

# Government guarantees and public debt in Croatia

ANTO BAJO, PhD\*

Institute of Public Finance, Zagreb

[bajo@ijf.hr](mailto:bajo@ijf.hr)

MARKO PRIMORAC, MA\*

Faculty of Economics and Business, Zagreb

[mprimorac@efzg.hr](mailto:mprimorac@efzg.hr)

Article\*\*

JEL: H63, O40

UDC: 336.27(497.5)

---

\* The authors would like to thank two anonymous referees for their useful comments and suggestions.

\*\* Received: May 27, 2011

Accepted: July 18, 2011

## Abstract

*Government financial and performance guarantees have been issued in Croatia since 1996, to support funding and ensure favourable borrowing conditions in the financial market for companies in majority state ownership. However, government guarantees have rarely been part of defined strategies and goals of public debt and risk management. Despite their steady growth, the structure of active guarantees and their influence on Croatian public debt are still unknown. This paper analyses the amount and structure of state guarantees, their maturities and the authority and accountability for their management, and it compares the structure of guarantees in terms of economic sectors. The main objective of the paper is to determine the influence of government guarantees on the public debt growth.*

*Keywords: government guarantees, maturity, management, public debt, Croatia*

## 1 INTRODUCTION

Government guarantees belong to contingent explicit liabilities, but are often classified as contingent implicit liabilities (e.g. deposit insurance). The problem is, however, that very often none of these contingent liability categories are included in fiscal policy analyses.

A government guarantee is a security instrument by which the government undertakes to cover the liabilities for which the guarantee is issued. The most frequent examples are government guarantees of liabilities incurred by lower levels of government and public enterprises, development banks and guarantee agencies, public-private partnership projects and other forms of cooperation between the government and private sector. Government guarantees are often used as a kind of aid for projects or activities producing a significant welfare effect. They are most frequently issued to cover, partly or fully, the risk in the cases when the debtor is unable to repay a debt or meet another liability which has been guaranteed, or when the borrower fails to meet his/her liabilities within the agreed time limit.

However, guarantees are not the most appropriate form of support for achieving a desired purpose (IMF, 2005). Particularly controversial are guarantees issued by other government institutions (e.g. development banks), because they are difficult to monitor and supervise. Potential guarantee issuance costs to the government are positively correlated with the realisation risk of a financial project, its value and duration (Polackova, 1998). Guarantees may involve many problems, because they are not supervised within regular budget expenditures. They can be used as a means to by-pass the government's fiscal constraints on borrowing and on the amount of debt of the government and local units, which is why they can produce a hidden and adverse effect on the fiscal policy status. Briefly, government guarantees can be a threat to efficient public finance management, because they are not included in fiscal analyses and thus convey a distorted picture of the public fina-

nce and constitute an impediment to reliable projections of fiscal policy effects in the future.

The main objective of this article is to determine, based on the obtained information, the key characteristics, the evolution and impact of government guarantees on Croatia's public debt in the period from 1996 to 2010. The analysis relies on up-to-date information published in the Official Gazette, as well as annual and semi-annual reports on the state budget execution, organised in databases which comprise 1,113 financial guarantees issued from 1996 to 2010 and 234 performance guarantees issued in the 1996-2008 period.

## 2 INSTITUTIONAL FRAMEWORK FOR THE ISSUE OF GOVERNMENT GUARANTEES

Government guarantees constitute security instruments by which the government warrants that an original debtor's liability will be settled. The Budget Act (OG, 87/08) governs the powers and obligations associated with the issue of government guarantees, whereas the annual amount of new government guarantees and the conditions for their issuance are laid down in annual acts on the execution of the State Budget of the Republic of Croatia.

At the proposal of the Government, Parliament enacts a *decision on the amounts of state debt<sup>1</sup> and government guarantees* in accordance with the amounts and purposes determined in the annual Budget and the State Budget Execution Act.

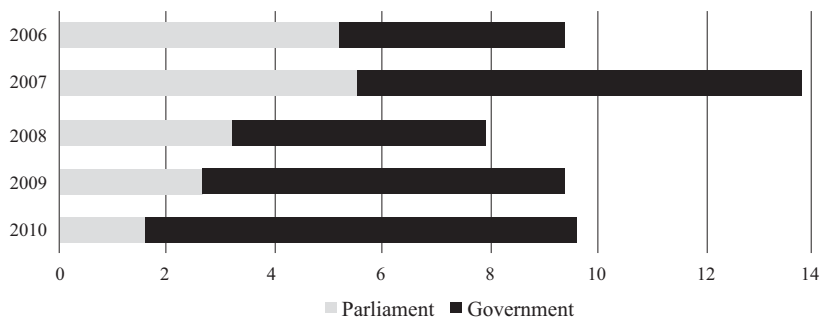
*Guarantees can be approved by the Government and by Parliament.* The bulk of guarantees are approved by the Government, but the amount of guarantees approved by Parliament is also significant. Decisions to this effect are published in the Official Gazette. *The Croatian Parliament* approves guarantees of loans obtained from international financial institutions (EIB, EBRD and IBRD) and governs them by special laws. The amount of guarantees approved by Parliament (including guarantees issued in the current year pursuant to decisions from the previous year) is not covered by the annual limit on the issuance of new financial guarantees, set in annual state budget execution acts.

The Ministry of Finance participates in the negotiations on granting government-guaranteed loans and, in accordance with the Government's decision and on its behalf, approves contracts for the issue of government guarantees. The Government may also delegate other state bodies to participate in the negotiations about government-guaranteed loans together with the Ministry of Finance. Subsequent proposals for amendments to a loan contract or a guarantee contract can be made subject to prior approval by the finance minister.

<sup>1</sup> State debt is defined as debt of the consolidated state budget, excluding government guarantees.

**GRAPH 1**

*Guarantees approved according to the Government and Parliament decisions, 2006-2010 (in billion kuna)*



Source: Ministry of Finance, 2011.

## 2.1 GOVERNMENT GUARANTEES AS STATE AID

Government guarantees constitute an instrument of state aid and their management is governed by special regulations, such as the *State Aid Act*<sup>2</sup>, *State Aid Regulation*<sup>3</sup>, *Rulebook on the Form and Content and on the Manner of Collecting Data about, and Keeping Records of State Aid*<sup>4</sup> and *Decision on Publishing Rules on State Aid in the Form of Guarantees*<sup>5</sup>.

Government guarantees differ from other state aid instruments, such as non-repayable funds or tax relief. By issuing guarantees, the government enters into an indirect legal relationship with the lender. Guarantees are usually related to loans and other financial obligations agreed between the borrower and the lender.

The European Commission's definition of state aid (provided in its Notification on the application of Articles 87 and 88 of the EC Treaty to state aid in the form of government guarantees) includes all forms of guarantees issued, regardless of their legal base and the transaction which they cover.

