply the safe-harbour provisions set out in the Annex for a maximum period of 10 years;
- i) firms in difficulty are excluded from the scope of application of the measure.

Figure 12: Main characteristics of the Temporary Framework

In most cases it was not possible to identify whether measures were based on the Temporary Framework or not. Interviewees were often not aware of the possibilities the Temporary Framework offers. In Germany and the Netherlands applications for additional yard financing under the Framework were reported.

3.9 The situation in nine EU Member States that do not have a vertical scheme

Nine EU Member States do not have a public or a private vertical scheme. Together, they produce 32% of the EU production volume in commercial newbuilding. In this section the situation in these countries is discussed. The situation in Italy is elaborated on, since this particular Member State is the second largest producer within the EU and hence produced the bulk of the 32%.

The other 12% (after deducting Italy's 20%) is mainly active in the construction of cargo vessels. These yards are small and most often based in South and Eastern Europe.

3.9.1 Italy has a substantial shipbuilding sector, but does not have a scheme

Italy intended to implement a vertical public scheme (Fondo speciale di garanzia per il credito navale) in 2005 but decided not to do so because it disagreed with the Commission about the required premium level. The fund would provide second-priority end-financing guarantees to ship-owners for work carried out in Italian shipyards. As in other countries ECA facilities are used in the shipbuilding industry, as far as export is concerned.

The citation below from Simest's Annual Review 2009⁴⁰ illustrates the importance of the ECA facility for Italian shipbuilding:

“Separate consideration must be given to the shipbuilding sector, (Fincantieri Group), which has revived since the revision of the OECD agreement in this sector. The Group draws on the support of SACE and SIMEST for cruise liners and ferries, both of which involve large, high cost vessels. In 2008 a total of 39 operations were approved with a deferred principal amount of €1,844.0 million (173.5% of the amount approved in 2007). In view of the foregoing discussion of the impact of the shipbuilding sector, however, if we consider only other sectors, the volume handled (€1,276.0 million net of shipbuilding) was close to the average for 1999-2007 (€ 870.4 million).”

The volumes of facilities used by shipbuilding are illustrated in the figure below.⁴¹

⁴⁰ Simest is the financial society for development and promotion of the Italian enterprises in foreign countries

⁴¹ Annual Review 2009 from Simest

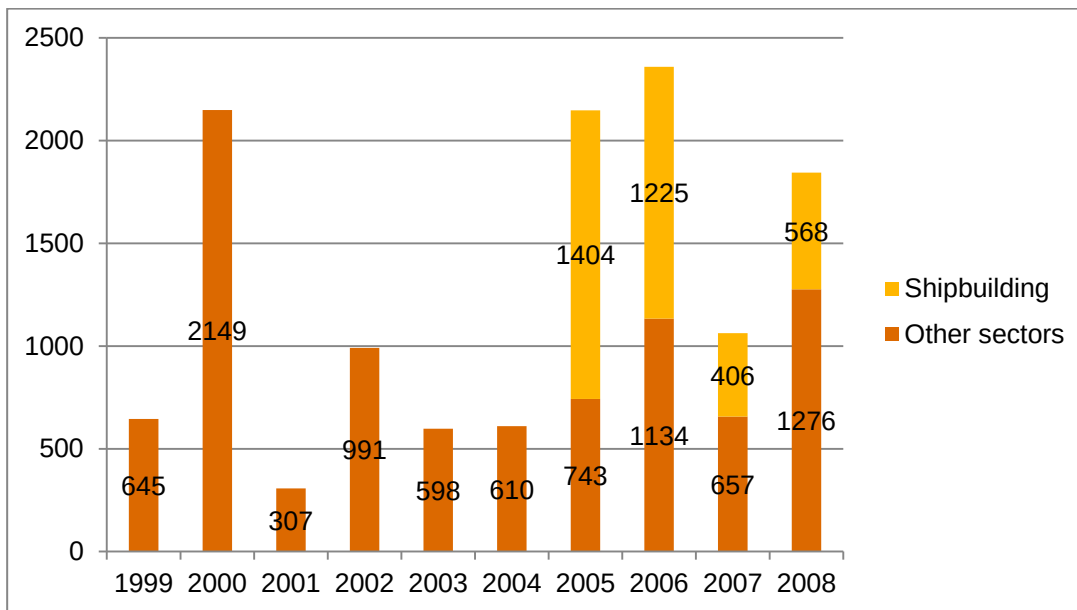


Figure 13: Buyer export credit: Deferred principal amount approved from 1999 to 2008 (€ millions)

Substantial parts of Italian commercial newbuildings are produced by (partly) state-owned shipbuilding companies. Other smaller shipbuilders reported, through their representative organisation ANCANAP, a large need for both pre- and post-delivery finance schemes.

3.9.2 Other eight Member States without schemes do not have significant shipbuilding industries

Bulgaria. In 2009 Bulgaria produced 0.25% of the EU production volume in commercial newbuildings. The Bulgarian shipbuilding association recently discussed a public scheme with the authorities, but no further steps have been taken until now. The annual production volume of the Bulgarian yards is 4 to 6 vessels with a value of €30-48 million.

Poland. In 2009, Poland produced 3.5% of the EU production volume. Yards often operate as subcontractor; two large yards are out of business. The capacity of the two yards may not be used for newbuilding projects but will possibly be used for building components in the near future. It is very likely that a pre-delivery scheme will be needed.

Portugal. In 2009, Portugal produced 1% of the EU production volume. Some of this is commercial newbuilding by state-owned yards. Annual production of commercial newbuilding is between 2-4 vessels with a value of €41-90 million.

Romania. In 2009, Romania produced 4% of the EU production volume. The main yards are owned by foreign companies (STX, Damen and DSME) that also take care of the financing of production if necessary. The reported annual production volume is between 18-71 vessels with a value of €331-550 million.

UK. No significant newbuilding activity was reported other than 2 vessels with a value of between €9-20 million.

Lithuania. In 2009, Lithuania produced 0.5% of the EU production volume. The only yard active in commercial newbuilding is recently bought by a foreign company (BLRT). The production volume is 2-3 vessels with a value of €54-63 million.

Greece. In 2009, Greece produced 0.25% of the EU production volume. Two companies are active in commercial newbuilding and the production volume was 2 vessels with a value of €11 million.

Denmark. In 2009, Denmark produced 4% of the EU production volume. However, a large newbuilding yard is to be closed in the near future after having completed its last orders. Besides this yard, only small vessel builders are active in Denmark.

3.10 Role of European Investment Bank is increasing

The EIB has increased its role in the maritime sector in the EU since 2005. It provided a number of post-delivery financings of projects of European ship-owners, like Grimaldi, Finnlines, Tallink and Costa, with a total amount of €1.2 billion. The vessels in these projects were built at European yards, mostly in Italy. The EIB lends up to a maximum of 50% of the capital required for the project and passes on the advantage of being an AAA credit institution to the beneficiaries of its loans. This leads to attractive interest rates for the lenders. Some new maritime projects are momentarily outstanding at the EIB with a proposed EIB Finance of approximately €500 million.

The EIB is currently not involved in financing shipyards directly. However, yards may apply for intermediated EIB loans provided by banks and financial institutions in their Member State. The maximum size of these loans is € 25 million and can be financed up to 50% of the capital required.

3.11 Conclusions

Three types of pre-delivery schemes can be distinguished. When looking at vertical schemes, there are only two types: a public scheme and a private scheme. Public schemes all look alike, since they are based on the same EU Notice on Guarantees. These schemes can be found in The Netherlands, France, Finland and Germany. A private scheme is running in Spain. Combined with the production volumes of partly state-owned yards, nearly 90% of EU production volume is covered. The figure below gives an impression of the composition of the schemes in the EU.

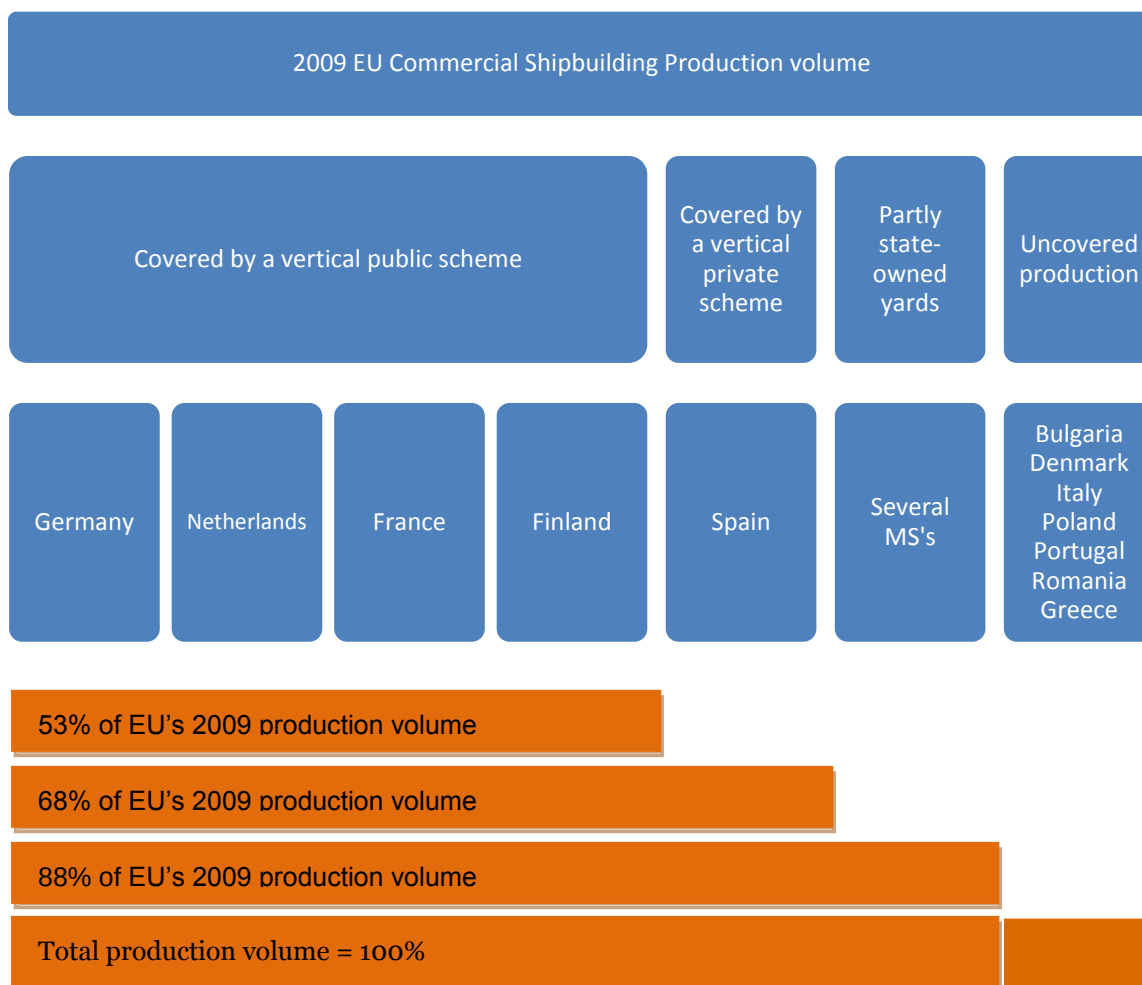


Figure 14: The build up of schemes in Europe and productions volumes they cover

Nine EU Member States do not have a public or private vertical scheme. The largest of these Member States is Italy. Most of the Italian commercial newbuildings are produced by (partly) state owned shipbuilding companies, who seem to have access to guarantees. The representative organisation of the remaining, smaller, shipyards ANCANAP, reported a large need for both pre- and post-delivery finance schemes. The remaining eight Member States without a vertical scheme do not have significant shipbuilding industries.

