Do shipyards pose an obstacle to fiscal consolidation in Croatia?

Primorac, Marko; Bajo, Anto

Source / Izvornik: **Newsletter : an occasional publication of the Institute of Public Finance, 2011, 13, 1 - 12**

Journal article, Published version
Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:242:616828

Rights / Prava: Attribution-NonCommercial-NoDerivatives 4.0 International/Imenovanje-Nekomercijalno-Bez prerada 4.0 međunarodna

Download date / Datum preuzimanja: **2024-04-20**

Repository / Repozitorij:

Institute of Public Finance Repository

dabar
DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI

Institute of Public Finance

NEWSLETTER
AN OCCASIONAL PUBLICATION OF THE INSTITUTE OF PUBLIC FINANCE

Zagreb | Smičiklasova 21
office@ijf.hr | www.ijf.hr | phone: +385 (0)1 4886 444

No. 64 | December 2011 | ISSN 1333-4263

Do shipyards pose an obstacle to fiscal consolidation in Croatia?

ANTO BAJO Institute of Public Finance
MARKO PRIMORAC Faculty of Economics and Business Zagreb

The claims that shipbuilding is a strategic industry in Croatia do not hold up. State aid granted to shipyards and their total annual losses are high, in some years even exceeding the total value of deliveries. The four major shipyards cannot live at the expense of taxpayers who bear the costs of generous aid that does not promote the growth and development of Croatian economy. Generous aid provided to shipbuilding undermines the financial stability and hampers the implementation of expected fiscal consolidations in the country.

1 INTRODUCTION

Over the last two decades, there have been no serious scientific or professional studies, neither has any thorough discussion been launched, about the financing and financial sustainability of shipyards in Croatia. Debates on the necessary restructuring of shipbuilding, mainly held between the government and trade unions, led to no concrete conclusions or information, or ideas for a long-term resolution of the issue. Unfortunately, even the announcements of privatisation and restructuring are full of uncertainties that create additional confusion among citizens trying to understand the costs and benefits of shipbuilding. By a single administrative manoeuvre in 2011, the Government converted the shipyards' contingent liabilities, totalling HRK 11.3 billion, into public debt. However, even this was not enough to put the issue of the financial sustainability of shipyards on the priority agenda of pre-election economic and political discussions. The goal of this article is to assess the financial conditions of six major Croatian shipyards (Viktor Lenac, Kraljevica, 3. Maj, Brodosplit, Brodotrogir and Uljanik) in the period between 2007 and 2010, based on their consolidated and audited financial statements. We try to establish whether the liabilities of Croatian shipyards pose an obstacle to implementing the expected fiscal consolidations. We used the information provided by the Zagreb Stock Exchange, the shipyards' annual and audit reports and the Financial Agency's data.

2 SOME FACTS ABOUT THE CROATIAN SHIPBUILDING

Shipbuilding represents one of the major industrial sectors in the RC, accounting for 2.5% of total employment, 1.2% of GDP and about 12% of total exports. Given the volume and importance of shipbuilding, a significant portion of Croatian industry, particularly small and medium-sized enterprises (subcontractors) directly depend on shipbuilding, which is a major employment source in the counties of Istria, Primorje-Gorski Kotar and Split-Dalmatia (CESA, 2011:43). Out of six shipyards, only one has been privatised (Viktor Lenac), whereas the others are majority-owned by the state or government agencies.

The Croatian Shipbuilding Corporation – Jadranbrod is the national association of major Croatian shipbuilders and a corporate body coordinating the access of the Croatian shipbuilding industry to international markets. The Corporation also receives government guarantees in the name and for the account of shipyards (for more information, please, visit http://www.hb.hr/Uvod/tabid/41/language/hr-HR/Default.aspx).

Croatia ranks 5th among European maritime countries in terms of employees directly engaged in ship building, maintenance and repair. The total number of employed

persons in European shipbuilding declined from about 148.8 thousand in 2007 to 114.5 thousand in 2010, i.e. it fell by 34.3 thousand in only four years. The biggest cuts were reported by Poland (as much as 10 thousand), Great Britain (5 thousand) and Germany (4.5 thousand) (see Table 1). This contraction was due to the financial crisis that led to the restructuring of shipyards and reducing of their costs, particularly the cost of labour. Another reason for austerity is the sharpening competition from Asian shipbuilders, assuming the leading role in the global shipbuilding market.

Unlike other countries that have faced considerable employment reductions (e.g. Poland, Romania and Great Britain), Croatia still sees high employment figures, and the data are contradictory. Specifically, according to the data from annual reports, the number of employees in the six Croatian shipyards totalled 11,195 in 2010. What is more, the financial crisis does not seem to have deeply affected the number of employees, as it dropped by as little as 317 in two years (see Table I in the Appendix). The difference between the CESA Annual Report data and data provided in the financial statements of shipyards amounts to about 3 thousand employees. The CESA data include only those who are directly engaged in the construction or repair of ships, whereas the shipyards' data cover administrative and support jobs in shipbuilding.