Guarantees can be issued individually or within a programme. According to the European Commission's Notification, guarantees can include aid granted by a member state or extended from government funds. Aid can be government guarantees issued by the central government, a regional or local government unit or by companies in which government bodies have the prevailing influence. There are two types of guarantee aid: (1) aid granted to the borrower; and (2) aid granted to the lender.

<sup>2</sup> OG, 47/2003; 60/2004 and 140/2005.

<sup>3</sup> OG, 121/2003 and 50/2006.

<sup>4</sup> OG, 11/2005.

<sup>5</sup> OG, 13/2008 and 39/2009.

Croatia has included all the provisions of the EC's Notification in its State Aid Act and the State Aid Regulation, which identify and assess individual cases in which issued government guarantees are considered as state aid. All public sector bodies authorised to grant or manage state aid in the form of guarantees are obliged to submit for approval to the Croatian Competition Agency the proposals for state aid in the form of guarantees.

### 3 TYPES OF GOVERNMENT GUARANTEES

Government guarantees are financial instruments by which the government warrants that an original debtor's liabilities will be settled if the debtor is unable to settle them fully and on time. Since 1996, two types of guarantees have been in use in Croatia: *performance guarantees* and *financial guarantees* (the latter can be divided into domestic and foreign ones). The guarantees are further classified according to economic sectors the credit liabilities of which are guaranteed, and according to the currency in which a guarantee is issued. The Government and the Ministry issue *performance guarantees* against a pledge of movable property that is readily cashable (e. g. airplanes, ships and other vehicles). Given such guarantees, early collection of an entire loan or guarantee is rarely required, for it is an action that is guaranteed (the fulfilment of a contract to deliver/return goods or services).

The Government and the Ministry of Finance issue *financial guarantees* of loans raised in the country and abroad, mainly for development projects in the areas of special state concern, for reconstruction projects in local government units, as incentives for new production, employment and technology, for tourist season planning, agricultural and shipbuilding projects, etc. From 1996 to 2010, the Government extended financial guarantees to legal entities in majority state ownership, local government units, extra-budgetary funds and the Croatian Bank for Reconstruction and Development (CBRD).

The total amount of financial guarantees called on is included in the public debt, and the amount of the public debt is limited in accordance with one of the convergence criteria defined in the Maastricht Treaty. According to the Budget Act and annual state budget execution acts, the total amount of public debt may not exceed 60% of the projected gross domestic product for the current year. Total public debt of Croatia jumped from 19.3% of GDP in 1995 to a high of 59% in 2010 (see table 1). A strong contribution to the total public debt growth came from called-on guarantees of loans extended to public sector institutions.

**TABLE 1**  
*Public debt (direct and potential), 1999-2010*  
*(in billion kuna and as a % of GDP)*

	Total general government debt		Government guarantees		CBRD debt		Total direct and potential debt	
	billion kuna	% of GDP	billion kuna	% of GDP	billion kuna	% of GDP	billion kuna	% of GDP
1995	19.0	19.3	0	0	0	0	19.0	19.3
1996	30.8	28.5	0.8	0.7	0.0	0	31.5	29.2
1997	33.9	27.3	1.7	2.7	0.8	1.0	37.1	30.0
1998	36.1	26.2	3.7	6.8	2.3	2.8	45.4	33.0
1999	46.8	28.5	11.9	7.2	1.3	0.8	59.9	36.5
2000	60.5	34.3	13.0	7.3	2.1	1.2	75.6	42.8
2001	67.2	35.2	14.6	7.6	2.8	1.4	84.6	44.3
2002	72.5	34.8	16.1	7.7	3.8	1.8	92.4	44.4
2003	81.2	35.8	15.4	6.8	4.9	2.2	101.6	44.7
2004	92.8	37.8	12.3	5.0	5.8	2.4	110.9	45.2
2005	101.2	38.3	12.5	4.7	7.1	2.7	120.8	45.7
2006	102.2	35.7	14.2	5.0	7.7	2.7	124.1	43.3
2007	104.1	33.1	17.4	5.5	9.7	3.1	131.1	41.7
2008	99.5	29.1	33.8	9.9	10.8	3.2	144.0	42.1
2009	117.9	35.2	37.5	11.2	12.4	3.7	167.9	50.0
2010	137.9	41.2	44.5	13.3	13.9	4.2	196.4	58.7

Source: Ministry of Finance, 2011.

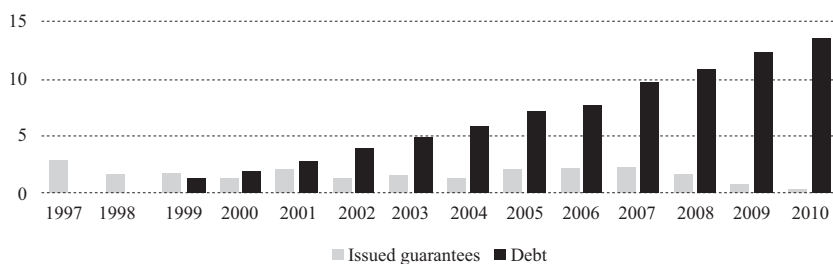
### 3.1 GUARANTEES OF THE LIABILITIES OF THE CROATIAN BANK FOR RECONSTRUCTION AND DEVELOPMENT

Since 1992, the CBRD has granted loans for projects aimed at the reconstruction and promotion of Croatian economy, where banks and other financial institutions are unable to provide the necessary funding. Originally, loans with guarantees have been granted for the recovery of the war-damaged economy. Since 2006, however, the CBRD has expanded its activities by financing small and medium-sized enterprises, infrastructure and export, securing Croatian goods and services exports against non-market risks and providing incentives to environmental protection. The bank also grants loans and other placements, issues bank and other guarantees, enters into insurance and reinsurance contracts and invests in debt and equity instruments. Credits are extended directly or indirectly, through banks and other legal entities.

In the period from 1997 to 2010, the CBRD's annual issue of guarantees averaged about 1.3 billion kuna (mainly in euro). Called-on guarantees issued by the CBRD are included in the overall statistics of called-on government guarantees. The CBRD's debt grew from kuna 1 billion kuna in 1999 to 14 billion kuna in 2010 (see graph 2).

## GRAPH 2

*Issued guarantees and debt of the CBRD, 1997-2010 (in billion kuna)*



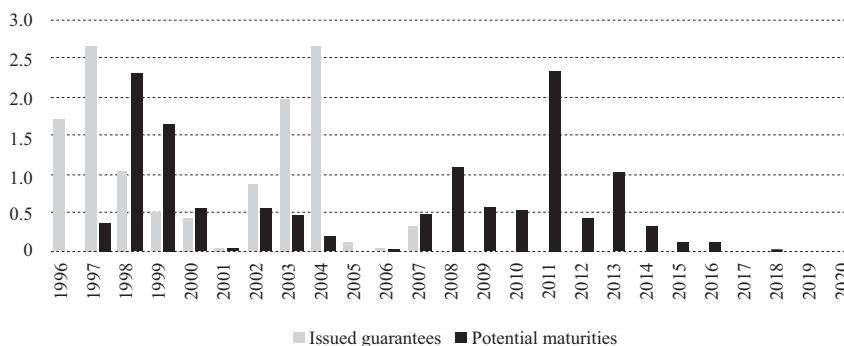
Source: Authors' calculation based on the CBRD and the Ministry of Finance data, 2011.