Of the five vertical pre-delivery schemes for the shipbuilding industry, four of them are used effectively. The 2005 Dutch Scheme has not been used due to disagreements between the banks and the government about the conditions under which damages could be claimed. The 2010 Dutch scheme is also under discussion between banks and the government. Italy intended to implement a vertical public scheme in 2005 but decided not to do so because they disagreed with the Commission about the required premium level.

Premiums of the vertical schemes are normally in a range of 0.8% - 1.5%. Some yards however, reported quite high premiums, with peaks of 3% - 3.5%. The 2010 Dutch scheme, which is not in place yet, reported a maximum premium level of 5.5%. The industry expressed concern about the (perceived) high costs of pre-delivery guarantees provided by (some) schemes. The perception of these high costs of the pre-delivery guarantees can be further affected by the decrease of competition between the financing commercial institutions. Given the modest net profit margins of the shipbuilding industry in the EU it can be concluded that an increase of the premiums from average 1.2% to for example, 3.5%, should be charged to the customers of the yards. If this is not possible due to the competitive position of the EU yards, net profit margins of EU shipbuilding will further decline or become negative. Pricing of the premium of the guarantees is therefore an important element in the pre-delivery schemes.

The study shows that the default rates and the loss amounts of the longest existing vertical schemes are low or even zero. This triggers the question whether the supposed increase of the premiums can be justified by the default rates and losses of the vertical schemes over a longer period including the current financial crisis years. At the moment this information is not available, however, it can be expected that market conditions can have an impact on the default rates and loss amounts in the near future. When these default rates and loss amounts affect the expected loss rates over a longer period, an increase of premiums seems necessary. Further investigation about the genuine losses of the schemes is therefore needed.

In Finland, Germany and the Netherlands public horizontal schemes are in place for guarantees on the working capital of the export orders. The premium charged is related to the premium of the financing banks. The Temporary Framework, valid until 31 December 2011, is another horizontal measure that is and can be used by the shipbuilding industry. In the Netherlands, Germany and Spain additional measures have been taken to cope with the current market conditions.

4 Shipbuilding finance schemes in other non-EU shipbuilding countries

4.1 Introduction

This chapter presents an analysis of finance schemes in use by other major shipbuilding countries outside the EU. In China, South Korea, Turkey, Croatia, Japan, the United States and Canada relevant schemes or measures were identified. All these countries have their Export Credit Agencies with the normal guarantee products available for shipbuilding post-delivery financing. These schemes are not described here.

The information in this chapter has been derived from various sources; public information, official and unofficial and interviews with stakeholders.

Negotiations on a shipbuilding agreement to ensure fair competitive conditions in the global market began in 2002 by the OECD Council Working Party 6 Shipbuilding (WP6). The OECD has decided on 17 December 2010 to terminate negotiations on this Shipbuilding Agreement. WP6 will continue to look at market distortions, subsidies and where the industry is heading but by seeking to strengthen transparency.

4.2 China

China is momentarily the largest shipbuilding country in the world, measured on the order book at the end of June 2010. At that time the order book consisted of 3,405 vessels of 52.2 million CGT, about 36% of the world order book.

Besides investments by domestic Chinese shipbuilding companies, also companies from Korea, the US, Japan and Europe invested in shipbuilding capacity in China, whether or not through joint-ventures with Chinese partners. This resulted in the built up of a massive production capacity in China in recent years.

The Chinese shipbuilding industry reported profitability (net profit margin) of 5,6% during 2006 on a total industry turnover of US\$ 22 billion. More than 50% of this profit was gained on newbuilding activities, the remaining 50% on repair and other related activities⁴².

In recent years, China has implemented and, since the financial crisis, improved a comprehensive set of instruments to stimulate their shipbuilding activities. The combination of low labour costs and a competitive set of financing instruments has allowed them to gain a spectacular share in the production of commodity newbuildings.

The use of financing and guarantee schemes in China has recently been described in an OECD report titled “The shipbuilding industry in China”⁴³.

“To speed up the process of privatization in the shipbuilding industry, and in recognition of the capital intensive character of the industry and its long-term investment profile, the Chinese government overhauled the conventional financing and investment system by playing a role to strengthen structural flexibility and providing assistance to facilitate the acquisition of capital. This was achieved principally by encouraging state-owned and private banking institutions to provide financial support to shipbuilders.

⁴² Source of data: COSTIND.

⁴³ C/WP6 2008 of 26 June 2008

The Chinese banking sector has traditionally been considered by authorities as a substitute for state financing to ensure a continued flow of funding to its state-owned enterprises, including those involved in shipbuilding. Finance for the shipbuilding sector can be broken down into two general areas: i) shipyard finance for capital acquisitions, and ii) capital to finance each shipbuilding project. Each can be of critical importance to the well being of the shipyard, because without a source of funds for capital acquisitions, the shipyards would be unable to modernize and would lack the equipment and tooling required to build ships competitively.

China Eximbank aims to create a network of links with the shipping industry and its ancillary government sectors. It has created new ground for Chinese shipbuilding as the economy's only export oriented bank that could make Chinese yards even more competitive, as well as offering attractive packages for ownership buyers. In a special report prepared by the China Daily in May 2005, 10 China Eximbank had provided different types of financial support, such as direct lending and guarantees, for over 90% of Chinese ship exports, and has become the major channel for Chinese ship financing.

The bank plays an important role in helping Chinese shipbuilding enterprises compete with their international counterparts, and in accelerating the development of China's shipbuilding industry. Until recently, nearly all the domestic large and medium-sized shipbuilding enterprises, including China State Shipbuilding Corporation (CSSC) were the Bank's key customers, and by the end of 2003, China Eximbank had financed the export of 976 ships totalling 25 million dwt, with loans totalling 65.5 billion Yuan. More recently, as well as the Eximbank, other major Chinese banks, such as the China Construction Bank, the Bank of China, the Agricultural Bank of China and the Industrial and Commercial Bank of China, have also become involved in transportation and infrastructure finance".

Figure 15: The use of financing and guarantee schemes in China, as described in OECD: "The shipbuilding industry in China"

Eximbank, Bank of China (BoC) and the Industrial and Commercial Bank of China (ICBC) are the main players at the Chinese shipbuilding market, all three state-owned. BoC estimates the total volume of 2010 of these three banks in pre- and post-delivery financing of shipbuilding between US\$ 88 and 102 billion. Each of them has 25% of the market and all remaining banks together 25%. They provide loans to ship-owners, shipbuilders and refund guarantees.

The Chinese government approved a stimulus plan for the shipbuilding industry in February 2009.

Stimulus plan for China's shipbuilding industry

In early February 2009 China's State Council adopted a stimulus plan for China's shipbuilding industry. By supporting domestic shipbuilders, the PRC government supports also associated industries such as steel and chemical production, textile manufacture, light industry, equipment manufacture and IT. The first stage of the Stimulus Plan will introduce credit support for domestic purchasers of Chinese-made ocean-going vessels until 2012. Other policies include the provision of tax rebates on major imported components for domestically owned ocean-going vessels.

Objectives of the shipbuilding industry stimulus plan

The shipbuilding industry stimulus plan outlines various objectives, including: **stabilizing production** by encouraging the major domestic shipbuilders and ship owners to adhere to previously agreed newbuilding delivery schedules; **stimulating domestic demand** for newbuildings by scrapping and replacing older vessels; **developing the offshore sector** by encouraging domestic shipbuilders to invest in the construction of high-value and technologically advanced vessels such as oil rigs and other offshore equipment; **consolidating the domestic shipbuilding industry** by encouraging corporate reorganisation, mergers and acquisition among existing yards and the improvement of their corporate governance; promoting research and development in new shipbuilding and marine technology and encouraging domestic shipbuilders to upgrade existing production technology; and **expanding scope of business services and market share** by encourage domestic shipbuilders to enhance their ship repair services and expand their vessel product range, specialized vessel construction and manufacture of offshore equipment.

Measures

The PRC government has set out various measures to promote the development of the domestic shipbuilding industry to reach the objectives set out in the stimulus plan and in line with the measures already taken earlier for the shipbuilding industry.

Firstly, domestic banks will provide credit support to domestic shipbuilders affected by delayed orders and increase provision of refund guarantees (to support the domestic shipyards) and performance guarantees (to support domestic ship owners) in order to kick-start new orders. Additional financial incentives will also include the provision of construction mortgages and other investment products and shipbuilding industry-related bonds and investment funds, although the details have not yet been published.

Secondly, financial support will be provided to domestic ship owners and leasing companies who step in and perform shipbuilding contracts that would otherwise have been cancelled by the original buyers.

Thirdly, the PRC government has agreed to provide VAT tax refunds to domestic shipbuilders for the sale of oil rigs and other offshore equipment to Chinese oil and natural gas exploration companies, to increase government department budgets for the acquisition of government-owned vessels and to implement new regulations on the scrapping of older vessels and single hull tankers.

Lastly, the wording of the stimulus plan would suggest that domestic yard construction and development under the existing 10 year “Shipbuilding Industry Development Plan” (which commenced in 2006 and covers the building of new docks and the expansion of existing slipways), be suspended for 3 years.

Credit support for foreign buyers and our business

Whilst the Stimulus Plan does not directly benefit foreign ship owners, domestic banks (and export credit agencies) are encouraged to provide increased buyer’s credit schemes for foreign buyers in order to promote the construction and sale of vessels for the export market. “

Figure 16: Stimulus plan for China’s shipbuilding industry: China Insight, issue 17, Norton Rose

Based on press reports and observations from shipbrokers active in China the following two vehicles were established during the financial crisis:

- the China Ship Fund. This Fund of US\$ 2,9 billion will acquire vessels from Chinese and foreign yards and lease them to domestic ship operators;
- the ICBC leasing fund for ships built in China. Financing of this fund is partly provided by non Chinese financial institutions. This fund is modelled after the well known aviation leasing funds.

Shipbrokers consider the financing terms for pre- and post-delivery, as far as they know, to be at market levels. They indicated that the progress payment schemes in China also seem to alter from high down payments to low down payments. No information is available about volumes and pricing of pre- and post delivery financing in China. In general Chinese banks report to use “arm’s length” conditions.