The value of deliveries by European shipyards surged from EUR 10.3bn in 2004 to EUR 17bn a year later. Only in 2009, the deliveries dropped by EUR 2bn. However, a recovery of the European shipbuilding started as early as 2010, and the value of deliveries reached a record high of EUR 19.4bn (see Table 2).

The largest shares of the shipbuilding market belong to Germany, Italy, Norway, the Netherlands and Spain, which account for over 70% of total deliveries by the European shipyards. Croatia belongs to the same group as Denmark and Poland, each participating with an average of 3.9% of total deliveries. It is noteworthy that the value of deliveries made in Poland decreased. Croatia, however, reports annual deliveries worth about EUR 500m on average, most of them made abroad. Total value of deliveries made by Croatian shipyards moves around an average of 1.3% of GDP, of which 1% relates to deliveries abroad (see Table 3). It is interesting to make a cross-country comparison of the values of deliveries and the numbers of employees in 2010. The deliveries of Spanish shipyards, employing about 6 thousand workers, totalled about EUR 2bn. Finland, with about 4 thousand employees, earned EUR 1bn; Norway (5 thousand employees) made deliveries worth EUR 3bn, and Denmark (about 2 thousand employees) makes deliveries in the same amount as Croatia, with 8.8 thousand employees. Moreover, most aforementioned countries report small numbers of shipbuilding orders, but of considerably higher values than those in Croatia.

Table 1

The numbers of employees in shipbuilding, European countries, 2007-10

	2007	2008	2009	2010
Germany	22,500	23,600	19,200	18,000
France	17,200	17,100	16,400	16,400
the Netherlands	14,272	14,400	13,500	13,219
Italy	12,245	12,142	11,790	11,640
Croatia	*9,811*	*9,553*	*8,851*	*8,792*
Romania	10,800	10,100	8,160	8,075
Poland	17,000	15,000	7,300	7,000
Spain	7,678	6,490	5,666	6,180
Norway	6,000	5,000	5,000	5,000
Bulgaria	5,400	4,977	4,968	4,250
Finland	4,700	4,630	4,500	3,800
Latvia	5,100	4,800	4,200	3,682
GB	8,500	8,300	8,300	3,000
Greece	2,434	2,324	2,487	2,319
Denmark	3,500	3,700	3,000	1,830
Portugal	1,652	1,592	1,572	1,304
Total	*148,792*	*143,708*	*124,894*	*114,491*

Source: CESA, 2011

Table 2

Annual deliveries by shipyards in Europe, 2004-10 (in million EUR)

	2004	2005	2006	2007	2008	2009	2010	Total
Germany	2,306	2,581	2,919	3,126	4,449	2,618	4,657	22,656
Italy	2,212	1,310	1,761	2,566	2,374	2,391	2,926	15,540
Norway	501	991	1,764	2,159	1,749	2,932	3,125	13,221
the Netherlands	1,050	1,150	1,574	2,152	3,400	1,786	2,032	13,144
Spain	1,248	444	665	1,050	1,022	1,825	2,157	8,411
Finland	975	65	935	1,165	1,145	1,190	1,000	6,475
France	370	270	900	650	1,051	750	1,400	5,391
Denmark	479	550	522	700	600	500	550	3,901
Croatia	*466*	*460*	*500*	*547*	*629*	*559*	*682*	*3,843*
Poland	607	751	765	584	511	432	170	3,820
Romania	134	331	580	410	550	482	397	2,884
Portugal	54	69	63	90	41	90	9	416
Latvia					54	63	129	246
Bulgaria					48	30	109	187
Greece	49	49	0	0	0	11	0	109
GB		20	20	14	13	9	23	99
Total	*10,282*	*9,041*	*12,968*	*15,213*	*17,636*	*15,669*	*19,366*	*100,175*

Source: CESA, 2011

Table 3

Deliveries completed by Croatian shipbuilders, 2004-10 (in million EUR and %)

	2004	2005	2006	2007	2008	2009	2010
Total deliveries, in million EUR	466	460	500	547	629	559	682
Exports, in million EUR	432	376	464	356	582	464	565
Exports, as a % of total deliveries	93	82	93	65	93	83	83
Total deliveries, as a % of GDP	1.4	1.3	1.3	1.3	1.3	1.2	1.5
Exports, as a % of GDP	1.3	1.0	1.2	0.8	1.2	1.0	1.2

Source: Authors' calculation based on the CESA and CBS data, 2011

According to order-book data (http://www.hb.hr/Portals/0/docs/ob-web.pdf), the Croatian shipbuilding industry is supposed to make 24 deliveries in the total value of about USD 1.2bn (see Table 3). Just like other countries, amid the financial crisis and growing competition coming from Asian shipbuilders, Croatia was faced with a fall in orders in 2009, which started to grow again in 2010.