The government guarantees the liabilities of the CBRD jointly and severally, unconditionally, irrevocably and at first call, without issuing any special guarantee document. The CBRD does not allocate special reserves for claims secured by government guarantees. Provisions for contingent losses are made on an annual basis in the State Budget, based on the data delivered by the CBRD to the Ministry of Finance.

Apart from direct annual allocations from the State Budget (providing credit through the initial capital of the CBRD and supporting exports), the Government supports the CBRD through government guarantees.

## GRAPH 3

*Government financial guarantees issued to the CBRD and their potential maturities, 1996-2020 (in billion kuna)*



Source: Authors' calculation based on the data from the CBRD and Official Gazette, 2010.

Government guarantees to the CBRD are mainly intended for shipyards and companies in majority state ownership. A sizeable amount of guarantees is also provided to the tourist sector. These guarantees pose a risk to the state's fiscal position, if the Government assumes the CBRD debt directly or through called-on guarantees. For example, in May 2011 the Government enacted a law transferring the credit liabilities of four shipyards, secured by government guarantees, to direct public debt<sup>6</sup>.

The CBRD is not subject to regulations on the allocation and maintenance of reserve requirements held with the central bank, or on setting limits on the volume and growth of placements, neither is it subject to regulations on concluding credit and guarantee transactions between extra-budgetary users, or to the Insurance Act. The CBRD is not subject to the corporate income tax.

#### 4 CRITERIA FOR ISSUING GOVERNMENT GUARANTEES

From 1994 to 1999, there were no clear-cut criteria for approving government guarantees. Independently of the Ministry of Finance, the Government issued guarantees for loans taken on mainly by public sector institutions, but also by the private sector. In this period, the criteria and conditions for approving government guarantees were laid down in annual state budget execution acts. These acts also regulated the sources of funding for government liabilities, as well as the terms and the manner of their settlement. From 1999 on, the approval of government guarantees has been subject to the prior opinion of the Ministry of Finance and the responsible ministry, to which applicants must submit detailed financial data showing their financial positions and data on the development programmes. It was only in 2003 that the Government set the guarantee approval criteria (OG, 16/03 and 108/03); guarantees are only given to budget users, extra-budgetary users, local government units, and the CBRD. The Government does not guarantee the coverage of current costs or operating losses of companies (salaries, current assets, etc.), neither does it give guarantees to beneficiaries who default on their liabilities to the state, and have not obtained positive opinions of the responsible state or business audit for the last two business years.

In the event of a change in company ownership (particularly of companies in majority or predominant state ownership) the guarantee is withdrawn and renewed under new conditions. Pursuant to a Government's decision, guarantees can be transferred to another beneficiary (a legal successor), depending on its business condition, development plans and the interests of the country.

##### 4.1 ENSURING THE REPAYMENT OF GOVERNMENT GUARANTEES

From 1996 to 1998, guarantees were only approved based on previously obtained commercial bank guarantees. From 1999 on, guarantees to legal entities in majority private ownership were only approved upon receipt of blank signed bills with

<sup>6</sup> Act Governing the Rights and Obligations of Shipyards in the Process of Restructuring (OG, 61/11).



a bill of exchange statement in favour of the Republic of Croatia and authenticated declarations of the members of the management and supervisory boards that the loan would be repaid properly. With a view to sharing the credit or guarantee risk, the Government, banks and other legal entities may give super-guarantees, counter-guarantees or guarantees with mutual risk sharing<sup>7</sup>.

The state budget execution acts for the period from 2000 to 2011 introduced some novelties with regard to securing the collection of guarantees. Specifically, the approval of guarantees was conditioned by ensuring the repayment by pledging the property of an applicant for credit or by other security instruments. The Government charges a commission on issued financial guarantees at a rate of 0.5% on their value. The commission is payable before serving the guarantee document on the beneficiary and is paid into the state budget. In the case of called-on government guarantees, the Ministry of Finance may order the Financial Agency to freeze the debtor's account. In order to collect the debt arising from due guarantees, the Ministry of Finance and the debtor may conclude an agreement on debt repayment by instalments over a maximum period of one year.

#### 4.1.1 Guarantee reserves

Since 2000, the Ministry of Finance has charged each applicant for a guarantee a commission of 0.5% on the value of the guarantee. The commission is paid into the guarantee reserves, being a potential source of funds for the repayment of due (protested) guarantees. Apart from the commission, the Government and the Ministry of Finance provide for additional budgetary funds in the reserves for guarantees that have been protested. The funds earmarked in the guarantee reserves are used for covering the costs of called-on guarantees from the previous year (carried forward to the current year) as well as for new protested guarantees. After a guarantee is protested, the costs are debited from the guarantee reserves, and at the end of a fiscal year, the total guarantees called on in that year are assessed in order to determine the capacities of debtors to meet their liabilities. This provides a basis for classifying the expenditures for current protested guarantees as the cost of the public debt repayment or cost of the guarantee reserves for the next year. Ideally, instead of a uniform commission of 0.5% on the value of a guarantee, a risk charge should be calculated for each individual guarantee. One of the methods for this would be to calculate the so-called subsidy cost (Polackova Brix and Schick, 2002). The subsidy cost in terms of a guaranteed loan is defined as the estimated long-term cost calculated on the basis of a net current value, minus operating expenses. The net current value is calculated by discounting the anticipated future cash outflows (payments for protested guarantees) and inflows (fees and refunds associated with protested guarantees), where the discount rate can be the interest rate paid by the Government on a loan with the same maturity. The subsidy cost thus calculated can be used for the assessment of guarantee reserves.

<sup>7</sup> Act on the Execution of the State Budget of the Republic of Croatia for 1999 (OG, 167/98).

The subsidy cost must be revised annually during the life cycle of the guaranteed loan.

The extent of risk sharing between the guarantor and the guarantee beneficiary should be larger. The usual risk sharing instruments include: the issuance of a guarantee only for a part of the potential loss, collection of risk premiums and the revocation of a guarantee agreement in case of a moral hazard. In an ideal situation, part of the risk would be taken by the guarantee beneficiary (a bank), as this would be the motive for a more critical assessment of its own exposure. (In Canada, for example, banks bear at least 15% of the net loss arising from a default on guaranteed loan repayment (Polackova Brixl and Schick, 2002).