In June 2010 the Chinese government announced a scheme for Chinese owners for fleet renewal. Under the scheme a subsidy of US\$ 220 per ton deadweight will be given to ship owners for renewals at Chinese yards.

4.3 South Korea

Until recently, when China took over, South Korea was the worlds’ largest shipbuilding country. The Korean order book at the end of June 2010 consisted of 1,602 vessels of 44.4 million CGT.

For decades, South Korea has successfully applied the OECD Understanding based ECA facilities.

During the financial crisis South Korea introduced (July 2009) a special financing scheme that allowed Korean ship-owners to sale and lease back vessels to a KAMCO Shipping Fund. In October 2009, 16 shipping companies and a fleet of 62 vessels had applied for the scheme, at that moment at least 17 vessels had been financed by the scheme. The funds that became available from these transactions allowed the shipping companies to pay their bills at the Korean yards for the newbuildings they ordered. The total capacity of the fund amounts to \$3.1 billion. Besides this KAMCO Shipping Fund the Korean Development Bank (KDB) operates another sale and lease back Shipping Fund. The capacity of this Fund amounts to US\$1.8 billion. Both KAMCO and KDB are state owned financial institutions.

The Korean Marine Finance Corporation (KOMARF) was established in 2003. Present shareholders are STX Offshore and Shipbuilding (27%), DSME (24%), Korean Development Bank (14%), Korean Line Corporation (12%) and 6 smaller shareholders from the maritime and financial industry (23%). KOMARF operates at this moment 30 single ship companies in so-called Ship Investment Companies (SIC). These SIC's are based on the Ship Investment Companies Act by South Korea. This act allows substantial tax benefits to the shareholders.

All the instruments described above can be seen as post-delivery and are only available for Korean built ships.

Maritime press reported recently of financial problems at small and medium sized Korean yards, concerning obtaining the required refund guarantees for newbuilding contracts. Eventually, these yards reached an agreement with their bankers about the funding of their orders.

4.4 Turkey

After an enormous growth of shipbuilding capacity in Turkey the country is now regarded as a major shipbuilding country in the world. At the end of June 2010 the order book contained 191 vessels of 1,1 million CGT. The yards are strongly concentrated in the Tuzla area and the Black Sea coast.

Until the financial crisis most commercial newbuilding projects were financed through construction loans provided by commercial banks. Some six banks have a lot of experience in shipping finance.

The Türk Eximbank, a state owned bank, provides a special Shipbuilding Finance and Guarantee Program. Through this program, construction loans and pre-delivery refund guarantees are available for a period of maximum 24 months on a project basis. The maximum amount is 85% of the contract price. Rates are determined depending upon the length of the construction period, market conditions, repayments terms and the risk profile of the yard and the customer. No public information about the heights of the rates is available. An important condition to qualify for the scheme is to have at least 25% Turkish content in the project.

Türk Eximbank is also the official ECA for Turkey and provides facilities for export orders, based on the OECD Consensus. The Pre-Shipment Export Credit program facilitates working capital financing of export orders.

The financial crisis had an impact on Turkish yards; orders were cancelled and customers had difficulties paying the agreed progress billings or final payments on delivery of the vessel. The Turkish government started a special "Credit Guarantee Fund" in 2010 of approximately US\$ 400 million. This Fund provides guarantees to banks that provide loans to SME's in the maritime sector. The loan amounts vary from TL 7 million (€ 3,2 million) to TL 30 million (€ 13,9 million). Repayment terms are between three and eight years depending on the type of investments financed with the loan. A minimum financing through own resources of 10% is required.

Furthermore, the Turkish government initiated a fleet renewal project for 400 vessels for the Turkish short sea fleet. The project value is estimated at € 4 billion. The ships have to be built at Turkish yards and for each new built vessel an old vessel will be scrapped so the total available tonnage will not change. No further details about this project are publicly available.

4.5 Croatia

Croatia has six state owned major shipyards organized together in the state owned Croatian Shipbuilding Corporation. The Victor Lenac repair yard has been (partly) privatized. The Croatian government intends to privatize the six state owned yards. Negotiations with potential buyers have not resulted in realizing this objective so far. The Croatian yards completed 14 vessels in 2009 with a value of € 559 million from which € 464 million is exported.

There are no pre-delivery vertical financing guarantee schemes in place in Croatia. In 2010 the Croatian government approved of two financial guarantees for loans to the state owned shipyards. No details of the loans were published.

The Croatian Shipbuilding Corporation executes obligations and commitments determined by the Croatian Government. This concerns coordination and organization of financing. They monitor the contracted shipbuilding programs by securing that down payments paid by ship owners and credit facilities for bridge financing are being used to serve only that particular shipbuilding contract. The Croatian Shipbuilding Corporation reports that contracts can be supported with guarantees from the state owned Croatian Bank of Reconstruction and Development (HBOR) or Croatian commercial banks, which are acceptable to first class European banks and are providing full security to the owners.

HBOR is providing ECA facilities including CIRR interest rates, based on the OECD Consensus. Croatia is not an OECD member. The HBOR also provides guarantees for working capital financing of export orders.

4.6 Japan

Japan is the world's number three in shipbuilding capacity and has a long standing tradition as shipbuilder. Three large yards dominate the industry. The Japanese order book at June 2010 contains 1,163 vessels of 21.8 million CGT. The Japanese export orders decreased strongly in recent years, with 60% in 2009.

Japan was one of the first developing countries who started a commercial shipbuilding industry, right after WWII. In the late fifties several organizations that supported the shipbuilding industry were founded. Japan was also one of the first countries using export credit facilities in acquiring orders from foreign ship owners.

Pre-delivery financing of shipbuilding in Japan is provided by commercial banks. For exports, the state owned Nippon Export and Investment Insurance (NEXI) and the Japan Bank for International Cooperation (JBIC) support the industry with post-delivery financing instruments.

NEXI acts as the Japanese ECA. During the recent years several newbuilding projects of Japanese yards have been financed using these facilities. The JBIC is the international wing of the Japan Finance Corporation (JFC), Japan's policy-based financing institution. JBIC is currently involved in financing of about 50 or 60 vessels under construction at Japanese yards. The post-delivery financing of these vessels is not in place due to the financial crisis. JBIC offers a "wide range of support" to local financial institutions with credit lines specifically for the export of ships to foreign countries.

Recent press reports mention Japanese shipbuilders accepting price cuts on existing newbuilding orders in exchange for owners ordering an extra vessel.

4.7 United States

The maritime industry within the US is highly influenced by the Jones Act. This Act prescribes that transport between US ports has to be carried out by US built and flagged vessels. The order book of June 2010 therefore exists of only 91 vessels of 0.5 CGT, which is 0.3% of the world order book.

The US operates a scheme very similar to a pre-delivery guarantee scheme in Europe under the Notice on guarantees. Based on Title XI of the Merchant Marine Act 1936, the US operates a ship financing scheme, known as the "Title XI ship financing guarantees". The scheme is open for qualifying US flagged ships and yards. The scheme was intensively used in the years 1998 to 2001 for projects with a total value of \$4.8 billion. In the period 2003 to 2009 the scheme supported a few projects. At this moment applications for 6 projects are pending for 21 ships with a total value of \$2.1 billion and a requested loan amount of \$1.6 billion.

The scheme is described in § 298 "Obligation guarantees" of the implementing regulations of Title XI of the Merchant Marine Act 1936. A summary of the scheme is reproduced below, based on information of the Maritime Administration. The premium for the guarantees is between 1/2 of one percent to one percent for the period after vessel delivery and between 1/4 of one percent to 1/2 of one percent prior to vessel delivery. The guarantee fee rate is generally based on a ratio of net worth to long-term debt of the ship owner or shipyard.

The description below is taken from the Maritime Administration.

Purpose of Program

The primary purpose of the program is to promote the growth and modernization of the U.S. Merchant Marine and U.S. shipyards. The program enables owners of eligible vessels and eligible shipyards to obtain long-term financing with attractive terms.

Eligibility Requirements

Vessels eligible for Title XI assistance generally include commercial vessels such as ferries, bulk, container, cargo, tankers, tugs, towboats, barges, dredges, oceanographic research, floating power barges, offshore oil rigs and support vessels, and floating dry docks.

Eligible Technology generally includes proven technology, techniques and processes to enhance the productivity and quality of shipyards, novel techniques and processes designed to improve shipbuilding and related industrial production which advances the U.S. shipbuilding state-of-the-art.

The design of the vessels must be approved from an engineering standpoint. A U.S.-flag vessel must meet the American Bureau of Shipping standards or other such standards approved by the U.S. Coast Guard or, in the case of an eligible export vessel, standards imposed by an International Association of Classification Societies member to be ISO 9000 series registered or other standards acceptable to the Maritime Administration. The ship-owner or shipyard must have sufficient operating experience and the ability to operate the vessels or employ the technology on an economically sound basis. The ship-owner or shipyard must meet certain financial requirements with respect to working capital and net worth, both of which are based on such factors as the amount of the guaranteed obligations, the ship owner's or shipyard's financial strength, intended employment of the vessels or Technology, creditworthiness of the applicant and export country, etc. These factors also affect the terms of the Maritime Administration guarantee, continuing Title XI financial covenants, guarantee fees, reserve fund, etc. All guarantees under the program must be determined by the Secretary to be economically sound.

Amount Guaranteed

The amount of the obligations guaranteed by the Government is based on the "actual cost" of the vessels or the Technology as determined by the Secretary. The actual cost of a vessel generally includes those items which would normally be capitalized as vessel costs under usual accounting practices, such as the cost of construction, reconstruction, or reconditioning (including designing, inspection, outfitting and equipping) of the vessel, together with construction period interest and the guarantee fee. The actual cost of Technology generally includes those items which would normally be capitalized as shipbuilding technology under usual accounting practices including construction period interest and the guarantee fee but excludes amounts payable to the manufacturer for early delivery of equipment and pre-delivery expenses which may not be properly capitalized as the cost of the Technology. All items of actual cost must be determined to be fair and reasonable by the Secretary. Some costs are excluded from actual cost (although sometimes considered capitalisable costs) such as legal and accounting fees, printing costs, vessel insurance and underwriting fees, and any interest on borrowings for the ship owner's equity in the vessels or shipyard's equity in the Technology.

Legislation permits guarantees for up to 87 1/2 percent of the actual cost of (1) passenger vessels, designed to be not less than 1,000 gross tons and capable of a sustained speed of not less than 8 knots, to be used solely on inland rivers and waterways, (2) ocean-going tugs or more than 2,500 horsepower (hp), (3) barges, (4) vessels of more than 2,500 hp designed to be capable of a sustained speed of not less than 40 knots, (5) other vessels of not less than 3,500 gross tons and capable of a sustained speed of 10 knots, (6) ferries engaged solely in point-to-point transportation, not less than 75 gross tons, and capable of sustained speed of not less than 8 knots and (7) Technology. Certain other vessels are limited to 75 percent financing.