Shipyards with the largest value and number of orders include Uljanik (USD 422m), Brodosplit (USD 287m), 3. Maj (USD 263m), Brodotrogir (USD 110.7m) and Kraljevica (USD 88.8m). The order book of the Viktor Lenac Shipyard contains no orders for 2012 and 2013 (as at September 2011).

3 FINANCIAL CONDITION

The financial operation analysis of shipyards is an unrewarding and difficult task for a number of reasons. Firstly, the data on a shipyard's financial operation are rather intransparent, non-homogenous and confusing. This is partly due to the specific nature of shipyards' operation, as they have reported negative business results for years. Keeping records of losses (especially if they exceed the company's capital) has become difficult over time, due to changes in the book reporting of losses above the level of capital.

Despite the warnings, frequently stated even in auditors' opinions, that the continued operation of shipbuilding companies is questionable (without the support of their owner, i.e. the government), helping shipyards survive has been a political commitment of all governments so far.

In the following, we analyse the financial operation of shipyards based on key financial ratios. The Croatian shipbuilding industry directly depends on the financial support of the government, i.e. granted guarantees and

subsidies. Without such guarantees, shipyards would have difficulties in obtaining loans.

According to the Croatian regulations on the balance sheet structure, capital cannot be reported as a negative item. Therefore, losses exceeding the level of capital (i.e. the amount by which operating losses exceed the amount of total capital) used to be reported as follows: losses up to the amount of total capital were recorded as liabilities (then the value of capital was zero), and losses in excess of capital were recorded as assets (although this was actually not an asset item). This was done for the purpose of achieving balance sheet equilibrium. According to the new Regulations on the Structure and Content of Annual Financial Statements (OG 130/2010), losses above the level of capital are no more reported in the balance sheet under "Assets", but their full amount is included in "Liabilities", under item "Loss Carried Over" (if they come from previous periods) or under item "Loss of the Period" (if they come from the current period). Losses above the level of capital actually indicate lack of assets for covering liabilities.

From 2007 to 2010, shipyards incurred losses in the total amount of HRK 4bn, or HRK 1bn on average per year, which equals about 0.3% of annual GDP (see Table 4). Operating revenues were insufficient to cover operating expenses, and financial revenues were lower than financial expenditures, mostly due to high interest expenses for loans taken out by shipyards.

Table 4
Profit/loss of shipyards, 2007-10 (in million HRK and as a % of GDP)

	2007	2008	2009	2010
Brodosplit	-482.0	-547.1	-129.0	-427.2
Brodotrogir	-106.6	-331.9	-171.2	-250.1
Kraljevica	-76.7	-101.2	-125.2	-251.4
3. Maj	-144.6	-322.7	-454.5	-243.4
Uljanik	-232.0	45.2	23.4	76.1
Viktor Lenac	-53.7	103.6	7.2	8.0
Total profit/loss	-1,095.7	-1,154.1	-849.4	-1.088
Profit/loss as a % of GDP	-0.34	-0.33	-0.25	-0.33

Source: Authors' calculation based on the financial statements of shipyards, 2011

The loss-making shipyards include Brodosplit, Brodotrogir, Kraljevica and 3. Maj, whereas Uljanik and Viktor Lenac have reported positive business results since 2008.

One of the main causes of the huge losses lays in the high debt repayment expenses. Only in the four reference years, the shipyards' interest expenses totalled HRK 4bn, or HRK 1bn on average per year.

Table 5
Interest expenses, 2007-10 (in million HRK and as a % of GDP)

	2007	2008	2009	2010	2007-10
Brodosplit	213	392	262	417	1,283
Uljanik	144	301	252	265	962
3. Maj	135	226	213	281	855
Brodotrogir	95	241	121	142	599
Kraljevica	52	90	101	114	357
Viktor Lenac	0	0	4	6	10
Total	639	1,250	953	1,224	4,066
Expenses as a % of GDP	0.2	0.4	0.3	0.4	-

Source: Authors' calculation based on the financial statements of shipyards, 2011

Brodosplit and Uljanik reported the highest interest expenses (about HRK 2bn, in total), followed by Brodotrogir and Kraljevica. The lowest interest expenses were exhibited by the Viktor Lenac Shipyard. To put it briefly, the annual interest expenses of shipyards averaged about 0.3% of GDP (see Table 5).

The high interest rates provide a good reason to examine the amount and structure of the Croatian shipyards' liabilities, which grew from HRK 11.1bn (32% of GDP) in 2007 to as much as HRK 14.8bn (4.4% of GDP) in 2010. Hence, in only four reference years, liabilities increased by a whopping HRK 3.8bn (see Table 6).