#### 4.2 PAYMENT OF DUE GOVERNMENT GUARANTEES ISSUED

The government pays its due liabilities arising from guarantees in the cases when: (a) the debtor fails to pay the entire amount, or a part of the loan in accordance with the terms of the loan agreement; and (b) the creditor takes the measures and actions laid down in the agreement concerning the loan and the collection of due liabilities from the borrower. Where such terms are not set out in the agreement on the issuance of government guarantees, the finance minister and the creditor determine the measures to be taken when the government guarantees fall due and the time limits within which the Government should settle the due liabilities.

##### *Debt collection from a guarantee beneficiary*

Where a guarantee call on, the Ministry of Finance can take the following measures (on behalf of the state):

- 1) acquire equity in the companies for the state by offsetting the claims arising from the loans granted against the guarantees paid;
- 2) subject to the Government's approval, the finance minister can, at the debtor's request (and given the appropriate security and interest), defer the repayment, agree with the debtor on the debt repayment by instalments, or change the predictable payment dynamics, if this would significantly improve the debtor's ability to repay the debt (this refers to debtors from whom the entire debt arising from given government guarantees could not otherwise be collected).

Should the Ministry of Finance fail to collect the claims through regular channels, the matter is referred to the State Attorney's Office for further action.

#### 5 FINANCIAL ANALYSIS OF GOVERNMENT GUARANTEES

Records on guarantees are kept off the balance sheet, which means that they are not included in the financial statements, but the Ministry of Finance keeps them separately under the "contingent debt" category. From 1995 to 2006, the Government and the Ministry of Finance issued financial and performance guarantees, and since 2006, only financial guarantees have been officially issued (see table 2).

TABLE 2

*Issued and active (financial and performance) guarantees, 1996-2010  
(in billion kuna)*

	Planned financial	Issued financial 1 (A+B)	Domestic A	Foreign B	Perfor- mance 2	Total (1+2)	Active
1996	2.5	0.8	0.1	0.7	1.4	2.2	0.8
1997	3.0	3.2	1.4	1.8	3.0	6.2	3.2
1998	1.0	5.1	1.3	3.8	3.4	8.5	10.2
1999	3.0	5.9	1.2	4.8	1.8	7.7	10.4
2000		5.4	5.0	0.4	4.3	9.7	15.7
2001		7.7	3.0	4.7	6.0	13.7	18.1
2002		8.4	5.7	2.7	2.9	11.2	20.1
2003	5.9	9.0	5.0	4.0	2.7	11.7	20.5
2004	4.9	5.8	2.9	2.9	4.8	10.6	18.3
2005	4.0	3.7	2.7	0.9	3.5	7.2	19.7
2006	4.0	9.4	4.8	4.6	1.5	10.9	22.0
2007	4.9	13.6	4.5	9.1		13.6	27.1
2008	7.4	7.9	3.4	4.5		7.9	44.7
2009	4.9	9.4	4.5	4.9		9.4	50.7
2010	4.9	9.6	5.0	4.6		9.6	58.8
2011*	4.9						58.9

\* For 2011 as at 31 January.

Source: Ministry of Finance and CNB, 2011.

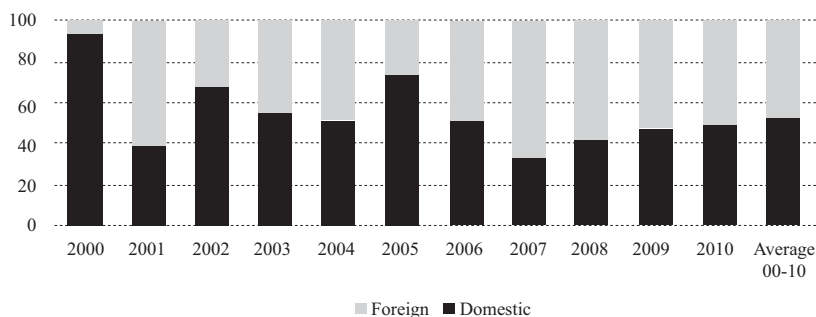
Applications for guarantees grew markedly after 2003, with the bulk of guarantees being issued for domestic borrowing. However, in the last three years, guarantees for borrowing abroad outdid those for domestic borrowing. It is worth noting that from 1996 to 2007, the Government approved performance guarantees mainly for loans taken on by shipyards, whereas from 2007 on, performance guarantees were substituted by financial ones. This substitution led to an increase in the amount of active financial guarantees as contingent liabilities of the government. Active guarantees rose from 0.8 billion kuna in 1996 to 58.8 billion kuna in 2010. With the exception of 2005, in all the years, the amounts of issued financial guarantees considerably exceeded the limits laid down in the annual state budget execution acts.

*Limits on the issue of financial guarantees.* In the annual state budget execution acts, the Government lays down the amount of guarantees to be issued in a particular year. As no such amount was laid down in the state budget execution acts for the period 2000-2003, the issuance of guarantees (with no limit set) was left to the discretion of the Government and the Ministry of Finance. Regrettably, for most of the reference period, the amount of financial guarantees exceeded the prescribed limit. A sizeable amount of guarantees was also approved by Parliament's decisions, disregarding the annual limits set by the Government.

*Domestic and foreign financial guarantees.* Guarantees for borrowing in the country make the bulk of total guarantees (53%), whereas guarantees for borrowing abroad account for 47% of the total (see graph 4). There is no pattern in the distribution of domestic and foreign guarantees, which differs from year to year.

#### GRAPH 4

*Domestic and foreign financial guarantees as a % of total guarantees issued, 2000-2010*



Source: Ministry of Finance, 2011.

Dominant in the structure of financial guarantees issued are guarantees for borrowing from domestic and foreign commercial banks, financial institutions (mainly EBRD, EIB, etc.) and the CBRD.

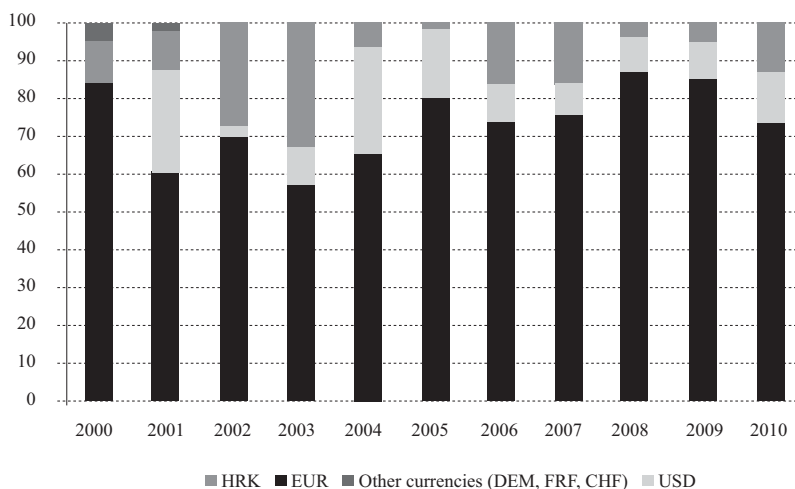
*Currency structure of issued financial guarantees.* From 2000 on, guarantees denominated in euro predominated in the structure of loans with government guarantees (see graph 5).