If a Title XI guarantee of obligations for a vessel is documented after delivery or for refinancing, the actual cost must be depreciated from the date of delivery to the documentation date of the guarantee. If a Title XI guarantee of obligations for Technology is approved after the Technology has been placed in service or for refinancing, the actual cost must be depreciated from the date placed in service to the documentation date of the guarantee.

Amortization and Interest Rate

The maximum guarantee period is the lesser of 25 years or the remaining economic life of the vessel or Technology, as determined by the Secretary. The actual financing period will be based on the financial, economic and other critical aspects of the project. Amortization in equal payments of principal is usually required; however, other amortization methods such as a level debt (equal payments of principal and interest) may be approved if sufficient security is offered such as long term charters, reduction of the amount of guarantee and/or length of guarantee period.

The interest rate of the obligations guaranteed is determined by the private sector. Generally, in establishing the interest rate the prospective obligee would utilize as a benchmark rate the interest rate carried by U.S. Treasury obligations comparable to the average life of the proposed debt issue. The rate must be determined to be fair and reasonable by the Secretary. The interest rate has been fixed for the financing period in most cases; however, the Maritime Administration has also approved floating interest rates with certain restrictions.

Source of Funds for the Obligations

Since the program is a guarantee program, funds for the guaranteed debt obligations are obtained in the private sector. The main sources for such funds include banks, pension funds, life insurance companies, and notes or bonds sold to the general public.

Refinancing

Amounts outstanding on existing Title XI obligations, or amounts outstanding on obligations not previously guaranteed and applicable to vessels may be refinanced up to the applicable financing level (87½ percent or 75 percent) of the depreciated actual cost of the Title XI vessels but not exceeding the amount of the existing obligations being refinanced. Only amounts outstanding on existing Title XI obligations applicable to Technology will be eligible for refinancing not exceeding the amount of the existing obligations being refinanced. Refinancing under Title XI must meet all the applicable requirements of the existing statutes and regulations, and the original debt must have been issued within one year after vessel delivery or within one year of the date the Technology was placed in service. Vessels or Technology purchased as "used" are not eligible under this provision.

Program Fees

There are a number of fees charged by the Maritime Administration for using the program. The applicant must pay a non-refundable filing fee of \$5,000 when the application is filed. Prior to issuance of the letter commitment, the applicant must pay an investigation fee of one-half of 1 percent on obligations to be issued up to and including \$10,000,000 plus 1/8 of one percent on all obligations to be issued in excess of \$10,000,000. Additional fees may be collected to offset the cost of external advisors used in the review process. The \$5,000 filing fee previously paid upon filing the original application and any fees for external advisors will be credited against the investigation fee.

The guarantee fee is calculated by (1) determining the amount of obligations outstanding during each year of the financing and multiplying that amount by the guarantee fee rate applicable to the project and (2) applying a present value analysis to the amount calculated in (1) above. The guarantee fee rate is generally based on a ratio of net worth to long-term debt of the ship-owner or shipyard. The rate is (1) between ½ of one percent to one percent for the period after vessel delivery or Technology placed in service and (2) between ¼ of one percent to ½ of one-percent prior to vessel delivery or during the construction or development of Technology. Amounts on deposit for the vessel or Technology in an escrow fund held pursuant to Title XI are excluded in the computation of this fee.

The one time guarantee fee is to be paid prior to the documentation date of the guarantee. No guarantee fees paid will be refunded. The guarantee fee may be included in actual cost and is eligible to be financed.

Procedure to Apply

Application forms and the regulations governing the program may be obtained upon request from the Maritime Administration at the above address or from this web site. Prior to filing an application, a preliminary meeting(s) should be arranged with the Director, Office of Shipyards and Marine Financing to discuss the Title XI application and requirements.

Approval of the application will be contingent upon the determination by the Secretary as to whether the vessels or Technology and the overall project meet all the applicable requirements of the existing statutes and regulations. If the application is approved, a letter commitment to guarantee the obligations will be issued, stating the requirements necessary for closing. If the application is not approved, the applicant will be notified in writing. Implementation of the approval of the application is accomplished through the execution of formal documentation of the transaction satisfying all the conditions in the letter commitment. At such time the guaranteed obligations (notes, bonds or other debt obligations) may be issued and sold and a secured interest or a mortgage on the vessels or Technology will be granted to the Secretary.

Completed sets of the application, including schedules and exhibits as required, should be sent to the Maritime Administration accompanied by the filing fee of \$5,000, which is not refundable. Generally, application processing will take 60 days from the date the application is determined to be complete by the Maritime Administration. Typical approval times from preliminary meeting to closing are usually nine months to one year, although great variations exist in review periods.”

Figure 17: Title XI ship financing guarantees taken from the Maritime Administration

In the United States, two other relevant funds can be distinguished.

The Construction reserve fund is primarily used by ship owners and is a mix of pre- and post-delivery instruments, but can only be applied for US built vessels. It allows owners of US built and US flagged ships to defer taxation on capital gains at sale of the vessel.

Like the Construction reserve fund the Capital construction fund is a mixed pre- and post-delivery instrument for US built vessels. This scheme allows owners of US built and US flagged ships to defer taxation on income from capital destined for construction of a new vessel, reconstruction or acquisition of vessels.

Both funds provide the ship owner a cash flow advantage because tax payment over the capital gains is deferred to the future. Both funds can provide substantial cash advantages for the ship owner.

4.8 Canada

Canada has a scheme for Canadian built vessels and offshore marine structures under the name “Structured Financing Facility” (SFF). Basically the scheme provides a reduction of interest costs. A summary of the scheme is reproduced below, based on information of the “Industry Canada”.

The Government has extended the Structured Financing Facility (SFF) to March 2011. The objective of the Structured Financing Facility (SFF) is to help ensure that shipyard capability exists for federal marine procurement and maintenance requirements in keeping with the Buy Canada procurement policy.

Eligibility Criteria

The applicant must be a purchaser or lessee of a vessel or offshore marine structure. The payment for the newly built or modified vessel or offshore marine structure must be financed by a lender or lessor who will receive the SFF contribution to reduce the applicant’s interest or leasing costs.

What are the eligible products?

Eligible products are new vessels or offshore marine structures and existing vessels and offshore marine structures undergoing major refurbishment, conversion or other major modification and constructed in Canada. The following additional criteria apply: The shipyard must be in Canada on a water way accessible to ocean-going traffic. The vessel is not constructed mainly of wood or fibreglass and is not a wind powered craft. The vessel is at least 25 metres in length. The price paid for the shipyard work is at least \$5 million. The vessel is solely intended for commercial use and not any private use. If it is a marine structure, it must be one used in the development or exploitation of offshore oil, gas and/or mineral resources. The vessel or offshore marine structure will be constructed and delivered by March 31, 2011. Pleasure craft, as defined in the Canada Shipping Act, are not included.

SFF Description

The SFF provides financing support in the form of a buy-down of financing costs. Subject to the limitations below, this support can be up to 15% of the purchase price paid to the Canadian shipyard for the construction or modification of an eligible vessel or offshore marine structure. The support is in the form of a non-repayable contribution. The financing support is subject to the following limitations:

The buy-down of interest or leasing costs cannot exceed 75% of total interest or leasing costs. If the vessel or offshore marine structure is for export, and a fixed-rate loan is used to finance the acquisition or modification, then the interest

rate of the loan cannot normally be brought down below the Commercial Interest Reference Rate (CIRR) as defined by the Organisation for Economic Co-operation and Development (OECD).

For Canadian applicants, the Canadian income tax regulations remove the right to accelerated capital cost allowance for vessels whose construction or modification was supported by SFF.

Application Process

An applicant provides a project outline to Industry Canada with the following information:

company information - name of company, address, contact person, preferred language of communication;

company profile - ownership and organization, (legal status), brief summary of company history nature of business, most recent financial statements;

proposed project - what type of vessel or offshore marine structure is being purchased/modified, which Canadian yard, the overall costs, proposed financing arrangements, proposed contracts for use and destination of vessel, timing of the project;

market - where the vessel will be used;

competition - which shipyards are competing for the construction of the vessel, what is the price differential amongst the alternative shipyards;

need - justification as to why SFF support is needed for the project to proceed in Canada with the desired scope and timing;

benefit to Canada - outline benefits such as jobs created in Canada both in the construction of the vessel and in its use, identify any design or development that may be required, technology transfers, etc.

The Minister of Industry Canada shall have the sole discretion to determine the acceptability of an applicant, a recipient, a lender or lessor, and a shipyard; the Minister may, from time to time, make policies regarding acceptability.

Industry Canada will assess the above information and provide the applicant within a few weeks with an indication of whether the proposed project is eligible under the SFF. If the project appears to be eligible, the Department will inform the applicant of any additional information that may be required in order for the Department to proceed with a full analysis and obtain the appropriate approval authorities.

If the project is approved, the recipient will be requested to submit data, schedules, plans and reports in sufficient detail to enable the Minister to:

- (a) assess the progress of the project;
- (b) carry out the post-completion monitoring called for in the contribution agreement.

Figure 18: Structured Financing Facility taken from Industry Canada

Under this scheme, 38 vessels were built in the period from 2002 to 2009 with a total value of C\$ 59 million and applications for C\$ 12 are pending. The SFF scheme can reduce the cost price of the new built vessel up to 15%. That is a substantial portion of the purchase price and is an effective instrument for Canadian shipbuilding.

4.9 Conclusions

When looking at the major shipbuilding countries like China, South Korea, Japan and Turkey our research shows that before the financial crisis, these countries had their pre- and post delivery schemes in place. Especially the ECA-facilities are intensively used.

In the years of the financial crisis the Chinese government approved and implemented a stimulus plan for the shipbuilding industry. The combination of rather low costs and a comprehensive set of financial instruments has allowed China to gain a spectacular share in the production of commodity newbuildings. The announced

scheme for fleet renewal of June 2010 by the Chinese government is expected to give a further boost to the Chinese shipbuilding industry.

South Korea set up a sale and lease back scheme by KAMCO and KDB for existing vessels in use to cope with the effect of the financial crisis. This sale and lease back scheme allowed the Korean ship owners to pay for their new vessels built at Korean yards. The SIC's are based on tax incentives and are an effective post delivery instrument of South Korea.

The Turkish government started a "Credit Guarantee Fund" which provides guarantees for banks who provide loans to small and medium sized companies in the maritime sector. Furthermore, they announced a fleet renewal program as well.

As far as we understand Japan uses primarily ECA facilities for export orders. No specific measures seem to be taken to cope with the effects of the financial crisis.

Croatia, the United States and Canada are relative small shipbuilding countries. The United States has a pre- and post delivery scheme similar to European schemes, Croatia and Canada only have ECA facilities available.