Table 6
Total liabilities of shipyards, 2007-10 (in billion HRK and as a % of GDP)

	2007	2008	2009	2010
Brodosplit	3.8	4.4	4.9	5.5
3. Maj	2.6	3.1	3.5	4.4
Brodotrogir	1.5	1.7	1.8	2.2
Uljanik	1.4	2.2	2.0	1.6
Kraljevica	0.7	0.8	1.0	1.1
Viktor Lenac	1.1	0.1	0.1	0.1
Total liabilities	11.1	12.3	13.3	14.8
Liabilities as a % of BDP	3.2	3.7	4.0	4.4

Source: Authors' calculation based on the financial statements of shipyards, 2011

There is no doubt that the liabilities of the shipyards have overstepped the limit of what is considered as economically, and even socially justifiable operation, which is why they should not remain under the government's support. A continuation of shipyard financing would undermine the stability of not only public finance but also of commercial banks, which might get into difficulties unless the government settles the guaranteed liabilities of the shipyards.

In 2010, total liabilities equalled the sum of the shipyards' deliveries completed in the last four years. Predominating were liabilities to banks and other financial institutions, followed by other short-term and long-term liabilities (Brodosplit and Uljanik had particularly large liabilities, over HRK 1bn each).

There were also liabilities to suppliers, in which Uljanik and 3. Maj were leaders.

The structure of liabilities by maturity reveals the seriousness of the financial difficulties the resolution of which has been postponed for decades. Specifically, short-term liabilities continued to dominate in 2010, standing at HRK 9.9bn (over 65% of the total liabilities of shipyards). The situation improved in 2010, mainly due to the fear of banks that agreed to substitute a part of short-term liabilities of shipyards with long-term liabilities.

An unchecked expansion of shipyards' liabilities (especially short-term ones) and their unfavourable structure would not be possible without a generous and unconditioned support from the government. Indeed, the government provided full and unconditional guarantees to commercial banks for the liabilities and loans of shipyards. It is unknown whether government guarantees have been issued with risk sharing between creditors (banks) and the government as guarantor (and, if so, in what amount). It is completely illogical and unusual that banks do not even bear a part of the risk of their loans. Judging by interest rates, banks (both domestic and foreign) can be more than satisfied with such clients as the Croatian shipyards.

The government has long supported the borrowing by shipyards by issuing financial and performance guarantees. From 1997 to 2011, it issued guarantees worth HRK 35bn, of which HRK 18.3bn were financial and HRK 16.8bn performance guarantees. State guarantees annually account for about 0.9% of GDP on average (see Table 7).

From 1997 to 2011 the majority of financial guarantees were given to the 3. Maj and Brodosplit shipyards (over HRK 6bn), followed by Brodotrogir, Uljanik and Kraljevica. The lowest amount was issued in favour of Viktor Lenac.

The average maturity of financial guarantees issued until 2000 was about 1.5 years. In 2000 and 2001, the government issued no financial guarantees. The maturities of guarantees issued from 2002 to 2006 have been extended to about 7 years on average. However, from 2006 (when the Government announced the restructuring and privatisation of shipyards), the average maturities of financial guarantees were reduced to 1.5 years.

Table 7
Financial and performance guarantees issued, 1997-11 (in billion HRK and as a % of GDP)

	Guarantees (in billion HRK)			% of GDP
	Financial	Performance	Total	
1997	1.3	0.0	1.3	
1998	0.0	1.6	1.6	
1999	0.0	1.6	1.6	
2000	0.0	3.9	3.9	2.2
2001	0.0	0.0	0.0	0.0
2002	0.2	0.0	0.2	0.1
2003	0.6	0.0	0.6	0.3
2004	0.2	4.7	4.9	2.0
2005	0.6	3.5	4.1	1.5
2006	2.9	1.5	4.4	1.5
2007	5.5	0.0	5.5	1.7
2008	2.4	0.0	2.4	0.7
2009	3.0	0.0	3.0	0.9
2010	1.4	0.0	1.4	0.4
I-VI 2011	0.3	0.0	0.3	0.1
Total	18.3	16.8	35.0	

Source: Authors' calculation based on data from the register of government guarantees

Guarantees issued in USD and EUR dominated in the currency structure, whereas the smallest number of guarantees was issued in HRK (see Table 8). The shipyards' liabilities have been exposed to the currency risk of the US dollar and euro exchange rate fluctuations.

Table 8
Currency structure of financial guarantees issued to shipyards, 1997-11 (in billion HRK)

	EUR	USD	HRK	Total
3. Maj	1.7	3.7	1.3	6.7
Brodosplit	2.6	2.8	1.2	6.6
Brodotrogir	0.5	0.7	0.6	1.9
Uljanik	0.6	1.0	0.1	1.7
Kraljevica	0.9	0.0	0.3	1.2
Viktor Lenac	0.0	0.0	0.3	0.3

Source: Authors' calculation based on data from the register of government guarantees

Most of the Croatian shipyards are not creditworthy and are unable to pay off their liabilities arising from annuities and loan principals due. Specifically, from 1998 to 2011, guarantees to shipyards, called by banks, amounted to HRK 4.2bn, or 43% of total guarantees called in that period. The largest amount of guarantees to shipbuilding was called in the 2008-2011 period; about 80% of total called guarantees on average (see Table 9).