*Issued financial guarantees by sector.* Guarantees of the liabilities of public transport companies account for the largest share in total financial guarantees issued. The second largest category are financial guarantees for the borrowing of business sector enterprises, mainly “big loss-makers” like Split Ironworks, Sisak Tube Rolling Mill and TLM Šibenik, which are planned to be issued until their final restructuring and privatisation. This group also includes guarantees for organised recon-

struction programmes and for the financing of loans to small and medium-sized enterprises in the period from 2001 to 2002 (through the CBRD). Numerous guarantees were also given to the Croatian Railways, which took on short-term loans for liquidity maintenance (particularly during 2002 and 2003) (see graph 6).

### GRAPH 5

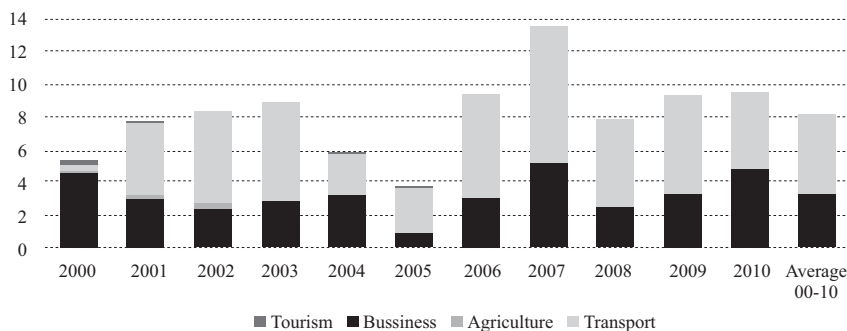
*Currency structure of issued financial guarantees, 2000-2010 (%)*



Source: Ministry of Finance, 2011.

### GRAPH 6

*Structure and value of issued financial guarantees by sector, 2000-2010 (in billion kuna)*



Source: Ministry of Finance, 2011.

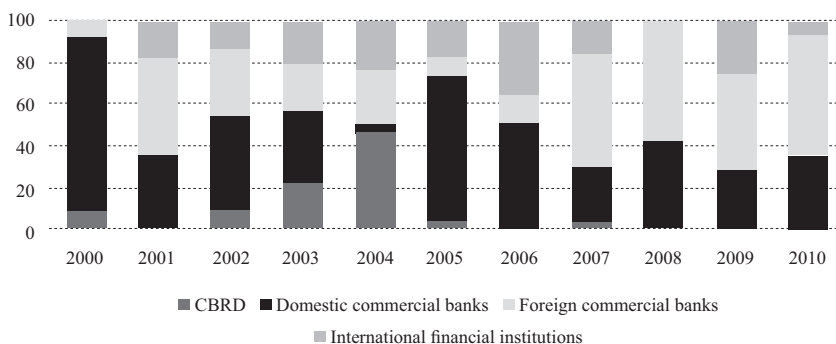
During 2000, the Government adopted a package of measures defining a new position and terms of operation of shipyards pending their privatisation. From 2000 on, the issuance of performance guarantees increased, and from 2006 to 2011, a

considerable amount of guarantees was issued in the form of state aid for shipyard restructuring. After the restructuring and privatisation, guarantees to shipyards should be reduced and granted in accordance with EU rules for state aid allocation.

*Issued financial guarantees by type of creditor.* Early in the reference period, the lending activities included domestic commercial banks and, particularly, the CBRD, given its development mission. As the country's investment credit rating improved, the participation of foreign commercial and development banks (e.g. *Kreditanstalt für Wiederaufbau, KfW*), as well as other international financial institutions (EBRD, EIB, etc.), extending loans for infrastructure projects (roads, motor roads, railways, air transport facilities, ports, gas transportation systems and electric power industry) increased over time. Since 2009, among the creditors have also been foreign suppliers and ship buyers (see graph 7).

### GRAPH 7

*Structure of issued financial guarantees by type of creditor, 2000-2010 (%)*

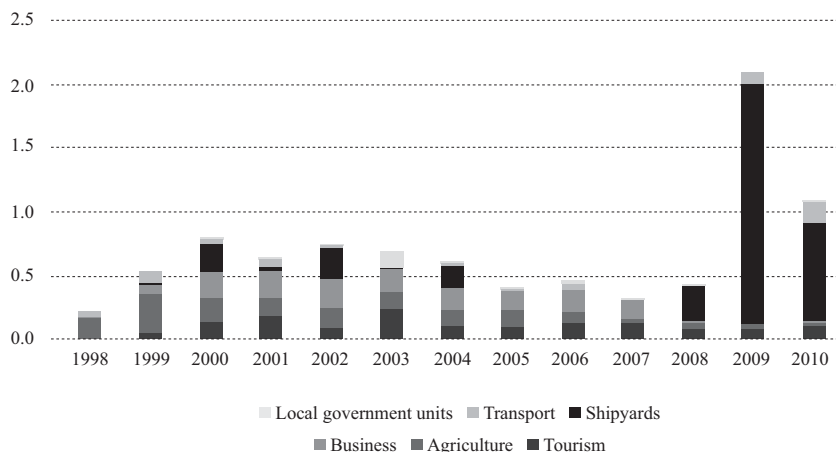


Source: Ministry of Finance, 2011.

*Protested guarantees.* A portion of government-guaranteed loans fall due annually. The guarantees are protested and included in the direct public debt. In the period from 1999 to 2004, the majority of guarantees fell due, imposing an additional burden to the state budget. Guarantees issued to agriculture (for the financing of special programmes, rescheduling of previously granted loans and procurement of agricultural machinery), tourist sector (for the reconstruction of hotel facilities and preparation of facilities for the tourist season) and business sector (as aid to enterprises in difficulties, and for the financing of fixed working capital) were called on. A minor portion of protested guarantees was seen in the transport sector. A sizeable portion of guarantees extended to shipyards were protested in 2009, and it is expected to grow further until their desired privatisation. In the 1998-2010 period, protested guarantees amounted to 9 billion kuna, and were mainly extended to the business sector, shipbuilding, agriculture and tourism (see graph 8).

## GRAPH 8

Sectoral distribution of protested financial guarantees, 1998-2010  
(in billion kuna)



Source: Ministry of Finance, 2011.

*Refunds to the State Budget from original debtors.* After guarantees have been protested, the Government and the Ministry of Finance try to collect the debt incurred from the relevant companies. Regrettably, refunds to the Budget are low, suggesting that the original debtors are still in difficulties and are unable to settle their credit liabilities guaranteed by the State Budget (see table 3).

TABLE 3

*Refunds to the State Budget from original debtors, 2001-2010 (in billion kuna and as a % of protested financial guarantees)*

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total protested financial guarantees	648	755	695	622	411	463	326	447	2,113	1,099
Refunds to the Budget	18	134	113	136	57	35	33	34	19	6
% of refunds to the Budget	2.78	17.75	16.26	21.86	13.87	7.56	10.12	7.61	0.90	0.55

Source: Authors' calculation based on the data from the Ministry of Finance, 2010.