5 A SWOT analysis

5.1 A SWOT Matrix of shipbuilding pre-delivery financing

An analysis of the strengths, weaknesses, opportunities and threats related to the financing of shipbuilding in EU Member States, as described in the previous chapters, is illustrated in the following matrix:

Strengths		Weaknesses	
1.	Nearly 90% of EU shipbuilding has access to pre-delivery guarantees with sufficient capacity	3.	Looking from a global perspective, European shipyards are relatively small
2.	Europe has a long standing of shipbuilding finance with in-depth knowledge at different financial institutions	4.	Profitability and solvency of many European yards are low
		5.	Work in progress of European shipyards is mainly short term funded
Opportunities		Threats	
6.	The role of the EIB in post-delivery financing of maritime projects is increasing	8.	Capacity for and knowledge of shipbuilding at banks and financial institutions is declining
7.	Focus of Export Credit Agencies on post-delivery financing of export orders can be extended to pre-delivery financing as well	9.	Concern about the (perceived) high costs of pre-delivery guarantees

Table 15: SWOT matrix of shipbuilding pre-delivery financing

5.2 An elaboration of the matrix

5.2.1 EU shipyards are relatively small on a world wide scale

From the 52 EU companies currently active in commercial newbuildings just 5 have a sales volume of between € 1 billion and € 3 billion. Number 10 in the worldwide sales ranking has a sales volume of € 2.6 billion. On a world wide scale, EU yards are therefore relatively small. In the recent years European yards have refrained from massive capacity expansions and their focus on niche markets placed the European yard as leaders in building innovative and specialized vessels. We also identified some smaller companies in different EU countries being very successful in niches of the industry. Economies of scale can however be an important factor for success in research and development. The small size of the EU shipbuilding companies may therefore be an important impediment for the move into new business areas which often require substantial start-up investments.

5.2.2 Financial position

The financial position of the EU shipbuilding companies in general is vulnerable. In spite of a number of positive exceptions, both small and large companies, profitability and solvency of many yards is low. Furthermore, the work in progress at the “average EU yard”, is mainly short term funded, which may cause immediate financial pressure if deviations from the projected cash flow schemes occur. Especially the smaller companies will experience difficulties to access capital markets, irrespective whether it is for equity, loans or guarantees. The larger companies in general will have easier access to financial markets for project financing and financing for extensions and acquisitions.

5.2.3 Access to guarantees

Nearly 90% of the EU commercial newbuilding capacity has access to pre-delivery guarantee facilities with sufficient capacity. The only major shipbuilding Member State without a national pre-delivery guarantee scheme is Italy. Representatives of private Italian shipbuilding industry reported a large need for both pre- and post-delivery finance schemes.

There are some clear indications that premiums and other conditions for these guarantees are perceived by various stakeholders as too high. In 2005 the Italian government decided not to implement a vertical guarantee scheme because of the high premiums that should have to be paid. In 2005 the Dutch government introduced a scheme that was never used because the banks and the government disagreed about the conditions under which damages could be claimed. The 2010 Dutch guarantee scheme is also under discussion between banks and government. Premiums of the guarantees are a relevant component of the cost price of the vessels, due to competitive reasons it might be difficult to charge an increase to the customers. Then an increase of the premiums will directly lead to a further decline of the (already low) profitability. The historical default rates and loss amounts of the several schemes do not indicate a necessary increase of the premiums at this moment. Current market conditions however may have an impact on the default rates and losses in the near future. Further investigation about the genuine losses during the financial crisis is therefore needed.

5.2.4 Long standing shipbuilding finance

Europe has a long standing with shipbuilding finance, especially in the traditional shipbuilding countries. Expertise on both pre- and post-delivery financing, ECA applications and structured project financing were available at many banks and financial institutions that also had an in-depth knowledge of the shipyard. Those banks worked closely together with the yards during the offering process with potential customers.

Due to the financial crisis several banks withdrew (partially) from the shipbuilding industry. The number of bankers with shipping finance expertise is therefore declining as well. Per country nowadays just a few banks with specialized expertise are still active in shipbuilding finance, the reduced availability of private sector operators and sources for guarantees is therefore of concern.

5.2.5 Increasing role of EIB

The EIB has increased its role in the maritime sector since 2005. It provided post-delivery financing of several projects with European ship owners. Up to € 1.2 billion was lent to ship owners at an attractive interest rate.

However, the EIB is currently not involved in financing shipyards directly. However, yards may apply for intermediated EIB loans provided by banks and financial institutions in their Member State. The maximum size of these loans is € 25 million and can be financed up to 50% of the capital required.

5.2.6 Role of ECA's

Export Credit Agencies are available in all shipbuilding countries. In two countries (Finland and the Netherlands) we identified working capital guarantees for shipbuilding orders provided by the ECA under a separate horizontal national scheme. Those schemes are guaranteed by the government and are in line with the EU Notice on guarantees. In Germany the same facility is available through the “Landesbürgschaften” both for export and domestic orders.

6 Conclusions and Recommendations

6.1 Conclusions

The study on the need for a shipbuilding pre-delivery guarantees scheme in Europe shows that EU shipbuilding has experienced turbulent times since 2003: from a significant rise in order books in the 2003 -2007 period to the lowest level since 1990 in 2010. The market share of EU shipbuilding has declined to 5.2% of the world's order books at June 2010 in terms of CGT's.

The production of the commercial newbuildings in the EU Member States is spread over about 50 companies, mostly in Germany, Italy, the Netherlands, Spain and Finland. EU shipbuilding companies are small on a global scale, perhaps with the exception of the 5 largest companies with a turnover of between €1 billion and € 3.2 billion. The profitability and solvency of many of the EU yards is low. The small size of the yards and their vulnerable financial position causes for many of them serious difficulties to access the capital markets. This situation is exacerbated by the decline in capacity and knowledge of shipbuilding financing at banks and other financial institutions. An increase of demand for pre-delivery guarantees from public sources therefore can be expected.

Our research showed that nearly 90% of EU shipbuilding has access to pre-delivery guarantee facilities. The industry expressed concern about the (perceived) high costs of pre-delivery guarantees provided by (some) schemes, since they are a relevant component of the cost price of the vessels. Further investigation about the height of the premiums due to the effects of the financial crisis on the default rates and losses of the schemes, may be needed. Nine EU Member States do not have a public or private vertical scheme, of which Italy is by far the largest shipbuilding country. The eight remaining countries represent 12% of the EU production volume. When looking at the major non-EU shipbuilding countries like China, South Korea, Japan and Turkey, our research shows that before the financial crisis, these countries had their pre- and post delivery schemes in place. Especially the ECA-facilities are intensively used.

In the years of the financial crisis the EU implemented the Temporary Framework that allowed Member States to provide horizontal measures that also can be used by the shipbuilding industry. Several EU countries made use of this facility. The Chinese and Korean government approved and implemented a comprehensive set of financial instruments to support their domestic shipbuilding industry, like the sale and lease back schemes in Korea and the stimulus plan in China. The Turkish government started a "Credit Guarantee Fund" which provides guarantees for banks who provide loans to small and medium sized companies in the maritime sector. China and Turkey both announced a fleet renewal program.

6.2 Recommendations

In conclusion and also in consideration of cost aspects establishment of a European pre-delivery guarantee scheme doesn't seem to be the most appropriate or urgent measure to address the financing problems of the European shipbuilding industry. An extension of existing instruments seems to be the easier and more cost-effective way forward.

At the moment Export Credit Agencies are available in all EU shipbuilding Member States. While these are primarily used for post-delivery financing of export orders, experience from a number of Member States show that the instruments of these institutions can be extended and used for pre-delivery financing as well. Such a solution might be particular interesting in Member States with a low number of newbuilding contracts per year which would not justify establishment of an own dedicated scheme.

Another source of financing for the European shipbuilding industry could be the European Investment Bank (EIB) which has substantially increased its activities in post-delivery financing in the past few years. It would be worth exploring whether the EIB could offer pre-delivery financing including refund guarantees especially in those cases where the bank is involved in post-delivery financing. Another option worth exploring is the possibility of launching a program by the EIB dedicated to strengthen the solvency position of the European yards, which could help these yards in getting finance for example for innovative and environmental projects which would strengthen their competitive advantage. Our research however showed that the EIB currently does not have adequate resources and funds to provide the suggested services.

The move of the EU shipbuilding industry to new market segments and the importance of innovative products for their competitiveness can have impact on their needs in financing. The traditional financing and guarantee rules in shipbuilding originate very much from the financing of cargo vessels. The study shows that payment terms may differ for specialized tonnage and further differences may occur when shipyards move to new specialized vessels. Further development of financing and guarantee facilities could play an important role in facilitating this move of the European shipbuilding industry to new activities.

Yours faithfully,
PricewaterhouseCoopers Accountants N.V.

The image shows two handwritten signatures in black ink. On the left is 'Agnes Koops-Aukes' and on the right is 'Johan Wagelaar'. Both are written in a cursive, flowing style.

Agnes Koops-Aukes RA
Partner

Johan Wagelaar RA
Senior Manager

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Appendix 2: Research Questions

In the table below the respective research assignments are presented together with the primary locations of the answers given.

	Research Assignment	Location
A	the needs and requirements of shipbuilding industry for pre-delivery guarantees	Chapter 2
B	a SWOT analysis of the current situation with regards to shipbuilding financing	Chapter 5
C	available national schemes in Members States (and refer to best practices and lessons learnt from schemes in other countries such as Croatia, Turkey, US, Canada, China, Japan and Korea) and arguments used to justify schemes or reasons put forward for not having a national scheme;	Chapter 3, Chapter 4
D	analysis of and reasons for deal failure at the yard level	Chapter 2
E	market volume and size of national schemes; types of guarantees offered; list and short description of operations (including those under preparation);	Chapter 3, Appendix 3
F	national schemes' governance / procedures and thresholds for application, approval etc. with regards to guarantees (eligibility criteria (e.g. minimum size of projects); maximum guaranteed amounts (for the overall scheme, per year, per operation, as % of liabilities to be guaranteed); risk margins applied – comparison with market prices; due diligence performed / approval process;	Appendix 3
G	Identify and examine mechanisms which might exist in other industry sectors for best-practices/lessons learned.	Appendix 4

Table 16: The respective research assignments

Appendix 3: Detailed information on current national schemes

	Germany (Mecklenburg-Vorpommern)	Finland	Netherlands ⁴⁴	France
	GOVERNANCE			
Legal base	Haushaltsgesetz 2010/2011	Act on Ship guarantees and Act on export guarantees	General law on subsidies	Loi de Finances Rectificative du 30 décembre 2005, article 119
Implementing order	Richtlinie zur Übernahme von Bürgschaften vom 4. Dezember 2008	n/a	Besluit borgstelling kredieten, chapter 8	Decret 2006-563 of 17 May, 2006, implementing state guarantees for shipbuilding
EU approval	N512/2003 dated 16.12.2003	E 7/2005 dated 04.04.2007	27 October 2010	N35/2006 dated 16.05.2006
Advisory committee	Bürgschaftsausschuss 1 Vertreter vom Wirtschaftsministerium und 1 vom Fachministerium	n/a	Advisory committee, 3-5 members, appointed by Ministry of Economic Affairs	Comité d'engagement, 2 représentants des ministres (budget et économie) et 1 représentants de CDFI
Scope	Pre- and post-delivery financing Refund guarantees Performance bonds	Pre- and post-delivery financing	Pre-delivery financing	Pre-delivery financing Refund guarantees Performance bonds
Duration scheme	No limits	No limits	3 years	4 years
Management	PwC Germany	Finnvera	Agentschap NL	CFDI
	MAXIMUM GUARANTEED AMOUNT			
Volume	Maximum of €705 million at any moment. (Other Länder have no limits)	Maximum of € 12,5 billion at any moment	Maximum of €1 billion at any moment	Maximum of €900 million at any moment
Maximum guarantee	80% of outstanding loan	80% of outstanding loan	80% of outstanding loan	80% of outstanding loan
Maximum per yard	n/a	n/a	30% of available volume	n/a

Table 17: Current national schemes (1/2)

⁴⁴ The details of the Dutch scheme are based on the draft version before it was approved by the Commission. The text of the final version is not yet public available. Differences therefore may occur.

