

Document of
The World Bank

Report No: ICR00003910

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IBRD-74100, IBRD-80770)

ON A LOAN

IN THE AMOUNT OF €108.8 MILLION
(US\$142.22 MILLION EQUIVALENT)

TO THE

PORT OF PLOČE

WITH THE GUARANTEE OF THE REPUBLIC OF CROATIA

FOR A

TRADE AND TRANSPORT INTEGRATION PROJECT

November, 2016

Transport and ICT Global Practice
Europe and Central Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 8, 2016)

Currency Unit = HRK
HRK 1.00 = US\$0.147
US\$1.00 = HRK 6.802
€1 = HRK 7.502

FISCAL YEAR
January 1 - December 31

ABBREVIATIONS AND ACRONYMS

BCT	Bulk Cargo Terminal
BiH	Bosnia and Herzegovina
B/C ratio	Benefit/Cost Ratio
BCT	Bulk Cargo Terminal
CPS	Country Partnership Strategy
CT	Container Terminal
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
EU	European Union
HAC	Croatian Motorways
HZ	Croatian Railways
ICR	Implementation Completion and Results Report
IGH	Institute IGH
INA	Industrija Nafta
ISR	Implementation Status and Results Report
IT	Information Technology
LDP	Letter of Development Policy
LP	Luka Ploče d.d.
MG	Port Entrance Terminal/Main Gate
MMATI	Ministry of Maritime Affairs, Transport and Infrastructure
MTR	Midterm Review
NPV	Net Present Value
PAD	Project Appraisal Document
PCS	Port Community System
PDO	Project Development Objective
PPA	Port of Ploče Authority
PIU	Project Implementation Unit
PPF	Project Preparation Facility

PPIAF	Public-Private Infrastructure Advisory Facility
TEU	Twenty Foot Equivalent Unit (container)
TTI	Trade and Transport Integration
VAT	Value Added Tax

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REPUBLIC OF CROATIA
Trade and Transport Integration Project

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A. Basic Information			
Country:	Croatia	Project Name:	TRADE AND TRANSPORT INTEGRATION
Project ID:	P093767	L/C/TF Number(s):	IBRD-74100,IBRD-80770
ICR Date:	11/28/2016	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	CROATIA
Original Total Commitment:	USD 75.30M	Disbursed Amount:	USD 135.77M
Revised Amount:	USD 138.19M		
Environmental Category: A			
Implementing Agencies: Port of Ploce Authority			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	07/22/2005	Effectiveness:	03/20/2007	03/20/2007
Appraisal:	05/23/2006	Restructuring(s):		02/26/2010 06/18/2014 10/22/2015
Approval:	11/14/2006	Mid-term Review:		04/07/2009
		Closing:	12/31/2011	05/31/2016

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	Overall Borrower Performance:	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Ports/Waterways	95	95
Railways	5	5
Theme Code (as % of total Bank financing)		
Infrastructure services for private sector development	40	40
Regional integration	20	20
Trade facilitation and market access	40	40

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Cyril E Muller	Shigeo Katsu
Country Director:	Arup Banerji	Anand K. Seth
Practice Manager/Manager:	Juan Gaviria	Motoo Konishi
Project Team Leader:	Nadia Badea	Gerald Paul Ollivier
ICR Team Leader:	Nadia Badea	
ICR Primary Author:		

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

To develop trade along Corridor Vc by improving the capacity, efficiency and quality of services on the southern end of Corridor Vc with particular focus on the port of Ploce and on coordination aspects among all corridor participants. The project seeks to achieve this objective through: (i) increased throughput capacity of the port and railway

infrastructure; (ii) efficient operation of the corridor including the Port of Ploce; (iii) high quality of services; (iv) competitive alternative to other corridors; and, (v) increased private sector involvement to address these priorities, reduce commercial risks and secure financing for port cargo handling equipment.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Bulk cargo capacity (million tons per annum)			
Value quantitative or Qualitative)	3.1	8.2	8.0	4.2
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Bulk cargo terminal is completed. However, the terminal will be operational once the pertaining equipment is installed in mid-2017. Once the new bulk cargo terminal is operational, an additional capacity of 4.6 million tons will be achieved.			
Indicator 2 :	Direct Loading/Unloading Capacity for Container Cellular Vessels (TEU*1,000 per annum)			
Value quantitative or Qualitative)	n/a	66	66	66
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	New container crane has been purchased and is in use. This indicator has been met.			
Indicator 3 :	General Cargo Capacity (million tons per annum)			
Value quantitative or Qualitative)	1.2	1.2	1.4	1.4
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Additional area has been cleared up for general cargo. This indicator has been met.			

Indicator 4 :	Gross Container LoLo Productivity Cellular Vessels (moves/hour/gang or crane)			
Value quantitative or Qualitative)	n/a	n/a	18	18
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	The efficiency indicator has been met.			
Indicator 5 :	Gross Bulk Unloading Crane Productivity (tons/hour)			
Value quantitative or Qualitative)	100	100	700	700
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	New bulk cargo crane has been purchased and is in use. This target has been met.			
Indicator 6 :	Gross Bulk Unloading capacity at the new terminal (tone/year)			
Value quantitative or Qualitative)	100	100	700	0
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This target was not met at project close. Target should be met by mid-2017.			
Indicator 7 :	Gross General Cargo Crane/Gang Productivity (tons/hour)			
Value quantitative or Qualitative)	42	65	65	65
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This efficiency target has been met.			
Indicator 8 :	Safety: Lost Time Accidents (per 200k man hour)			
Value quantitative or Qualitative)	3.1	1.8	1.8	1.6
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	The target has been met. The value is based on the annual health and safety report.			
Indicator 9 :	Average vessel waiting time for available berth (hours)			