Table 9

Called guarantees to shipyards (in million HRK and as a % of total called guarantees), 1998-11

	Guarantees to shipbuilding	Total	%
1998	0	208	0
1999	12	540	2
2000	232	794	29
2001	36	648	6
2002	254	755	34
2003	11	695	2
2004	170	622	27
2005	0	411	0
2006	0	463	0
2007	0	326	0
2008	290	447	65
2009	1,899	2,113	90
2010	772	1,099	70
I-VI 2011	527	667	79
Total	4,202	9,790	43

Source: Authors' calculation based on data from the register of government guarantees

The Brodosplit and 3. Maj shipyards account for the bulk of called guarantees. In the period from 2008 to 2011, the government had to pay as much as HRK 2.7bn from the budget for the settlement of credit liabilities of only these two companies. Called guarantees to Brodotrogir and Kraljevica amount to about half a billion and 223 million kuna, respectively. No guarantees were called on behalf of the Viktor Lenac shipyard in the reference period (see Table 10).

Table 10

Called guarantees, 2008-10 (in million HRK)

	2008	2009	2010	2011	Total
Brodosplit		895	375	316	1,587
Brodotrogir		303	147	47	497
Uljanik		0	0	23	23
3. Maj	290	581	181	105	1,158
Kraljevica		120	69	34	223
Viktor Lenac					0
Total	290	1,899	772	526	3,487

Source: Authors' calculation based on data from the register of government guarantees

Called guarantees always increase public debt. By introducing the Act Governing the Rights and Obligations of Shipyards in the Process of Restructuring (OG 61/2011), the government assumed the liabilities of the shipyards, converting them into public debt, which consequently rose by HRK 11.3bn. The Government and Parliament should finally define public debt as the general government debt, increased by the debt of companies in which the government has majority stakes, and to which it issues guarantees for borrowing. The shipyards' debt is not contained in the MoF and CNB statistics, but it continues to be maintained under guarantees.

It is only after the Government signs an agreement on the privatisation of a shipyard, and after commercial banks transfer the claims from the shipyard to the government that the shipyard's liabilities formally become public debt. Unfortunately, Croatia is among few European countries having no clearly defined concept and scope of public debt. The Budget Act includes the categories of state debt and general government debt but the term "public debt" does not officially exist, nor is its size delimited.

4 FINANCIAL PERSPECTIVE

The financial performance of four shipyards (Brodosplit, Brodotrogir, 3. Maj and Kraljevica) from 2007 to 2010 was "steadily bad", to put it mildly. The shipyards' consolidated annual loss over the four reference years amounted to HRK 1bn. Out of six shipyards, only two (Viktor Lenac and Uljanik) reported positive business results (from 2008 on). The shipbuilding industry has been a traditional loss maker, and its huge negative effects on the Croatian economy have been ignored for quite a long time. Moreover, public policymakers prone to populism and playing up to voters (particularly at the regional level) never even tried to deal with the financial problems of shipyards. It must be said, clearly and openly, that the shipbuilding industry cannot forever live at the expense of taxpayers who bear the costs of high subsidies that do not promote the growth and development of Croatian economy.

Total losses of and state aid granted to the shipbuilding industry reduce the value of total annual deliveries. Only in 2007, total losses and aid granted exceeded the value of completed deliveries; in 2008 and 2009, they accounted for 67% and 49% of the total amount of deliveries respectively (see Table 11).

Unfortunately, the 2010 data on state aid to shipbuilding are not available. Moreover, the analysis would be more thorough, if there were data about the amount of imported inputs used by this industry, which would only confirm the fact that most shipyards neither produce any significant value added nor contribute to GDP growth.

Pursuant to the EU accession agreement, Croatia committed itself to restructuring and privatising four major loss-making shipyards (Brodosplit, 3. Maj, Kraljevica and Brodotrogir). Although the restructuring plans allegedly exist at the Government and the Croatian Competition Agency, it is not clear why they are not publicly available. During the

restructuring process, production capacities are to be reduced from the current 510,607 to 323,600 compensated gross tons per ship built[1] over the next ten years, starting from 2011. The capacities will be reduced by permanently closing the slipways, using them for military production, or reducing the shipyards' surface areas. Shipbuilding companies will receive no new restructuring and rehabilitation aid until the expiry of 10 years from the conclusion of agreements on their privatisation. Croatia has committed itself to submitting to the EU Commission semi-annual reports on the restructuring of state aid-receiving enterprises. Additional grounds for the restructuring and privatisation of shipyards can be provided by the values of thirteen financial ratios, which give a deeper insight into the structural problems of shipbuilding (see Table 12).