	Germany (Mecklenburg-Vorpommern)	Finland	Netherlands	France
	RISK MARGINS			
Premium	0.8-1.5%	0.8%-1.5%	0.8-1.5%	Commercial bank price + 20 bps.
Duration of guarantees	8 years for working capital	No limitations	3 years	4 years
Guarantee type	Direct liability guarantee	Direct liability guarantee	Direct liability guarantee	Direct liability guarantee
Allocation of budget	No reservations	No reservations	Reservation of €20.000.000 (Internal budget reserve)	No reservations
Expected default rate	Not publicly available	Not publicly available	1%	Not publicly available
Beneficiary	Credit institutions in EER for loans to shipyards	Credit institutions in EER for loans to shipyards	Credit institutions in EER for loans to shipyards	Credit institutions in EER for loans to shipyards
Premium categories	6	Not publicly available	Not publicly available	Not publicly available
	ELIGIBILITY CRITERIA			
Eligibility shipyard	Not for yards in financial difficulty (Art 3.3)	Not for yards in financial difficulty, implicitly measured in risk assessment	No yards in financial trouble (Art 8.6.i)	Yard has at least 10% equity/debt ratio (Art 2.1)
Qualifying vessels	n/a	a vessel or a hull that is least 10 metre long and at most 10 years old and that will be used for merchant shipping	>365kW or > 500 gt self propelling vessel Order value > €3 million and < €100 million per vessel	Order value > €40.000.000
	DUE DILIGENCE PERFORMED/ APPROVAL PROCESS			
Application form publicly available	Yes, in all Länder	n/a	Yes	No
Risk assessment	4 criteria scoring model	7 risk categories	Risk assessment	4 criteria scoring model
Decision	Ministry of Finance of the Land	Finnvera	Ministry of Economic Affairs	Ministre de Budget et Economie

Table 18: Current national schemes (2/2)

Appendix 4: Best practices in other industries

The shipbuilding industry (commercial newbuildings) can be characterised as a producer of large and high value capital goods on an internationally and extreme competitive world market. The European industry produces 400-500 vessels annually with an average value per vessel of between €3 million for a small coastal vessel to over €500 million for a cruise vessel. The European industry mainly produces specialised vessels with a high CGT value. Production in Europe is spread over 40-50 groups that operate one or more production plants in several countries.

Standard in the shipbuilding industry is a building contract that describes a payment scheme and the required guarantees between yard and customer. Payment schemes are quite different in shipbuilding, depending on ship type and other criteria. Schemes often used (5 x 20%) cover the building costs during production, but there is a visible trend towards schemes with relatively high final payments on delivery (80%) and a down payment of 20% on the signing of the contract.

From a theoretical point of view, the question who pays the interest during the construction phase of the vessel is not of much interest; in the end it is always the customer who pays. But in day-to-day business these instruments may also be used for commercial reasons, whether they influence the calculated net profit margin or not. In shipbuilding, customers always receive refund guarantees for all payments made before delivery.

Large European construction companies also frequently use payment schemes to cover all building costs during production. They provide a performance guarantee to the customer, but refund guarantees for the interim payments are not as usual as they are in shipbuilding. Customers are, however, legally entitled to the parts of the construction already built.

In some European countries, yards give the right of mortgage to the customer over a vessel under construction that gives the customer a legal title to the vessel under construction, and so avoiding refund guarantees.

In aviation, only one payment (30% is often used) on signing of the contract is expected. The remaining amount of the purchase price is paid on delivery. In many cases these payments are financed by specialised banks or lease companies who receive the right to take over the contract if the customer fails to pay upon delivery. This right is mostly acknowledged by the aircraft builder.

Appendix 5: Inventory of balance sheet differences

The impact of the yard's size

Comparing balance sheets for this category shows a difference in the way work in progress is financed. The small yards are forced to use high down payment schemes because they do not have enough financing capacity.⁴⁵

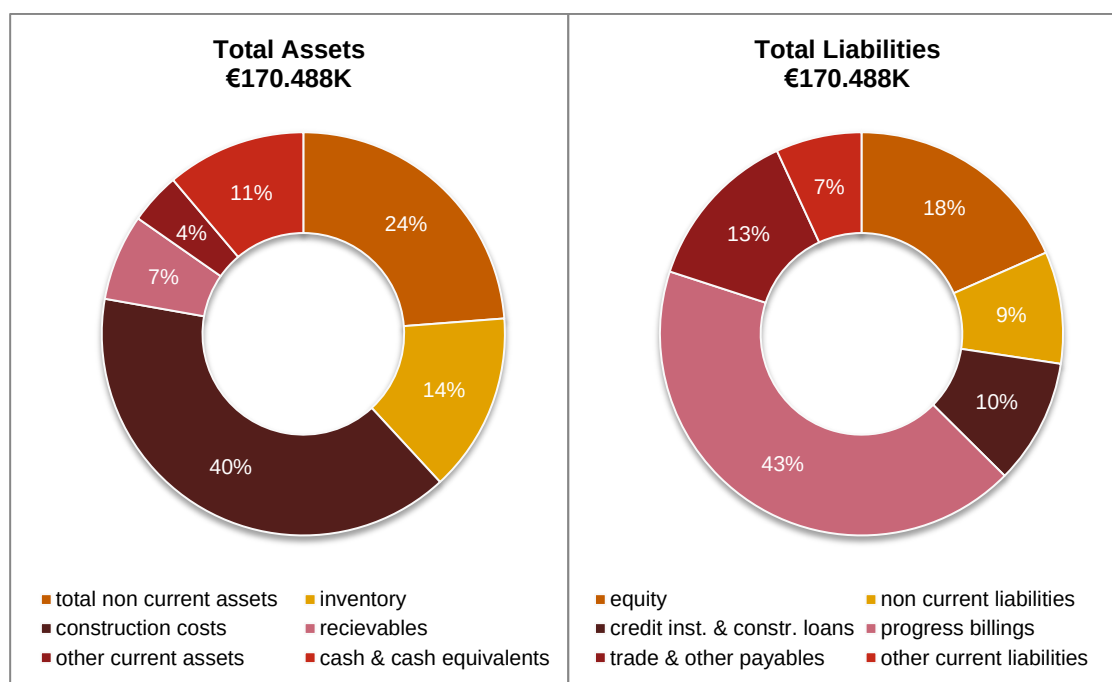


Figure 19: Weighted average balance sheet for small EU shipyards

⁴⁵ Large yards have a 2009 production volume that exceeds €350 mln

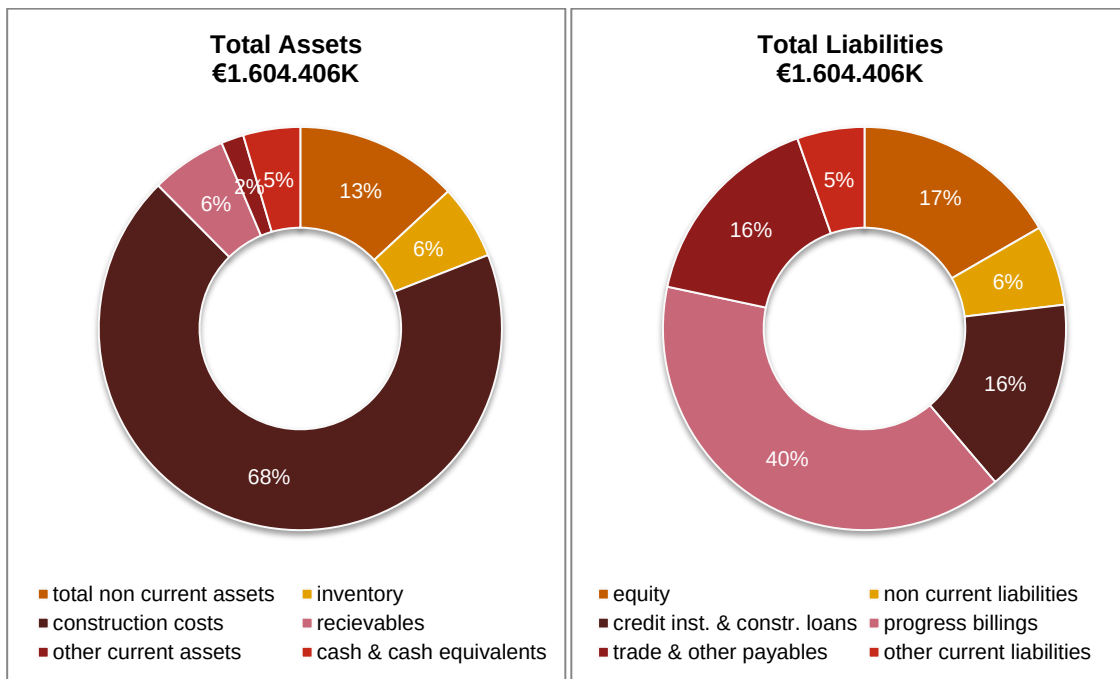


Figure 20: Weighted average balance sheet for large EU shipyards

Impact of the two types of PPS's

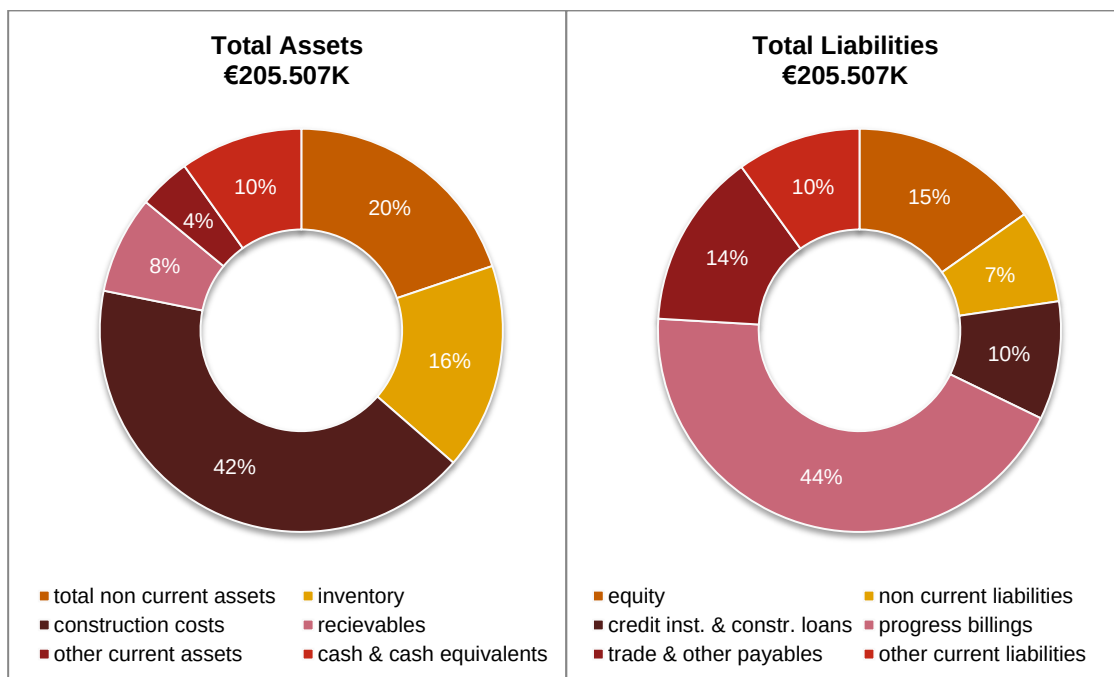


Figure 21: Weighted average balance sheet for shipyards using high down payment schemes