Value quantitative or Qualitative)	<2	<2	<2	<2
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This target has been met.			
Indicator 10 :	Ability for shippers to track cargo within the Port (percentage)			
Value quantitative or Qualitative)	0%	90%	90%	50%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Once the PCS is fully operational and Luka Ploče adheres to it, the target will be met.			
Indicator 11 :	Cargo Throughput (mil tons per annum, excluding liquid bulk)			
Value quantitative or Qualitative)	2.5	7.6	3.8	2.5
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This indicator has not been met due to the decrease in port traffic.			
Indicator 12 :	Ploče Corridor (inland cost) cost vs Rijeka and Bar (to be less than target %)			
Value quantitative or Qualitative)	53%	<80%	<80%	50% compared to Bar and 56% compared to Rijeka
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This indicator has been met for container transportation by rail up to 250 km (based on the report prepared by MC - Mobility Consultants in 2015)			
Indicator 13 :	Revised and signed Priority concession agreements (bulk/container)			
Value quantitative or Qualitative)	0%	100%	100%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This target has been fully met with Luka Ploče being concessionaire.			

Indicator 14 :	Private sector participation in Ploce operations (as % of tons handled excluding liquid bulk cargo)			
Value quantitative or Qualitative)	40%	85%	85%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This target has been fully met. Luka Ploče d.d is now fully privatized and all other operations are carried out by private operators.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Construction of Bulk Terminal completed			
Value (quantitative or Qualitative)	0%	100%	100%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Construction of the bulk cargo terminal was completed in June 2016.			
Indicator 2 :	Construction of Container Terminal completed in 2009			
Value (quantitative or Qualitative)	0%	100%	100%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This target has been met.			
Indicator 3 :	Other Port Infrastructure			
Value (quantitative or Qualitative)	0%	100%	100%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	All the small infrastructure (port roads, drainage system, rainwater collector, protective stone embankment) was completed.			
Indicator 4 :	Port Community System in Place-Electronic exchange of documents with shippers allowing them to track location of their cargo			

Value (quantitative or Qualitative)	0%	90%	90%	50%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	The PCS was developed and is ready to be tested once the full installment of the equipment is completed			
Indicator 5 :	Concession agreement for new terminal			
Value (quantitative or Qualitative)	0%	100%	100%	100%
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Concession agreement for both the new terminals was signed in January 2010.			
Indicator 6 :	Client satisfaction			
Value (quantitative or Qualitative)	0	0	0	0
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	This indicator will be relevant once the Bulk Cargo terminal and Port Entrance Facility are fully opera			
Indicator 7 :	Supervision report for works			
Value (quantitative or Qualitative)	n/a	n/a	n/a	n/a
Date achieved	12/31/2005	11/15/2006	06/17/2014	05/31/2016
Comments (incl. % achievement)	Reports have been periodically prepared throughout the Project Implementation.			

G. Ratings of Project Performance in ISRs

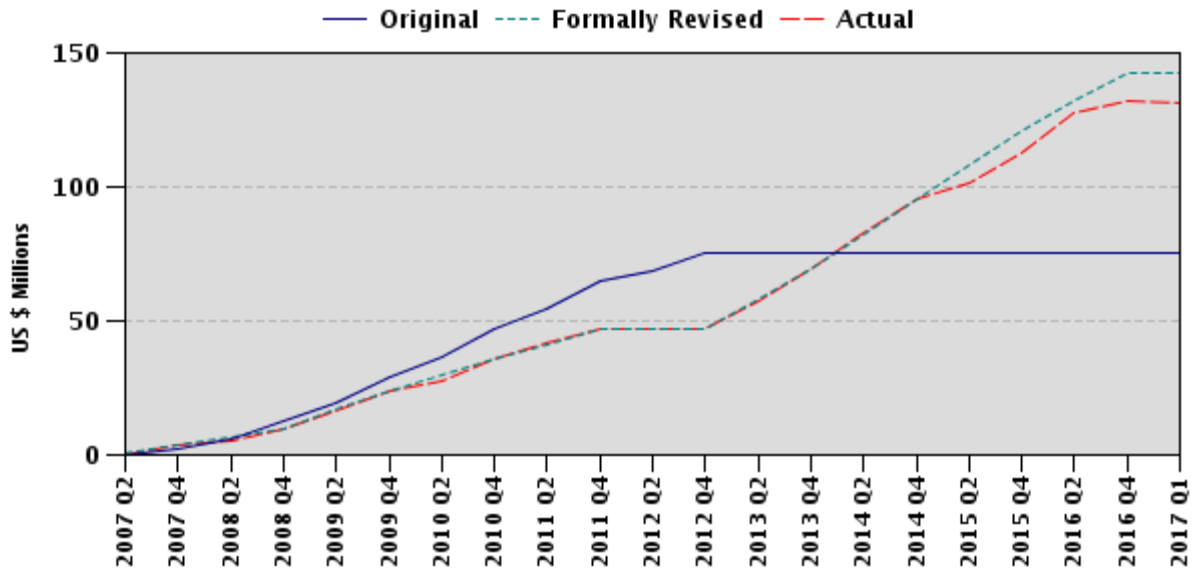
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	04/13/2007	Satisfactory	Satisfactory	0.75
2	11/26/2007	Satisfactory	Satisfactory	2.36
3	05/14/2008	Satisfactory	Satisfactory	9.94
4	11/04/2008	Satisfactory	Satisfactory	12.50
5	05/11/2009	Satisfactory	Satisfactory	20.22
6	12/23/2009	Satisfactory	Satisfactory	27.59