In the 2001-2010 period, original debtors repaid as little as about 12% of the amount of protested guarantees to the Budget. This percentage varied from year to year, and was particularly low in 2010 (0.55%), when shipyards' guarantees fell due.

*Guarantee reserves.* The Government and Ministry of Finance provide funds for protested guarantees from the guarantee reserves (see table 4). After protesting the guarantees, the Government and the Ministry take measures to collect the debt from the original debtor. However, the problem is that the original debtors are insolvent and unable to meet their liabilities to the state. Therefore, government guarantees actually represent a classic form of state aid to industrial sectors pending their restructuring or privatisation.

**TABLE 4**

*Guarantee reserves and protested financial guarantees, 2000-2010  
(in million kuna and %)*

	Guarantees (in kuna)			Guarantee reserves as a % of		Protested guarantees as a % of potentially mature guarantees
	reserves	protested	potentially mature	potentially mature guarantees	protested guarantees	
2000	0,212	0,749	1,075	20	28	70
2001	0,150	0,496	0,670	22	30	74
2002	0,400	0,730	0,950	42	55	77
2003	0,550	0,690	4,712	12	80	15
2004	0,314	0,620	7,074	4	51	9
2005	0,400	0,400	2,790	14	100	14
2006	0,290	0,463	1,526	19	63	30
2007	0,400	0,326	2,911	14	123	11
2008	0,267	0,447	7,257	4	60	6
2009	0,267	2,113	3,811	7	13	55
2010	1,000	1,099	3,085	32	100	36
2011	1,000		7,442	13		

*Source: Authors' calculation based on the data from the Ministry of Finance, 2011.*

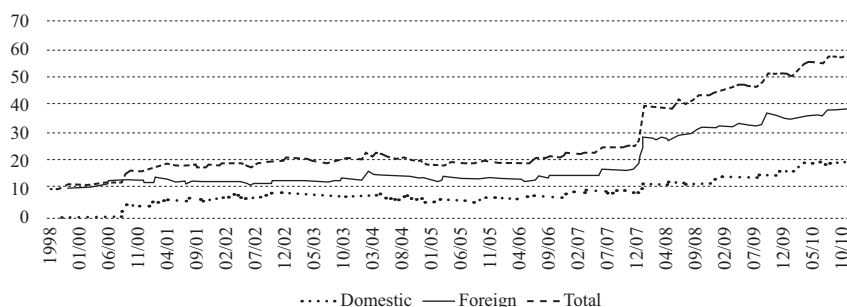
Only in 2005, 2007 and 2010, were guarantee reserves sufficient to cover the entire amount of protested guarantees. In 2007, there was even a surplus in the guarantee reserves after protested guarantees had been covered. In other years, the reserves were not enough to cover the protested guarantees, which required the provision of additional funds in the State Budget. More than 70% of due guarantees were protested in the period from 2000 to 2002. This percentage was falling till 2010, so that 55% of potentially due liabilities became payable in 2009 and 36% in 2010.



*Called-on guarantees* represent potential government debt, as the original debtor has still not met the guaranteed liabilities. Called-on guarantees grew from about 10 billion kuna in 1998 to 59 billion kuna in 2010 (see graph 9).

### GRAPH 9

*Called-on financial guarantees, 1998-2010 (in billion kuna)*



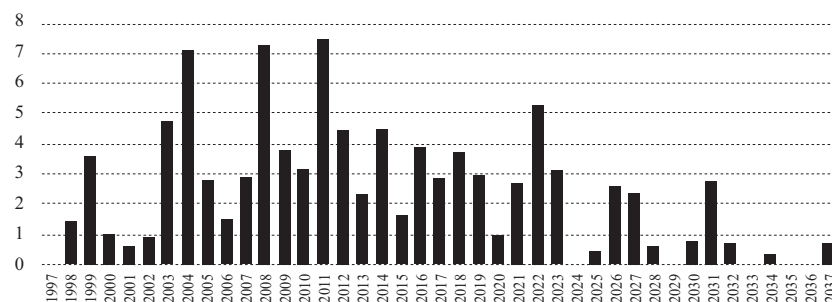
Source: CNB, 2011.

A marked increase in called-on guarantees since 2007 has been due to the substitution of performance guarantees (mainly extended to shipyards) by financial guarantees.

*Potential maturities of government guarantees.* Public sector institutions, the liabilities of which are guaranteed by the government (State Budget), incurred liabilities till 2037, to repay the principal and interest on the borrowing guaranteed by the State Budget (see graph 10). The amounts and potential maturity dates for the financial liabilities differ from year to year. In the period from 2010-2012, the government is likely to come under relatively strong pressure from potential calls on extended guarantees and their conversion into the direct public debt.

### GRAPH 10

*Amounts of potential maturities of guarantees issued from 1996 to 2037 (in billion kuna)<sup>8</sup>*



Source: Authors' calculation based on the data from the Ministry of Finance.

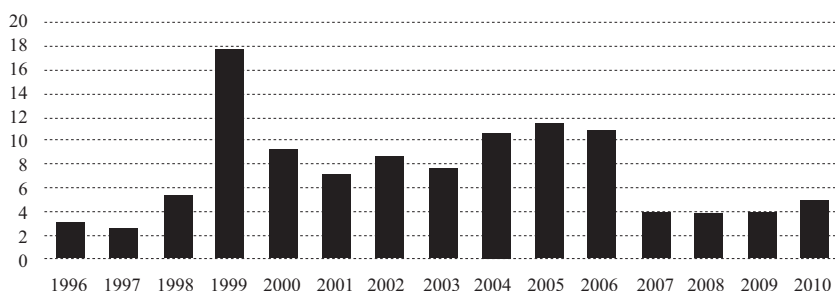
<sup>8</sup> Due to a lack of information on the terms of borrowing and repayment (annual or semi-annual) of the principal and interest on the borrowing of the original debtor, the calculation was based on the assumption that the entire amount of the principal falls due on the fixed maturity date.

In only three reference years, the Government might be faced with claims for about 13 billion kuna (3 billion kuna in 2010, 6 billion in 2011 and 4 billion in 2012). The maturity risks of guarantees will depend on the ability of original debtors to settle their liabilities arising from agreed loans in a timely manner. The Government and Ministry of Finance will certainly have to define and carry out measures in order to prevent the guarantees from significantly jeopardising the financial position of the state and speeding up the growth of public debt and budget deficit.

*Maturities of guarantees by year of issue.* Potential maturities of guarantees by year represent useful information for estimating their potential effect on direct government liabilities (see graph 11). The maturity calculation is based on the Ministry of Finance data. Briefly, from 1996 to 2010, the Government and Parliament issued 1,113 government guarantees worth 105 billion kuna, with average maturity of 7.4 years.