FINANCIAL RATIOS

Cash ratio – the ratio of a company's cash to its short-term liabilities;

Quick ratio – the ratio of short-term assets (minus inventories) to short-term liabilities;

Current ratio – the ratio of short-term assets to short-term liabilities;

Debt ratio – the ratio of total liabilities to total assets;

Total asset turnover ratio – the ratio of a company's total revenues to its total assets;

Short-term asset turnover ratio – the ratio of total revenues to short-term assets;

Claim turnover ratio – the ratio of sales proceeds to claims;

Debt collection period ratio – the ratio of receivables from customers to sales proceeds (divided by 360);

Liability settlement period ratio – the ratio of net short-term liabilities to total expenditures (divided by 360);

Total operating efficiency ratio – the ratio of total revenues to total expenditures;

Sales operations efficiency ratio – the ratio of operating revenues to operating expenditures;

Financing efficiency ratio – the ratio of financial revenues to financial expenditures;

Gross profit margin – the share of profit (before interest and tax) in total revenues.

1 *Compensated gross tonnage*, (*CGT*) is in an indicator of the amount of work necessary to build a ship. It is calculated by mulitplying the ship tonnage by a coefficient which depends on the type and size of the ship (OECD, 2007).

Table 11

The values of deliveries and state aid to shipyards, 2007-10

	2007	2008	2009	2010
Total deliveries, in million EUR	547	629	559	682
State aid, in million EUR	426	262	157	
Losses, in million EUR	149	160	116	149
Total losses and aid as a % of deliveries	105	67	49	

Source: Authors calculation based on data obtained from the CESA and Croatian Competition Agency, and on the financial statements of shipyards

Table 12

Consolidated financial ratios for shipbuilding, 2007-10

	2007	2008	2009	2010
Cash ratio	0.08	0.05	0.02	0.08
Quick ratio	0.21	0.22	0.14	0.27
Current ratio	0.32	0.32	0.26	0.34
Debt ratio	2.54	2.45	2.80	3.03
Total asset turnover ratio	1.56	1.48	1.42	1.52
Short-term asset turnover ratio	2.91	2.30	2.38	2.19
Claim turnover ratio	7.17	4.14	4.59	3.85
Debt collection period ratio (in days)	50	87	78	93
Liability settlement period ratio (in days)	336	428	516	417
Total operating efficiency ratio	0.86	0.87	0.89	0.87
Sales operations efficiency ratio	0.85	0.94	0.95	0.97
Financing efficiency ratio	1.00	0.46	0.48	0.32
Gross profit margin	-0.18	-0.17	-0.14	-0.15

Source: Authors' calculation based on the financial statements of shipyards

Liquidity ratios (the cash, quick and current ratios) show a company's ability to finance its short-term liabilities with its most-liquid assets. All the liquidity ratios mainly decreased in the reference period, but went up in 2010.

The cash ratio was exceptionally low in the reference period (below 10%), as were the quick and current ratios. A current ratio higher than 1 indicates that the net working capital is positive, i.e. that a part of short-term assets is financed with long-term sources, which is in accordance with the golden rule of financing[2]. Unfortunately, the consolidated current ratio for Croatian shipyards is lower than 1 (ranging from 0.26 to 0.34).

Debt ratio (the ratio of total liabilities to total assets) should be lower than 1 under normal business conditions, because total assets are financed with debt, but also with capital. A debt ratio higher than 1 suggests that company's debt exceeds its total assets. In such case, the company's capital value actually becomes negative. The consolidated debt ratio for Croatian shipyards has been rising, and exceeded 3 in 2010. This means that the (consolidated) liabilities of Croatian shipyards are as much as three times higher than their total assets.

Activity ratios (total asset, short-term asset and claim turnover ratios) show how many times in a single year total and short-term assets are converted into revenues, i.e. how many times in a single year claims are collected (converted into cash). All the three indicators show negative trends. The debt collection period and liability settlement period ratios indicate the average number of days necessary for collection and payment respectively. Both ratios were on the increase, with the average debt collection period expanding from 50 to 93 days. The average duration of liability settlement was from 336 to 516 days. Such long payment periods in shipbuilding may lead to the bankruptcy of subcontracting companies. In fact, it is unusual that, despite the long payment periods, subcontractors are still willing to cooperate with the shipbuilders. One of the reasons for this may be the large amounts of state aid and subsidies to shipyards that end up in the accounts of the subcontractors, if only with great delay.

Efficiency ratios show how much revenues a company collects per unit of expenditure. The total operating efficiency of Croatian shipyards is below 1, showing that the shipyards' operating revenues are lower than their operating expenses. The operating efficiency ratio suggests that the shipyards continuously operate at a loss, as also confirmed by negative gross profit margins.

2 According to the golden rule of financing long-term assets should be financed from long-term sources, whereas short-term assets should be mainly financed from short-term, and only partly from long-term sources (in the case of positive net working capital).