7	06/18/2010	Satisfactory	Moderately Satisfactory	35.53
8	12/18/2010	Satisfactory	Moderately Satisfactory	41.50
9	07/26/2011	Satisfactory	Moderately Satisfactory	46.70
10	02/02/2012	Satisfactory	Satisfactory	46.70
11	08/13/2012	Moderately Satisfactory	Satisfactory	53.38
12	12/25/2012	Moderately Satisfactory	Satisfactory	57.34
13	06/24/2013	Moderately Satisfactory	Moderately Satisfactory	69.40
14	12/28/2013	Moderately Unsatisfactory	Moderately Satisfactory	82.75
15	07/06/2014	Moderately Satisfactory	Moderately Satisfactory	95.07
16	11/23/2014	Moderately Satisfactory	Moderately Satisfactory	101.45
17	04/30/2015	Moderately Satisfactory	Moderately Satisfactory	107.01
18	12/21/2015	Moderately Satisfactory	Moderately Satisfactory	127.41
19	05/31/2016	Moderately Satisfactory	Moderately Satisfactory	127.41

H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
02/26/2010	N	S	S	27.59	Change of percentage of eligible expenditures financed under Loan No. 7410
06/18/2014	N	MU	MS	95.07	Extension of the closing date of Loan No. 7410 and Loan No/ 8077; Reallocation of Loan proceeds between categories of Loan No. 7410; Change of percentage of eligible expenditures financed under Loan No. 7410; Modification of some PDO indicators
10/22/2015		MS	MS	118.08	Extension of the closing date of Loan No. 8077

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. At the time of the appraisal of the Trade and Transport Integration (TTI) Project in 2006, the strategic objectives of the Croatian Government were to join the European Union (EU) and to position Croatia as a leader in southeast Europe for sustainable economic development and regional cooperation.

2. Transport linkages with EU markets were made through the Pan-European transport corridors X, Vb, and Vc that crossed Croatia and carried the vast majority of trade, transit, and tourist traffic between the EU and the southeast European region, and within the region. As such, these corridors became central to the program of transport infrastructure modernization of the Croatian Government. This program included investments in Croatian railways, in ports such as the port of Rijeka, and in construction of roads and motorways from Zagreb to eastern and southern Croatia. Beyond the infrastructure investments, Croatia signed a regional memorandum of understanding on the development of the South-East Europe Core Regional Transport Network in June 2004, fostering regional cooperation to improve transport infrastructure, services, and procedures related to the corridors.

3. Corridor Vc connecting the Port of Ploče, the second largest international port in Croatia,¹ to major cities, mines, and heavy industrial centers in Bosnia and Herzegovina (BiH) was generating significant, year-around, direct, and indirect economic activity for southern Dalmatia in Croatia and BiH. The direct economic activity was estimated at about US\$19 million (US\$8 per ton on average) for the Port of Ploče, the Croatian railways, and other Croatian transport intermediaries. The indirect effect on the surrounding economy was estimated to be about 50 to 70 percent of direct activity. Therefore, Corridor Vc was providing an essential income source for this part of Croatia with limited economic activity aside from seasonal tourism.

4. In addition, for neighboring states of BiH, Serbia, and Montenegro, dependable access to high volumes of raw materials was directly affecting the competitiveness of their heavy industry (metal production, coke, and alumina) and their mining companies. Many of these companies were concentrated along or close to Corridor Vc. The southern part of this corridor was originally developed for those companies in the 1960s and, at the time of the project appraisal, was still representing their favored option for egress and ingress, with about 80 percent of the Corridor Vc traffic to or from BiH. Based on traffic forecasts at project appraisal, the main clients would have increased their transport cost by an estimated €200 million (discounted value over 25 years) if alternative corridors for volumes beyond the capacity of the Port of Ploče available at that time were used.

5. As a consequence of the restructuring and privatization of the heavy industries in the process of being implemented at that time in BiH, the freight volumes carried along the

¹ Cargo traffic reached 2.8 million tons in 2005, while general cargo was at 350,000 tons.

corridor were increasing very rapidly (from 1.3 million tons in 2003 to 2.8 million tons in 2005) as measured at its Croatian entry point in Ploče, but still were below the prewar level of 4.5 million tons. Container traffic was also increasing from 4,000 containers (twenty foot equivalent unit [TEU]) in 2001 to 17,000 containers in 2005, even though the port had no berth dedicated to container vessels, but only a roll-on roll-off and ferry berth. General cargo (steel/aluminum products, timber, and bananas) was expected to grow as BiH factories started to export finished metal products through the corridor. Containerized cargo along the corridor was also offering a good growth potential (with a target traffic of 40,000 TEU by 2010) based on an increase in both market size, related to regional economic growth prospects, and market share, coming from proper handling capacity and the opening of a motorway from Ploče to Split by 2008.

6. The industrial restructuring in the region was in its early days and was providing Croatia and its neighboring countries with a great business opportunity. Factories in former Yugoslavia were reestablishing their linkages by importing coal through Ploče (Croatia), turning it into coke in Lukavac (BiH), and exporting it to Smederovo (Serbia) for steel production.

7. Traffic projections, based on surveys of operators and port clients and regional growth prospects and growth in containerization, were indicating that the annual traffic volume at the port could have rapidly increased to about 7 million tons by 2010 (within a range of 5.2 to 9.1 million tons), once the physical and operational capacity of the corridor was improved.

8. The bulk traffic was heavily concentrated among five large bulk clients based in BiH, and therefore the response to the demand for increased transport capacity in Croatia needed to be tailored to reflect a significant level of traffic risk. Traffic was expected to originate not only from existing facilities put back in production after war (coke, aluminum, and metal products), but also from their capacity expansion. As part of the restructuring of these factories, BiH received guarantees for new investments in some of these factories such as Zenica/Mittal Steel. Production levels were nonetheless closely connected to global commodity prices.