### GRAPH 11

#### *Average maturities of guarantees by year of issue*



*Source: Authors' calculation based on the data from the Ministry of Finance, 2011.*

The average maturity of guarantees was about 3.6 years in the 1996-1998 period, and was extended in the following years. Thus, the average maturities for the guarantees issued in 1999 were about 18 years. However, the maturities of guarantees issued from 2007 to 2010 shortened again, falling to about 4 years.

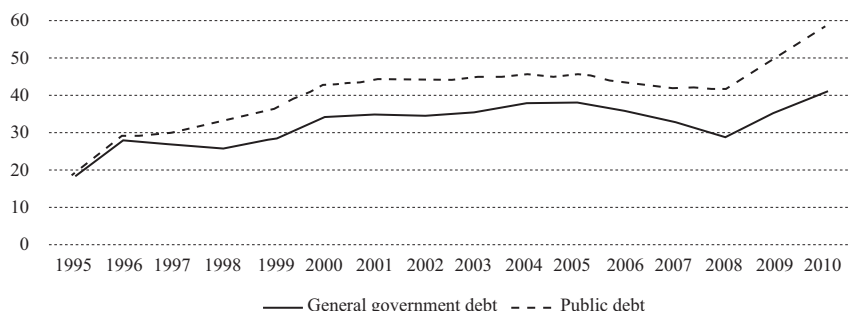
### 6 IMPACT OF GOVERNMENT GUARANTEES ON PUBLIC DEBT

Issued and still outstanding guarantees pose a potential threat to the public debt growth. In 2010, general government debt, excluding guarantees, accounted for 41% of GDP; with called-on guarantees included, total public debt accounted for 59% of GDP. Given the marked growth in guarantees issued since 2007, the analysis of their impact on public debt has become increasingly important. In 2010, outstanding guarantees accounted for as much as 18% of GDP. It is very likely that that part of these guarantees will be converted into the direct public debt.

The Government and Ministry of Finance have been aware of the risk of potential maturity of financial guarantees, and particularly of their impact on the budget deficit and public debt growth. With the view to estimating the impact of guarantees on public debt, the Ministry of Finance (i.e. its Bureau for Macroeconomic Analysis) has, since 2007, made up tests of public debt sensitivity to changes in GDP growth rates, maturities of guarantees, foreign exchange rates and changes in the primary general government budget deficit. Public debt has also shown great sensitivity to changes in contingent liabilities (guarantees), which would result in an increase in direct public debt to about 54% of GDP in 2010. The test results point to a need for moderating the issuance of government guarantees. Moreover, in order to curb the growth of contingent liabilities, the restructuring of certain economic sectors must be continued.

## GRAPH 12

*Public and general government debts, 1995-2010 (as a % of GDP)*



*Note: General government debt comprises the direct debts of the state budget, extra-budgetary users and local government units. Public debt includes called-on guarantees and the CBRD debt.*

*Source: The Ministry of Finance and CNB, 2011.*

It is obvious that guarantees have a direct impact on public debt at the time of their being protested. Now, if guarantees do influence the general government's direct debt growth, then the question is raised of their justifiability, given the suspicion that protested guarantees are financed through borrowing. On the other hand, this would mean that the guarantee issuing policy is inefficient, because the protested guarantees should be financed from guarantee reserves. Finally, the level of public debt, as the sum of direct and indirect liabilities, would also be thrown into doubt, where it is also possible that the potential debt (guarantees) create a need for borrowing, so that liabilities arising from the same source would be twice included in the public debt – as direct and indirect liabilities.

### *Simple linear regression model*

In order to test the hypothesis about the impact of issued guarantees on the amount of state debt, an analysis was carried out based on a simple linear regression mo-

del, with the independent variable being the value of issued guarantees and the dependent variable – the amount of the central government debt:

$$y_t = \alpha_n + \beta_n x_{t,n} + \varepsilon_n, n = 0, 1, \dots, 7 \quad (1)$$

where  $y_t$  is the value of the central government debt in a quarter  $t$ ,  $\alpha_n$  is the constant member of the regression model with an annual lag  $n$ ,  $\beta_n$  is the regression coefficient of the model with an annual lag  $n$ ,  $x_{t,n}$  is the value of issued guarantees in a quarter  $t$  with an annual lag  $n^9$ , and  $\varepsilon_n$  represents independent and equally distributed, normal random variables with zero expectancy and a variance of  $\sigma^2$ .

The analysis was based on a sample of quarterly data on the balance of called-on guarantees and of the central government debt from the first quarter of 2000 to the first quarter of 2010. Before testing the functional dependence of variables in the model, it was necessary to test the stationarity of the observed series. One of the ways to do this was to apply the ADF (Augmented Dickey Fuller) test (see table 5).

**TABLE 5**  
*Augmented Dickey Fuller test results in levels*

Variables	Intercept and trend	Intercept	None
Guarantees	0.9843	0.9964	0.9984
Debt	0.6624	0.5464	0.9993
$\Delta$ Guarantees	0.0000	0.0000	0.0000
$\Delta$ Debt	0.0000	0.0000	0.0000

Source: Authors' calculation.

The null hypothesis for data series expressed in levels at a significance level of 5% can be accepted, i.e. the observed series are non-stationary. When taking first differences, the series become stationary (the null hypothesis of the existence of a unit root is rejected at a significance level of 5%, so that the model assumes a new form:

$$\Delta y_t = \alpha_n + \beta_n \Delta x_{t,n} + \varepsilon_n, n = 0, 1, \dots, 7 \quad (2)$$

where  $\Delta y_t$  represents the quarterly change in the value of the central government debt in a quarter  $t$ ,  $\alpha_n$  is the constant member of the regression model with a lag  $n$ ,  $\beta_n$  is the regression coefficient of the model with an annual lag  $n$ ,  $\Delta x_{t,n}$  is a quarterly change in the value of issued guarantees in a quarter  $t$  with an annual lag  $n$ ,

<sup>9</sup> The regression model with an annual lag in the independent variable is used to establish the impact of the value of an independent variable in a quarter  $t$ ,  $n$  years ago on the value of the dependent variable in a quarter  $t$ .

and  $\varepsilon_n$  represents independent, equally distributed, normal random variables with zero expectancy and a variance of  $\sigma^2$ .

Intuitively, it can be assumed that guarantees issued in a particular year do not have too strong an influence on the central government's direct borrowing in that year. However, there is a possibility that a portion of guarantees would be protested over time, so that the government must even take loans to finance its direct liabilities arising from the protested guarantees. In order to test this hypothesis, eight separate regression analyses were carried out with a view to establishing the influence of changes in issued guarantees on the change in the level of state debt over a period of seven years from issuing the guarantees. The results of the regression analyses are shown in table 6.