5 CONCLUSION

The financial performance of Croatian shipyards is poor, with no signs of recovery revealed by financial analyses. The liquidity condition of shipbuilding is very low, with extremely high (and still growing) indebtedness. The total debt of the consolidated shipbuilding industry in 2010 was three times as large as its total assets, showing that the total negative capital was two times the size of the total assets.

The business activity of shipyards has weakened continuously, producing poor financial effects. The shipbuilding industry in Croatia earns no profit and is insolvent, over indebted, low performing and inefficient. Given the lack of any definite plans for restructuring, there is prospect of improving the current situation. Most shipyards do not contribute to the country's economic development, and even threaten the stability of public finance, as the government is likely to continue its heavy indebtedness in the 2012-2014 period, in order to settle its liabilities. The public finance is already in trouble, even without the shipbuilding. As shown by the results of the companies' financial operation analysis (see Tables II-VII in the Annex), not all shipyards are in difficulties. The financial performance of the shipyards Viktor Lenac (that came out of bankruptcy in 2008 when it was taken over by Uljanik and Tankerska plovidba) and Uljanik has been satisfactory since 2008, so these companies set an example of good business practice for other shipbuilders. Therefore, the following should be done in the short run:

- analyse the financial operations of the subcontractors of major shipyards, particularly as concerns the prices of services provided to shipyards;
- compare the costs and benefits of potential privatisation of the entire industry;
- make a cost-benefit study concerning major employee layoffs, including detailed programmes of care for redundant employees and of severance payment provision;
- encourage public debate on the financial sustainability and justifiability of operation of existing shipbuilding companies;
- determine the actual net effect of the shipbuilding industry in gross value added formation (by subtracting state aid from the value of completed deliveries);
- analyse the structure and nature of the shipbuilding costs, i.e. determine the shares of domestic vs. imported inputs in total costs.

LITERATURE

AZTN, 2010. *Godišnje izvješće o državnim potporama u 2009.* Zagreb: Agencija za zaštitu tržišnog natjecanja.

Brodosplit. *Godišnja izvješća o poslovanju od 2006. do 2010.* Split: Brodosplit.

Brodotrogir. *Godišnja izvješća o poslovanju od 2006. do 2010.* Trogir: Brodotrogir.

CESA, 2011. *Annual Report 2010-2011.* Brussels: Community of European Shipyards Associations.

Hrvatska brodogradnja Jadranbrod d.d., 2011. *Knjiga narudžbi za 2011.* [online]. Available from: [http://www.hb.hr/Portals/0/docs/ob-web.pdf].

Brodogradilište Kraljevica. *Godišnja izvješća o poslovanju od 2006. do 2010.* Kraljevica: Brodogradilište Kraljevica.

Brodogradilište 3. Maj. *Godišnja izvješća o poslovanju od 2006. do 2010.* Rijeka: 3. Maj.

OECD, 2007. *Compensated Gross Ton (CGT) System,* Council working party on Shipbuilding, Paris: OECD.

Brodogradilište Uljanik. *Godišnja izvješća o poslovanju od 2006. do 2010.* Pula: Brodogradilište Uljanik.

Brodogradilište Viktor Lenac. *Godišnja izvješća o poslovanju od 2006. do 2010.* Rijeka: Brodogradilište Viktor Lenac.

Vlada RH, 2011. *Ugovor o pristupanju Republike Hrvatske Europskoj uniji* [online]. Available from: [http://vlada.hr/hr/naslovnica/novosti_i_najave/2011/rujan/ugovor_o_pristupanju_rh_eu].

Pravilnik o strukturi i sadržaju godišnjih financijskih izvještaja, NN 130/10. Zagreb: Narodne novine.

Zakon o uređenju prava i obveza brodogradilišta u postupku restrukturiranja, NN 61/2011. Zagreb: Narodne novine.

ANNEX

Table I

Numbers of employees in shipyards, 2008-10

	2008	2009	2010
Brodosplit	3,777	3,727	3,553
Uljanik	2,788	2,820	2,702
3. Maj	2,734	2,700	2,628
Brodotrogir	1,173	1,138	1,208
Viktor Lenac	598	594	590
Kraljevica	442	443	514
Total	11,512	11,422	11,195

Source: The shipyards' annual statements

Table II

Financial ratios for the Brodosplit d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.09	0.03	0.01	0.06
Quick ratio	0.15	0.23	0.15	0.22
Current ratio	0.23	0.29	0.19	0.26
Debt ratio	2.80	3.51	4.33	3.78
Total asset turnover ratio	1.81	1.91	1.85	1.18
Short-term asset turnover ratio	3.97	2.42	2.74	1.54
Claim turnover ratio	11.34	2.93	2.61	3.39
Debt collection period ratio (in days)	32	123	138	106
Liability settlement period ratio(in days)	324	417	641	727
Total operating efficiency	0.84	0.81	0.94	0.80
Sales operations efficiency	0.79	0.90	1.00	0.96
Financing efficiency	1.40	0.26	0.52	0.15
Gross profit margin	-0.20	-0.23	-0.06	-0.25