9. Addressing projected port capacity constraints in the southern part of Corridor Vc required a coordinated intervention among its participants, based on a systematic and continuous review of shortcomings from the port to the main corridor clients. The port's maximum capacity, analyzed as part of a master plan preparation under a grant from the Public-Private Infrastructure Advisory Facility (PPIAF), was 4.8 million tons, with insufficient mechanization for bulk handling, inadequately located storage area (near the city center for coal), and the absence of facilities to load and unload modern container vessels. The corridor was operating relatively well at low traffic volumes, but the traffic increase was making more and more visible the weaknesses in coordination, port and rail operations, loading and unloading, border crossing procedures, and infrastructure and related equipment, leading to delays and reduced service quality. Idle time for cargo along the corridor was estimated at 70 percent of total transport time, resulting in low effective rail corridor speed of 7.5 km per hour with 40 percent of the time spent at

loading/unloading. Without operational and infrastructure improvement, the corridor would not have been able to handle foreseen traffic increases.

10. At the time of the project preparation, port operations were mostly carried out by Luka Ploče d.d. (LP), a publicly traded joint-stock company, owned primarily by the state (59.7 percent), small shareholders and employees (40.3 percent), based on a 12-year priority concession granted in August 2005. This concession gave LP control of most port and free zone operations and provided limited incentives for new investments, with shortcomings for both Port of Ploče Authority (PPA) (low concession fees, unclear language on responsibilities) and LP (short duration).

11. To increase the private sector participation in the port, the Ministry of Maritime Affairs, Transport and Infrastructure (MMATI) decided to authorize the PPA to extend the term of the LP priority concession and include the two new terminals proposed to be financed under the project. In addition, the MMATI committed to amend the Law on Seaports in force at that time to allow private ownership of handling equipment installed on the maritime domain. Once the concession agreement for the new terminals was signed, the Government's participation in LP would have been progressively reduced.

12. The overall objective of the revised and extended priority concession was to generate revenues for the PPA through port dues and concession fees to recover infrastructure investment and maintenance cost for the two new terminals, while providing LP with an environment conducive for competitiveness (with regard to price/quality ratio) and profitability.

13. In addition, recognizing the need to improve the railway capacity along Corridor Vc, as part of the TTI preparation, the Croatian and BiH Railways signed a memorandum of cooperation and prepared an action plan under which they agreed to work closely together to improve the effective flow and speed of trains through enhanced coordination across the corridor, investments in infrastructure and rolling stock, reduced border crossing times, and improved operational efficiency. Funding for most infrastructure investments was to be covered by the railway rehabilitation project prepared in parallel by the European Bank for Reconstruction and Development (EBRD)/European Investment Bank (EIB) in BiH.² BiH Railways was also in the process of securing funding for a remaining section of Corridor Vc, not yet covered. All these investments were to take place in time for the opening of the new terminals.

1.2 Original Project Development Objectives (PDO) and Key Indicators (as approved)

14. The overall development objective of the project, as stated in the Loan Agreement, was to develop trade along Corridor Vc by improving the capacity, efficiency, and quality of services on the southern end of Corridor Vc, with particular focus on the Port of Ploče and on coordination aspects among all corridor participants.

² Project no. 35418.

15. As detailed in the project appraisal document (PAD), the project sought to achieve this objective through:

- (a) investments in increased throughput capacity of the port infrastructure;
- (b) introduction of a modern electronic port community system (PCS);
- (c) strengthened corridor dialogue among corridor participants;
- (d) establishment of cost-recovery-based concession arrangements; and
- (e) increased private sector involvement to address these priorities, reduce commercial risks, and secure financing for port cargo handling equipment.

16. The key performance indicators identified in the PAD are as described in the following sections.

Increased Capacity

- (a) Effective bulk port capacity increased from 3.1 million tons to 8.2 million tons between 2006 and 2010
- (b) Effective direct container handling capacity increased to 66,000 TEU by 2010

Efficient Operations

- (a) Gross bulk unloading crane productivity (tons/hour) increased from 100 to 890
- (b) Average rail commercial speed increased from 7.5 to 10.3 km/hour
- (c) Safety: time lost to accidents per 100 employees decreased from 3.1 to 1.6

Quality of Services

- (a) Average vessel waiting time before accessing available berth (less than 2 hours)
- (b) Ability to track cargo status in port and through corridor operational by 2008

Support Regional Development Competitiveness

- (a) Cargo throughput increased to 6.3 million tons by 2010
- (b) Cost of transport (rail) along Corridor Vc lower by at least 20 percent compared to alternatives

Private Sector Involvement

- (a) Private sector participation (percentage of tons handled) increased from 40 percent in 2006 to 80 percent

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

17. The PDO was not revised.

1.4 Main Beneficiaries

18. The PAD does not explicitly identify the ‘primary target group’. However, the project objectives and key indicators suggest that the main beneficiaries of the TTI Project would be the following:

- Clients of the Port of Ploče, through the improved capacity, efficiency, and quality of services provided by the port facilities, enabling access to high volumes of raw materials and thus increased competitiveness.
- Port of Ploče, through the capacity enhancements and increased private sector involvement that will lead to growth in traffic and revenue, enabling its transformation into a self-financing port in the medium term.
- Private sector, through expanded opportunities for participating in port activities.
- Corridor Vc participants (corridor clients, port concessionaires, railways, road transport operators/forwarders, border agencies, Port Authority, Government of Croatia, Government of BiH) through strengthened dialogue and development of a modern electronic PCS, integrating all members of the port community.
- Citizens of Croatia, through providing essential income source for this part of the country with limited economic activity aside from seasonal tourism.

1.5 Original Components (original total project cost of EUR 91 million – cost of the components below plus the financial costs of €7.6 million)

Component 1: Port Infrastructure Development (total cost with contingencies - €76.9 million)

19. The Port Infrastructure Development component included the following subcomponents: (a) construction of a new bulk cargo terminal (BCT) with an initial capacity of 4 million tons; (b) construction of a container/multipurpose terminal with an initial capacity of 66,000 TEU; and (c) construction/rehabilitation of the supporting port infrastructure (road, rail, water, wastewater, and power supply) within the port area, including a new entrance facility. The third subcomponent represented 13 percent of base costs and was aimed at connecting the new terminals with the existing utility infrastructure inside and outside the port.