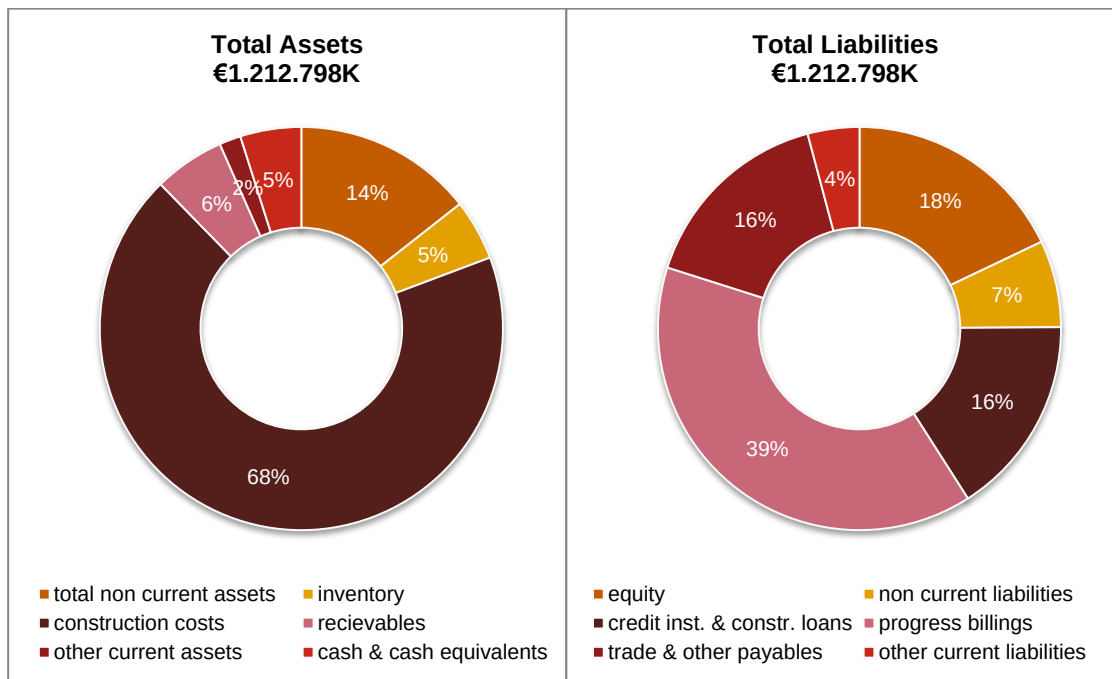


Figure 22: Weighted average balance sheet for shipyards using low down payment schemes

The impact of market segment

The cruise and ferry industry is used to few PPS's as illustrated in these balance sheet summaries. The cargo vessel industry use about 10% construction loans. Dredger , mega yacht and small vessel builders have a negative balance of work in progress and progress billings.

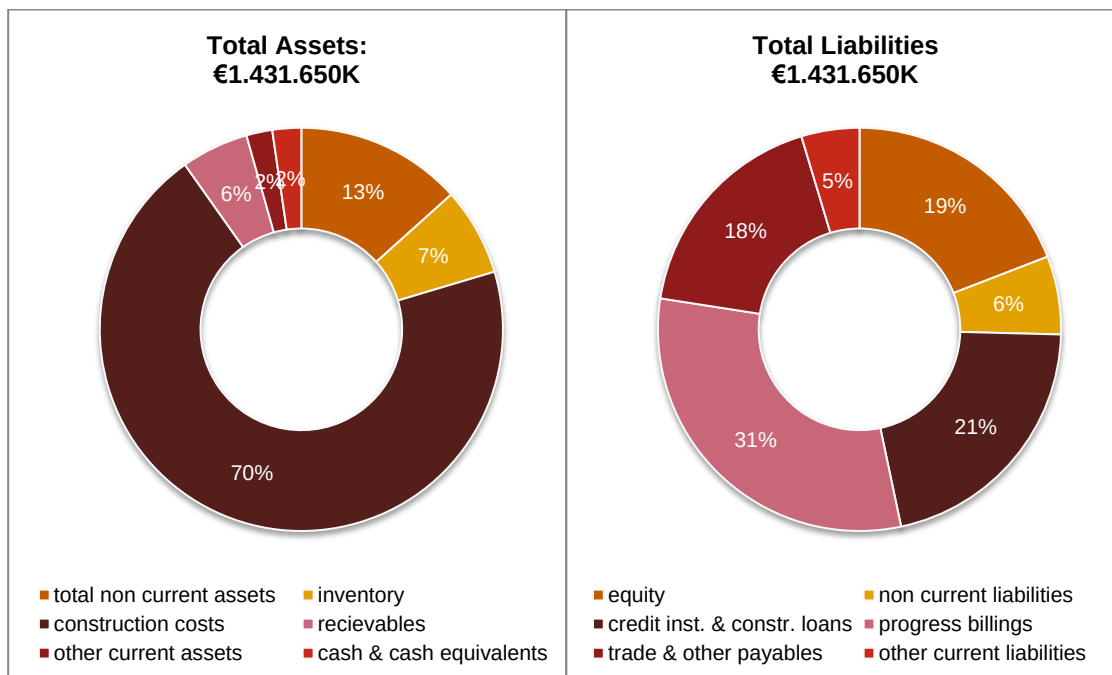


Figure 23: Weighted average balance sheet for builders of cruise vessels and ferries