Source: Authors calculation based on data from the consolidated financial statements of shipyards

Table III

Financial ratios for the Brodotrogir d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.18	0.01	0.03	0.08
Quick ratio	0.30	0.07	0.04	0.18
Current ratio	0.41	0.17	0.08	0.27
Debt ratio	2.62	4.37	6.57	6.49
Total asset turnover ratio	1.32	1.85	2.00	1.26
Short-term asset turnover ratio	2.00	3.36	5.03	2.31
Claim turnover ratio	16.41	26.01	26.33	24.38
Debt collection period ratio (in days)	22	14	14	15
Liability settlement period ratio (in days)	382	433	717	362
Total operating efficiency	0.87	0.69	0.76	0.63
Sales operations efficiency	0.91	0.73	0.90	0.79
Financing efficiency	0.57	0.54	0.11	0.07
Gross profit margin	-0.15	-0.46	-0.31	-0.59

Source: Authors calculation based on data from the consolidated financial statements of shipyards

Table IV

Financial ratios for the Uljanik d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.04	0.12	0.04	0.07
Quick ratio	0.30	0.32	0.20	0.76
Current ratio	0.51	0.53	0.63	1.17
Debt ratio	1.12	1.17	1.14	1.03
Total asset turnover ratio	1.30	1.22	1.46	2.28
Short-term asset turnover ratio	2.80	2.08	2.66	3.67
Claim turnover ratio	5.64	4.28	8.70	4.28
Debt collection period ratio (in days)	64	84	41	84
Liability settlement period ratio (in days)	223	333	218	86
Total operating efficiency	0.88	1.02	1.01	1.02
Sales operations efficiency	0.87	1.08	1.03	1.05
Financing efficiency	0.95	0.70	0.82	0.69
Gross profit margin	-0.14	0.02	0.01	0.02

Source: Authors calculation based on data from the consolidated financial statements of shipyards

Table V

Financial ratios for the 3. Maj d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.04	0.03	0.01	0.13
Quick ratio	0.15	0.13	0.09	0.25
Current ratio	0.21	0.19	0.18	0.28
Debt ratio	3.89	3.17	3.60	3.92
Total asset turnover ratio	2.10	1.28	0.91	0.99
Short-term asset turnover ratio	3.24	2.30	1.58	1.27
Claim turnover ratio	7.57	4.43	3.00	2.41
Debt collection period ratio (in days)	48	81	120	149
Liability settlement period ratio (in days)	488	649	816	818
Total operating efficiency	0.91	0.80	0.66	0.82
Sales operations efficiency	0.90	0.88	0.74	0.95
Financing efficiency	1.00	0.30	0.22	0.33
Gross profit margin	-0.10	-0.25	-0.52	-0.22

Source: Authors calculation based on data from the consolidated financial statements of shipyards

Table VI

Financial ratios for the Kraljevica d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.09	0.07	0.02	0.01
Quick ratio	0.26	0.31	0.21	0.07
Current ratio	0.42	0.42	0.33	0.13
Debt ratio	2.74	3.01	3.06	6.64
Total asset turnover ratio	1.26	1.32	0.93	1.74
Short-term asset turnover ratio	1.51	1.55	1.08	2.35
Claim turnover ratio	2.81	7.31	6.31	6.80
Debt collection period ratio (in days)	128	49	57	53
Liability settlement period ratio (in days)	459	427	703	610
Total operating efficiency	0.81	0.78	0.70	0.53
Sales operations efficiency	0.88	0.85	0.77	0.58
Financing efficiency	0.37	0.51	0.48	0.32
Gross profit margin	-0.24	-0.28	-0.43	-0.90

Source: Authors calculation based on data from the consolidated financial statements of shipyards

Table VII

Financial ratios for the Viktor Lenac d.d. company, 2007-10

	2007	2008	2009	2010
Cash ratio	0.78	0.28	0.45	0.15
Quick ratio	2.62	2.00	2.25	1.90
Current ratio	2.98	2.38	2.71	2.25
Debt ratio	4.36	0.30	0.27	0.27
Total asset turnover ratio	0.90	1.58	1.16	1.28
Short-term asset turnover ratio	1.98	2.84	2.07	2.49
Claim turnover ratio	4.62	5.69	6.36	6.63
Debt collection period ratio (in days)	78	63	57	54
Liability settlement period ratio (in days)	49	70	66	66
Total operating efficiency	0.80	1.33	1.02	1.02
Sales operations efficiency	0.81	1.33	1.01	1.02
Financing efficiency	0.33	1.24	1.61	1.27
Gross profit margin	-0.24	0.25	0.02	0.02

Source: Authors calculation based on data from the consolidated financial statements of shipyards