Component 2: Trade and Transport Integration (total cost with contingencies - €2 million)

20. The Trade and Transport Integration component included the development and rollout of a modern electronic PCS, integrating all members of the port community (shipping lines, shipping agent, stevedoring companies, banks, rail, road transport, border agencies) into a seamless information system enabling accurate and timely exchange of information and automated processing, where appropriate. This component built on the detailed analysis of procedures and information flows being prepared under a Project Preparation Facility (PPF). It included (a) necessary hardware (for example, servers, computers); (b) networking costs; (c) software; (d) extensive training of users and administrators; (e) technical services; and (f) security features. The system was designed to facilitate integration of information flows along Corridor Vc by defining document exchange interfaces based on international standards, thus facilitating systematic performance measurement across the transport chain.

Component 3: Project Implementation (total cost with contingencies - €4.5 million)

21. The Project Implementation component included the services required to prepare and support the successful implementation of the project. This covered in particular (a) technical assistance to the PPA to implement its business plan and establish the concession for new terminals; (b) technical services required for the preparation and supervision of project components; (c) audit services for the project and PPA; (d) training on project management, procurement, and financial management; (e) procurement support; and (f) incremental implementation costs.

1.6 Revised Components

22. The TTI Project was financed through two IBRD loans to the PPA (with the guarantee of Croatia) totaling €108.8 million (with €21 million cofinancing from the Government of Croatia). The first loan (Loan No. 7410), in the amount of €58.8 million, was approved on November 14, 2006. On September 14, 2011, an additional financing for the project was approved (Loan No. 8077) in the amount of €50 million. Initially, the project description for the Additional Financing Loan No. 8077 was limited to subcomponents 1.1 and 1.2 of the project description in the original Loan Agreement (1.1 corresponding to the construction of the BCT and 1.2 corresponding to the construction of a container/multipurpose terminal). The project restructuring processed in June 2014 was aimed, among other things, at modifying the Additional Financing Loan's project description to comprise all three original components and, thus, to be consistent with the description of the original loan (Loan No. 7410).

23. However, the description of the components was not revised during implementation.

1.7 Other Significant Changes

24. **Change in disbursement ratio.** The first change in disbursement percentage was processed (through a restructuring approved by the country director) in February 2010 and

applied to the Category (1) Works of the original loan (Loan No. 7410), increasing the percentage of expenditures to be financed from the loan from 60 percent to 90 percent. This change (triggered by the constraints on the counterpart funding) postponed the counterpart funding to a later date, but did not change the overall financing plan. The second change to the percentage of eligible expenditures under Category (1) Works financed under Loan No. 7410 from, 90 percent to 100 percent, was made in June 2014, under the second restructuring. This change entailed that the full cost of new contracts, including value added tax (VAT), would be covered from the loan proceeds and was triggered by a new Croatian Law on VAT, in effect since entry into the EU on July 1, 2013, stipulating that free trade zones were included in the territory of Croatia, rendering delivery of goods and services in the zones taxable by VAT. The PPA was still to cover VAT through counterpart funds for contracts signed before July 1, 2013.

25. **Additional financing.** The additional financing approved for the project in September 2011, amounting to €50 million, was aimed at financing the total additional costs of €51.3 million associated with (a) a scaling up (€5 million) and financing gap coverage (€35.9 million) for the BCT that was to be constructed under the project (to ensure the soundness of the new BCT infrastructure and to reflect the price adjustments) and (b) financing gap coverage (€10.4 million) for the container terminal (CT), which was completed. The remainder of the additional cost was to be covered by reallocating €1.3 million from the category interest accrued in the original loan to the category civil works (reflecting lower than anticipated disbursement and interest rates during the previous three years). On the occasion of the additional financing, other major changes from the original project were processed, including (a) extension of the closing date for the original project from December 31, 2011 to June 30, 2014, allowing for completion of the scaled-up BCT; (b) adjustment to the minimum debt service coverage ratio of the PPA to 1.1 instead of 1.3; and (c) adoption of the World Bank Procurement Guidelines published in May 2004 and revised in October 2006 and May 2010. The original closing date for the Additional Financing Loan (Loan No. 8077) was June 30, 2014.

26. **Extension of the closing date.** In addition to the extension of the original loan from December 31, 2011 to June 30, 2014 (approved in September 2011), there were two subsequent extensions: (a) extension of the closing date of Loan No. 7410 (original loan) and Loan No. 8077 by 18 months to December 31, 2015 (to allow for completion of BCT construction), approved in June 2014 and (b) extension of the closing date of Loan No. 8077 by five months from December 31, 2015 to May 31, 2016 (to ensure all remaining project activities are completed), approved in October 2015.

27. **Reallocation of loan proceeds between categories.** As mentioned above, when processing the Additional Financing in September 2011, €1.3 million were reallocated from the category 'Interest and Other Charges' to the category 'Works' in the original loan (Loan No. 7410). Then, the restructuring done in June 2014 provided for a reallocation of loan proceeds (Loan No. 7410) between various categories, amounting to €3.85 million, or about 7 percent of the total loan amount, as follows:

- (a) Reduction to Category (1) Works by €1.85 million due to cost savings arising from redesign and value engineering.

- (b) Increase to Category (2) Goods and Consultants' Services by €3.85 million through reallocation from Categories (1) Works, (3) Refund of the Project Preparation Advance, and (4) Interest and Other Charges on the Loan. The change in scope in the civil works component required additional technical support (consultant services) for implementation.
- (c) Reduction of Category (3) Refund of the Project Preparation Advance by €1.27 million. The Project Preparation Advance was closed.
- (d) Reduction to Category (4) Interest and Other Charges by €73,000 due to a reduction of interest charges as a result of slow disbursements.