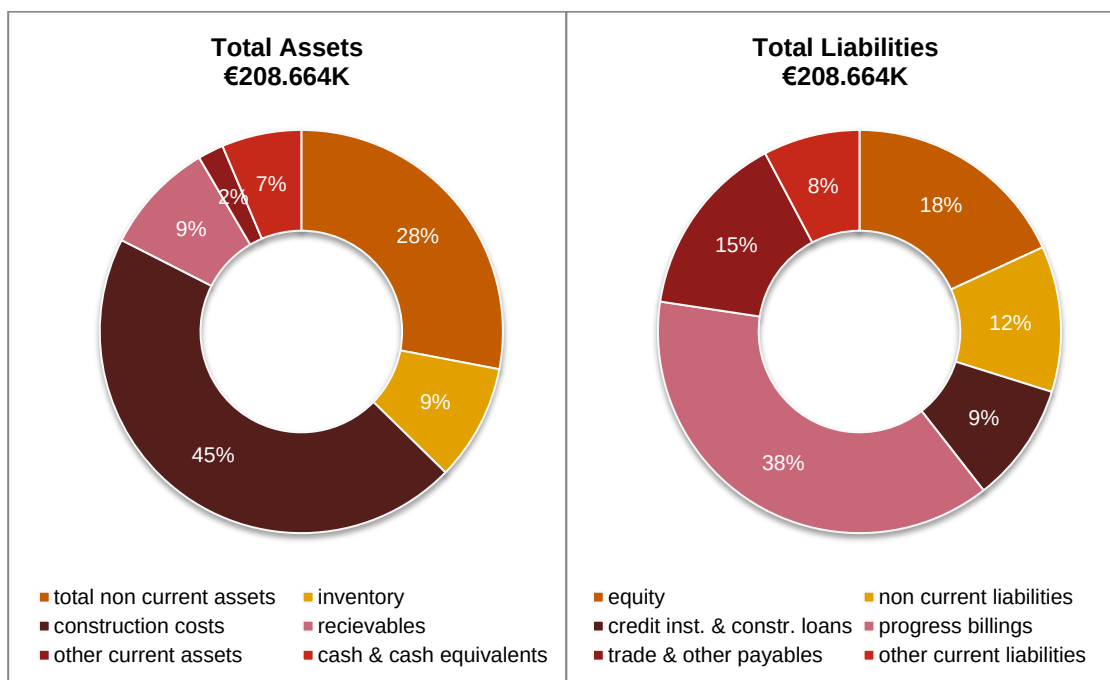


Figure 24: Weighted average balance sheet for builders of cargo vessels

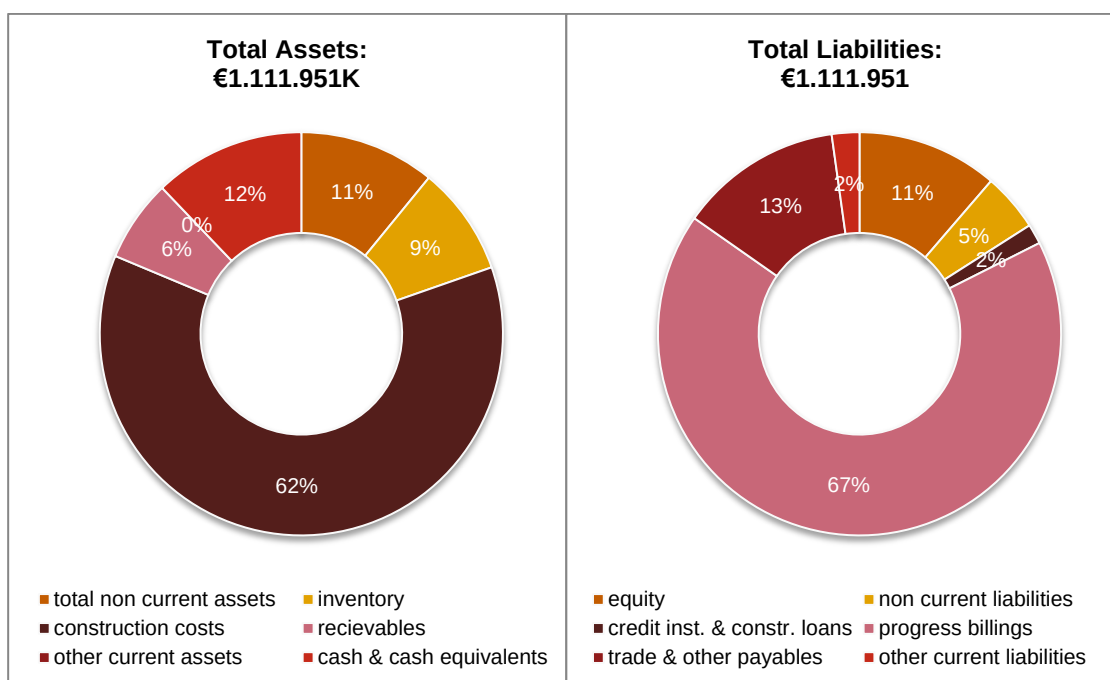


Figure 25: Weighted average balance sheet for builders of dredgers

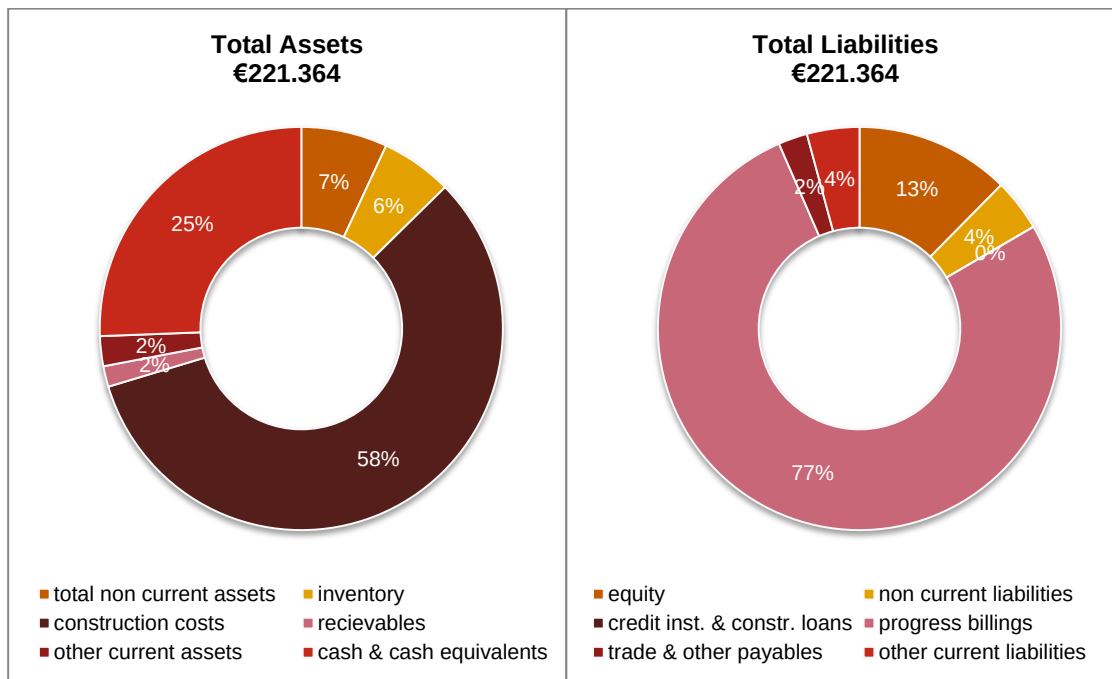


Figure 26: Weighted average balance sheet for builders of mega yachts

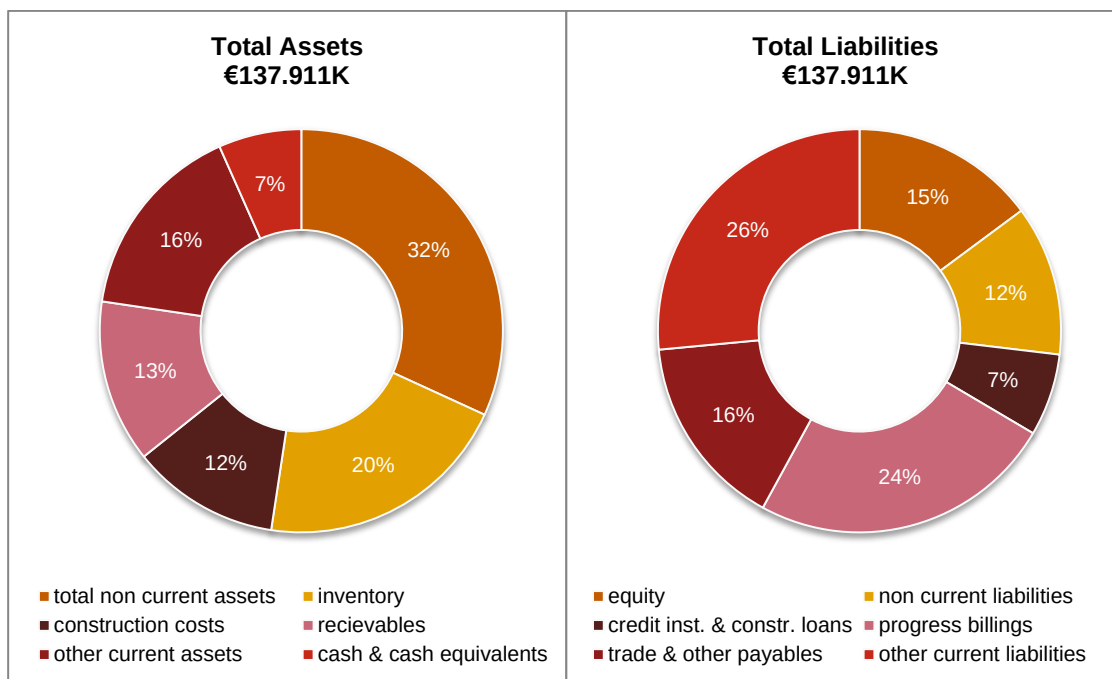


Figure 27: Weighted average balance sheet for builders of small vessels

Appendix 6: Data on EU completions (2004-2009)⁴⁶

	2004	2005	2006	2007	2008	2009	% of tot. value
BULGARIA							
N°					6	4	
CGT					29,157	22,892	
-Export					6	22,892	
Total value in m Euro					48	30	0.3%
-Export in m Euro					48	30	
DENMARK							
N°	9	8	8	8	10	9	
CGT	203,444	327,964	363,979	353,066	273,363	201,876	
-Export	-	-	-	-	10	-	
Total value in m Euro	479	550	522	700	600	500	4.1%
-Export in m Euro	-	-	-	-	600	-	
FINLAND							
N°	4	1	5	5	5	3	
CGT	266,419	13,800	294,190	283,936	291,113	260,674	
-Export	210,899	6,900	269,700	315,400	257,917	260,674	
Total value in m Euro	975	65	935	1,165	1,145	1,190	9.8%
-Export in m Euro	820	65	935	1,165	1,015	1,190	
FRANCE							
N°	15	16	14	7	11	13	
CGT	105,592	75,363	265,060	192,317	251,220	175,635	
-Export	90,816	572	91,280	93,440	237,367	109,187	
Total value in m Euro	370	270	900	650	1,051	750	6.2%
-Export in m Euro	-	-	450	450	1,000	650	
GERMANY							
N°	61	69	70	74	84	52	
CGT	907,320	1,163,146	1,174,241	1,171,314	1,311,904	945,383	
-Export	536,321	548,012	707,088	658,562	776,623	504,408	
Total value in m Euro	2,306	2,581	2,919	3,126	4,449	2,618	21.5%
-Export in m Euro	1,550	1,390	1,746	1,796	3,176	1,871	
GREECE							
N°	1	1	-	-	-	2	
CGT	897	894	-	-	-	4,095	
-Export	897	2,982	-	-	-	4,095	
Total value in m Euro	49	49	-	-	-	11	0.1%
-Export in m Euro	49	49	-	-	-	11	
ITALY							
N°	27	19	21	32	20	32	
CGT	633,603	398,676	546,565	806,203	684,134	628,455	
-Export	382,870	220,876	27,500	452,000	463,490	174,077	
Total value in m Euro	2,212	1,310	1,761	2,566	2,374	2,391	19.6%
-Export in m Euro	1,423	939	1,178	1,629	1,945	905	
LITHUANIA							
N°					3	2	
CGT					16,900	16,377	
-Export					14,703	-	
Total value in m Euro					54	63	0.5%
-Export in m Euro					47	-	
NETHERLANDS							
N°	114	100	236	271	247	176	
CGT	449,710	417,643	850,637	1,057,941	880,795	683,633	
-Export	293,780	172,080	308,052	355,561	627,613	401,518	
Total value in m Euro	1,050	1,150	1,574	2,152	2,020	1,786	14.7%
-Export in m Euro	770	610	1,061	1,474	1,545	1,204	
POLAND							

⁴⁶ Based on CESA statistics from the annual report 2009/2010

Nº	25	30	24	30	20	25	
CGT	448,684	565,973	494,601	396,514	330,296	241,889	
-Export	448,684	751,686	693,104	530,279	328,608	241,889	
Total value in m Euro	607	751	765	584	511	432	3.6%
-Export in m Euro	607	751	765	424	505	432	
PORTUGAL							
Nº	-	4	4	3	2	3	
CGT	-	34,781	21,184	23,254	17,098	28,983	
-Export	-	21,010	14,504	-	17,098	18,212	
Total value in m Euro	54	69	63	90	41	90	0.7%
-Export in m Euro	-	33	-	-	41	44	
ROMANIA							
Nº	9	18	71	27	28	31	
CGT	93,865	246,915	574,456	262,475	346,979	364,923	
-Export	93,865	-	447,704	312,883	346,979	364,923	
Total value in m Euro	134	331	580	410	550	482	4.0%
-Export in m Euro	-	-	461	300	550	482	
SPAIN							
Nº	41	52	47	64	64	50	
CGT	376,781	177,516	226,493	347,753	347,513	287,167	
-Export	290,561	57,782	64,549	191,313	194,852	216,687	
Total value in m Euro	1,248	444	665	1,050	1,022	1,825	15.0%
-Export in m Euro	1,052	230	286	770	602	1,441	
UNITED KINGDOM							
Nº	-	-	2	2	3	2	
CGT	-	-	3,701	3,906	4,100	2,076	
-Export	-	-	-	-	-	-	
Total value in m Euro	-	20	20	14	13	9	0.1%
-Export in m Euro	-	-	-	-	-	-	
EU/CESA TOTAL							
Nº	306	318	502	523	503	404	
CGT	3,486,315	3,422,671	4,815,107	4,898,679	4,784,572	3,864,058	
-Export	2,348,693	1,781,900	2,623,481	2,909,438	3,265,266	2,318,562	
Total value in m Euro	9,484	7,590	10,704	12,507	13,878	12,177	100%
-Export in m Euro	6,271	4,067	6,882	8,008	11,074	8,260	