**TABLE 6**

*Regression analysis of the influence of issued guarantees on the central government debt*

Annual lag (n)	R <sup>2</sup>	F-ratio	$\alpha$	$\beta$	No. of observations
0	0.3231	18.1423 ***(0.0001)	2531.4260 ***(0.0000)	-0.7629 *** (0.0001)	40
1	0.1220	4.7239 **(0.0368)	1004.5000 *(0.0999)	0.4658 **(0.0368)	36
2	0.0692	2.2304 (0.1458)	1251.0550 *(0.0709)	0.3481 (0.1458)	32
3	0.1192	3.5196 *(0.0719)	962.2783 (0.2097)	1.2281 *(0.0719)	28
4	0.0089	0.1981 (0.6606)	1706.1560 *(0.0723)	-0.3413 (0.6606)	24
5	0.0188	0.3458 (0.5638)	1294.3200 (0.2236)	-0.4759 (0.5638)	20
6	0.0169	0.2409 (0.6311)	738.1009 (0.6170)	0.5466 (0.6311)	16
7	0.0001	0.0010 (0.9757)	1303.7920 (0.5433)	-0.0466 (0.9757)	12

Note: p-values are put in parentheses, with \*, \*\* and \*\*\* standing for statistical significance levels of 10%, 5% and 1%, respectively.

Source: Authors' calculation.

The regression analysis results reveal considerably high p-values (hence the model is not representative) for series with annual lags ( $n > 0$ ), and (in such cases) the determination coefficient is relatively low (except for  $n=1$  and  $n=3$ ). The variable *quarterly change in the value of issued guarantees* is significant by  $n=0$  where the

deviation coefficient stands at 32.31%. An estimated parameter [ $\beta=-0.7629$ ] of the stated regression models shows that by issuing guarantees in the amount of [ $\Delta x=1$  million kuna] (in a particular quarter), the central government debt decreases by [ $\Delta y=762.9$  thousand kuna] (in the same quarter).

Taking into account that the model describes a relatively complex phenomenon like the central government borrowing (which depends on a series of different factors), the finding that only one variable describes over 32% of deviations is quite interesting. However, the economic interpretation of the results is limited, because, given that  $n=0$ , it cannot be concluded that issued guarantees upon their maturity pose a threat to the public debt, but, due to the negative value of the regression coefficient, it is rather possible that direct central government borrowing is substituted by issuing guarantees.

## 7 CONCLUSION

Since 1996, Croatia has increased the issuance of government financial and performance guarantees as an instrument of state aid aimed at ensuring favourable borrowing conditions for public sector institutions, mainly companies in majority state ownership. Regrettably, government guarantees have rarely been part of defined strategies and goals of the public debt and risk management. Each protested guarantee affects the public debt growth and, according to ESA 95 methodology, it is automatically included in the budget deficit. However, the actual financial impact of guarantees will be seen in the near future, as Croatia joins the EU. It is worth noting that the largest inclusion of guarantees in the public debt pursuant to the Act Governing the Rights and Obligations of Shipyards in the Process of Restructuring has not been dealt with in this paper.

The regression analysis results demonstrate that government guarantees do not have a statistically significant influence on the growth of direct government debt. It is beyond dispute that the central government debt is gradually substituted by issued guarantees. While there is no indication that government guarantees influence the public debt growth in the same period, there is evidence for state debt growth in the long run, due to a very low collection rate of protested guarantees. The research results should be interpreted with caution. Nevertheless, they provide a reliable basis for a comprehensive analysis of the influence of issued guarantees on the growth of direct government liabilities. Future research should be focused on the analyses of:

- potential maturities of guarantees based on quarterly data;
- the impact of changes in government guarantees on changes in the level of public debt and the possible influence of issued guarantees on annual government borrowing, and
- the risks of potential maturities of issued guarantees according to main economic sectors (agriculture, tourism and shipbuilding).

Future research should establish whether government guarantees are primarily extended to fast growing sectors that stimulate the overall economic growth or to the so-called zombie companies which would not survive in the market without such state aid (e.g. shipbuilding companies).

## LITERATURE

- Act Governing the Rights and Obligations of Shipyards in the Process of Restructuring**, NN 61/2011. Zagreb: Narodne novine.
- Budget Act**, NN 96/2003, 87/2008. Zagreb: Narodne novine.
- European Commission, 2008.** *Corrigendum to the Commission's Notification on the Application of Articles 87 and 88 of the EC Treaty to state aid in the form of guarantees* (52008XC0620(02)R(01), OJ C 244, 25. 09. 2008, pp. 32-32).
- European Commission, 2008.** *Notification of the European Commission on the Application of Articles 87 and 88 of the EC Treaty to state aid in the form of guarantees* (52008XC0620(02), OJ C 155, 20. 06. 2008, pp. 10-22).
- Government of the Republic of Croatia, 2009.** *Economic and Fiscal Policy Guidelines for the Period 2010-2012* [online]. Available from: [<http://www.mfin.hr/en/novosti/economic-and-fiscal-policy-guidelines-for-the-period-2010-2012>].
- Government of the Republic of Croatia, 2010.** *Economic and Fiscal Policy Guidelines for the Period 2011-2013*". Zagreb: Ministry of Finance.
- IMF, 2005.** *Government Guarantees and Fiscal Risk*. Washington D.C.: International Monetary Fund.
- IMF, 2006.** *Republic of Croatia: Letter of Intent, Annex, and Technical Memorandum of Understanding*. Washington D.C.: International Monetary Fund.
- Ministry of Finance of the RC, 2011.** "Croatia to issue Eurobonds worth EUR 750m, with the maturity date 2018" [online]. *Press Release*, 30 June 2011. Available from: [<http://www.mfin.hr/hr/novosti/izdanje-euroobveznica-republike-hrvatske-u-iznosu-od-eur-750-milijuna-dospi>].
- Ministry of Finance of the RC.** *Annual reports of Ministry of Finance* [online]. Available from: [<http://www.mfin.hr/en/annual-reports-of-ministry-of-finance>].
- Odluka o izmjenama i dopunama kriterija za davanje državnih jamstava**, NN 108/2003. Zagreb: Narodne novine.
- Odluka o kriterijima za davanje državnih jamstava**, NN 16/2003. Zagreb: Narodne novine.
- Odluka o objavljivanju pravila o državnoj potpori u obliku jamstava**, NN 13/2008, 39/2009. Zagreb: Narodne novine.
- Polackova Bixi, H. and Schick, A., 2002.** "Government at Risk, Contingent Liabilities and Fiscal Risk". Washington D.C.: The World Bank ; Oxford University Press.
- Polackova, H., 1998.** *Government Contingent Liabilities: A Hidden Risk to Financial Stability*. Washington: The World Bank.
- Pravilnik o obliku i sadržaju, te načinu prikupljanja podataka i vođenja evidencija državnih potpora**, NN 11/2005. Zagreb: Narodne novine.
- State Aid Act**, NN 47/2003, 60/2004 and 140/2005. Zagreb: Narodne novine.
- Uredba o državnim potporama**, NN 121/2003, 50/2006. Zagreb: Narodne novine.