28. **Modification of some of the PDO indicators.** There were two sets of modifications of the PDO indicators: (a) one processed with the additional financing package (September 2011), to capture the expected improvements in capacity (to be able to meet requirements for larger vessels) and to reflect the adjusted traffic forecasts (downward) after the traffic setback in 2009 (as detailed in Section 2.2) and (b) another one reflected in the 2014 restructuring package, to simplify the overly complex Results Framework by removing two indicators not directly linked to the project (commercial speed on rail corridor Vc and status of rail in Ploče) and by revising target values for indicators affected by the evolution of traffic patterns (such as overall traffic and capacity of the BCT).

29. The changes of the PDO indicators are summarized in table 1.

Table 1

Development Objective Indicators	Unit of Measure	Original End-target (PAD)	Revised End-target (September 2011)	Revised End-target (June 2014)
<i>Increased Capacity</i>				
Bulk Cargo Capacity	Million tons per annum	8.2	8.8	8.0
Direct Loading/Unloading Capacity for Container Cellular Vessels	TEU*1,000 per annum	66	Unchanged	Unchanged
General Cargo Capacity	Million tons per annum	1.4	Unchanged	Unchanged
Rail Yard Capacity	Number of shunting tracks	12	Unchanged	Removed (not directly linked to the project)
<i>Efficient Operations</i>				
Gross Container LoLo Productivity Cellular Vessels	moves/hour/gang or crane	18	Unchanged	Unchanged
Gross Bulk Unloading Crane Productivity	tons/hour	890	1,100	700

Development Objective Indicators	Unit of Measure	Original End-target (PAD)	Revised End-target (September 2011)	Revised End-target (June 2014)
Gross Bulk Unloading Capacity at New Terminal	tons/year	n.a.	2,200 (new indicator)	2,000
Gross General Cargo Crane/Gang Productivity	tons/hour	65	Unchanged	Unchanged
Average Commercial Speed of Vc Corridor		10.3	Unchanged	Removed (not directly linked to the project)
Safety: Lost Time Accidents	per 200kman hour	1.6	Unchanged	Unchanged
<i>Quality of Services</i>				
Average Vessel Waiting Time for Available Berth	hours	<2	Unchanged	Unchanged
Ability for Shippers to Track Cargo within the Port	%	90%	Unchanged	Unchanged
<i>Support Regional Development and Competitiveness</i>				
Cargo Throughput (excluding liquid bulk)	million tons per annum	7.6	5.8	3.8
Ploče Corridor (inland cost) Cost versus Rijeka and Bar (to be less than target %)	%	<80%	Unchanged	Unchanged
<i>Private Sector Involvement</i>				
Revised and Signed Priority Concession Agreements (bulk/container)		100%	Unchanged	Unchanged
Private Sector Participation in Ploče Operations (as % of tons handled excluding liquid bulk cargo)	%	85%	Unchanged	Unchanged

30. The changes made in June 2014 required a full restructuring paper (level 2 restructuring) approved by the regional vice president as cumulative extension exceeded two years from original loan closing date. The project restructuring done in October 2015 was approved by the country director as it related only to the extension of the Additional Financing Loan.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

Preparation

31. The project preparation was initiated in the spring of 2005 and led to an integrated approach to corridor development across borders considering its physical, financial, and operational dimensions and bringing together all the stakeholders. Given its programs in Croatia and BiH, the World Bank was uniquely suited to support this integrated approach and to build on its previous experience in supporting projects in Croatia and the southeast European region in port development (Rijeka, Durres), railway modernization (Croatia, Romania, the former Yugoslav Republic of Macedonia, Bulgaria), and trade and transport facilitation (all of southeast Europe).

32. The project preparation was financed with support from (a) a US\$250,000 PPIAF grant, (b) a US\$1.75 million IBRD PPF, and (c) a grant of €50,000 from the EBRD.

33. Under the PPIAF grant, secured by the MMATI and administered by the World Bank, a consultant (Royal Haskoning) was hired to review the legal framework, prepare a port master plan providing a long-term view of the port development, prepare business plans for the PPA and LP, and propose concrete options for private sector involvement in the Port of Ploče. Corridor clients were also involved in the dialogue on corridor optimization and investment in the port as part of project preparation. After considering various options, the MMATI selected the option best meeting its objectives and captured it in a letter of development policy (LDP) addressed to the World Bank, dated October 17, 2006. The LDP, which was also a condition for Board presentation, expressed the Government's commitment to the objectives of the project and to concrete measures to increase private involvement in the Port of Ploče by improving the institutional, regulatory, and legal framework.

34. The project was also presented to the Infrastructure Steering Group, which was coordinating initiatives from the European Commission (EC), World Bank, EBRD, EIB, and others to integrate the countries of southeast Europe amongst themselves and to the EU through developing infrastructure within a regional approach, instead of at a national level. Close cooperation was also maintained with the EC delegation in Zagreb as well during preparation.

35. A partnership with the EBRD was also envisaged, with cofinancing from the EBRD and World Bank taking the lead role, but the loan from the EBRD was finally cancelled in 2012.

Design

36. The project was consistent with the Country Assistance Strategy approved by the Board on December 21, 2004 and supporting the Government's growth and reform strategy for successful EU accession.

37. The design of the project considered lessons from past transport projects in Croatia and in the region. The first key lesson was that regional integration is essential when aiming at developing trade along corridors (Corridor Vc) and the project was designed to bring economic benefits to both Croatia and BiH by facilitating regional integration. Preparation

entailed an active dialogue with railways in both countries leading to the definition of a memorandum of cooperation and action plan to ensure increased railway capacity on the corridor and to build on the investments planned by BiH to upgrade its railway infrastructure to Ploče and by investors to upgrade production capacity in BiH. In addition, in April 2010, an agreement on cargo transport was signed by five rail companies from BiH, Serbia, Slovenia, and Croatia to promote a joint venture on transport markets with harmonized sales policies for increased competitiveness, improved service quality, and customer satisfaction. The World Bank team recommended adding the implementation of this agreement to the memorandum of cooperation signed in 2006.

38. The second lesson drawn from previous experience was that broad-based dialogue is a precondition for such projects given that corridors involve a large network of participants with different priorities and spread over different countries. Thus, project preparation entailed several high-profile events with media coverage; frequent contacts with corridor clients, transport operators and intermediaries, border agencies, and other financing institutions; and the setup of dedicated working groups.

39. Last, but not least, the project preparation took into consideration that increasing the private sector involvement in the ports sector proved to be challenging in Croatia. Therefore, the MMATI secured a grant from the PPIAF, administered by the World Bank, to review the legal framework and prepare a port master plan, providing a long-term view of the port development and business plans for the PPA and LP proposing concrete options for private sector involvement in the Port of Ploče. Corridor clients were also invited to participate in the dialogue on corridor optimization and investment in the port as part of project preparation.

40. In retrospect, these lessons were highly relevant as regional integration, dialogue among the Corridor Vc participants, and, to a lesser extent, increase of private sector participation in the port activities proved to pose many challenges throughout the project implementation.

41. Consideration of alternative project design included (a) focusing exclusively on the port infrastructure, instead of the corridor; (b) preparing the project without increasing private sector participation in the port; and (c) developing the full-fledged facilities as originally requested by the PPA, and not only the two new terminals.

42. With regard to project readiness, the engineering design documents for the first year's activities were complete and ready before Board presentation. The procurement documents for the first year's activities were also complete and ready for the start of the project implementation. In addition, the Project Implementation Plan was finalized before negotiations.

43. With respect to the design of the additional financing, the traffic projections completed in November 2010 (before the additional financing was approved) confirmed the need for a new BCT. This was also supported by new letters of intent received in February 2010 by Luka Ploče from its main bulk clients confirming their future production plans and their intent to channel a total of 4.5 million tons of bulk cargo throughput

annually through Ploče. In addition, the scaling up of the BCT was aimed at enhancing the commercial responsiveness of Port of Ploče, the revised design allowing to serve a broader range of market segments (including transshipment) than the original design, which primarily targeted exports from BiH.

Risks

44. The risks and respective mitigation measures identified in the PAD were deemed appropriate at the time of the project preparation.

45. The following were the risks identified and the mitigation measures considered:

- **Resistance to private sector participation.** Agreement reached between the MMATI, PPA, and Ministry of Finance to increase private involvement in the Port of Ploče based on the findings of the analysis conducted under the PPIAF and commitment toward this through the LDP; extensive consultations with corridor clients during the project preparation.
- **Complexity of concession extension.** Local and international legal advice provided to the PPA and active involvement of the World Bank team in the negotiations with LP to reflect the best international practices.
- **Cost overruns in civil works.** Physical contingencies budgeted.
- **Traffic fails to materialize.** Long-term contractual arrangements with the main clients envisaged before launching the construction of the bulk terminal.
- **Traffic materializes too soon.** The review conducted under the port master plan indicated that through the provision of additional equipment and increased vessel waiting time, the port would be able to temporarily accommodate an increase in traffic in 2007 and 2008, while the construction of the new bulk terminal would be completed in three years.
- **Social resistance to changes.** Close dialogue with the labor union was supposed to be maintained.
- **Cooperation between BiH and Croatia and coordination among the key stakeholders are insufficient.** Memorandum signed between the BiH/Croatian Railways to agree on an action plan to increase rail capacity; strong commercial interest in a better-functioning corridor; leverage through the EBRD/EIB railway project in BiH.
- **Political change in BiH priorities.** Considerable leverage of the large clients in BiH to limit political interference; commitment of BiH to upgrade the railway corridor to Ploče.

- **Abuse of comparative advantage by concessionaire.** Competition among modes and corridors; leverage of the large clients on tariffs.
- **Environmental matters.** Adjustments made during project preparation, based on feedback received during consultations, to have a modest impact on the environment; Environmental Management Plan (EMP), whose implementation was expected to mitigate all the environmental risks.

Adequacy of Government Commitment

46. The PPA and the MMTI were closely involved in the project preparation. Full commitment to the project objectives was evidenced by the above mentioned LDP, which outlined all the institutional and legal reforms to be taken to allow successful implementation of the project.

47. Based on all of the above, the quality at entry is rated as Satisfactory.

48. There was no Quality at Entry rating by the World Bank's Quality Assurance Group for this project.

2.2 Implementation

49. Project implementation was hampered by a number of factors, which led to significant changes (additional financing, extension of the closing date) and some major delays, which in turn had an impact on the operationalization of the major investments funded under the project and on the achievement of some of the project indicators, although all the activities envisaged under the project were completed. The project was only briefly considered a problem project in December 2013, before a restructuring, after which the rating was again Moderately Satisfactory as the PDO became achievable.

50. Key issues during implementation are discussed in the following paragraphs.

51. **Port traffic.** The traffic in the Port of Ploče went through major fluctuations during the project implementation. After a sustained traffic growth until 2008, a severe traffic drop took place in 2009 as a result of the global crisis which affected the major industrial companies in BiH using Ploče. Traffic rebounded by 58 percent in 2010 reaching 4.5 million tons. After 4.4 million tons in 2011, the overall port traffic fell to 2.6 million tons in 2012. The bulk cargo throughput was cut down by almost 60 percent (from 3.6 million tons in 2011 to 1.6 million tons in 2012). The vast majority of 2 million tons of lost bulk cargo was attributed to the termination of transshipment activities with the Italian client (as a result of the closure of the Edison power plant), while the remainder was due to lower production of BiH clients, driven by the global demand for commodities. Since 2012, the traffic was subject to minor variations, mostly following a positive trend but at a much slower path than the pre-crisis levels. In May 2016, the cargo throughput was at the same level as in 2005 (2.5 million tons per year). In addition, at the beginning of the project, the bulk cargo was heavily concentrated among five large clients, which reduced to four throughout the project implementation, all four operating at reduced capacities. All these factors were independent from the project.

52. **Global economic uncertainty.** The global crisis in 2008–2009 had a negative impact on the ability of the main industrial clients in BiH to make long-term production plans in the context of the European and global economic uncertainties. The client’s difficulty in planning posed a direct challenge to the port operator’s own business plans. In addition, the global decrease in commodity prices in 2015 and 2016 also affected the clients from BiH.

53. **Corridor dialogue.** The progress on the implementation of the memorandum on cooperation on rail transport along Corridor Vc, signed between the BiH and Croatian Railways, and of the pertaining implementation plan (specifying coordinated activities) was relatively modest. The coordination problems that still exist between the three rail operators (HZ Cargo, Railways of BiH Federation, and Railways of Republic Srpska) are causing delays in the transport of goods, being complemented by a lack of coordination with regard to pricing policies.

54. **Implementation delays.** Other factors that affected the implementation at various stages are the following:

- **Preparation works for the construction of port terminals.** Start of the construction works for the CT and the BCT was directly linked to the availability of rock-fill material from the construction of the connecting road to the port and the nearby motorway A1. These preparatory works started with delay and led to several extensions of the contract end date for preparatory works, which was finally completed in September 2011, and affected the dynamics of the BCT. Despite the time impact of using rock-fill material from the motorway construction, it is worthwhile mentioning that the overall arrangement was beneficial for both institutions (PPA and Croatian Motorways [HAC]), resulting in major savings for the HAC (as they incurred no additional costs for the disposal of surplus material) and for the PPA as well since there was no need to pay for delivery of large quantity of rock-fill material to the port, thus resulting in significant savings for the state budget (approximately €10 million).
- **Insufficient counterpart funding in 2009.** This led to a change in the disbursement ratio to increase the percentage of expenditures to be financed from the loan from 60 percent to 90 percent under the Works category. It is worthwhile mentioning that this was a systemic portfolio issue triggered by the financial crisis and the disbursement percent from the loan proceeds was increased for more than half of the projects.
- **BCT and the need for additional financing.** The design of the BCT was scaled up by the PPA and LP to reflect two major changes: (a) new market needs—fast-growing transshipment activity and need for larger vessels (Capesize vessels instead of Panamax) and (b) adjustments in technical parameters reflecting the detailed geotechnical analysis prepared during design preparation. Although the new approach was aimed at better addressing the long-term needs of the port, it slowed down the process of design

preparation and led to a substantially increased cost compared to the original estimate, the cost difference being of €40.9 million. This finally triggered the additional financing processed in June 2011.

- **Financial gap for the CT.** The additional financing also covered a financing gap of €10.4 million for the CT which derived from the too-low estimates made by the designer for the quay construction and the storage area.
- **Ability of LP to finance, procure, and install terminal equipment on time for the opening of the BCT.** The delays in obtaining the loan to finance the equipment by LP and the production problems faced by the Chinese supplier (who needed to obtain some specific certificate to be able to deliver on the EU market) led to significant delays in the delivery and instalment of the equipment for the BCT and, as of the date of the implementation completion and results report (ICR), the terminal is expected to become fully operational only by mid-2017.
- **Cooperation among various Croatian institutions.** The lack of cooperation among various governmental institutions was more prominent with respect to the port entrance terminal/main gate. In this case, the issuance of the Permit for Use depends on (a) the construction of the connecting road infrastructure (under the responsibility of the HAC) which will be completed by the end of 2016 and (b) the construction of the external parking water removal infrastructure (lagoon). Although the design of the water removal infrastructure was finalized, the related works could not be tendered due to the lack of clarity with respect to the ownership and maintenance of the infrastructure to be built, the major players being the PPA, HAC, and Croatian Roads, all of them being under the leadership of the Ministry of Maritime Affairs, Transport and Infrastructure.

Midterm Review (MTR)

55. The MTR was conducted in April 2009 (the date envisaged in the original PAD was December 2008) and concluded that the project was likely to achieve its development objectives. This conclusion was made based on an analysis against the project's result framework. More specifically, the review noted that (a) the traffic growth was sustained in 2008 (+21 percent/2007 and +83 percent/2005); (b) the corridor through Ploče continued to be price competitive for its main markets compared with alternative corridors; (c) the Ministry of Maritime Affairs, Transport and Infrastructure and the Board of the PPA formally approved in December 2008 the draft decision to extend the concession for the container and bulk terminal, based on the term sheets agreed in the spring of 2008; (d) the negotiations for the CT concession were successfully completed on April 30, 2009; (e) bulk and container handling productivity increased four and two times, respectively, as a result of investments in new handling equipment by LP in 2008; (f) LP secured letters of intent from major clients for a total of 5.3 million tons September 2008; and (g) the financial performance of the PPA and LP steadily improved until 2008.

56. The MTR rated implementation progress as being Satisfactory, with all components expected to be completed by the closing date at that time (December 31, 2011), with the exception of the scaled-up version of the bulk terminal, for which a one-year extension was flagged. The review signaled a delay in the completion of the bidding documents for the PCS and insufficient counterpart funds allocated for 2009 to cover actual project needs (alerting that a change in the percentage of disbursement may be requested). While the overall environmental management on the site was rated Satisfactory, the World Bank team and PPA agreed during the MTR on measures to improve reporting on environmental aspects.

57. The MTR report outlined a number of aspects requiring close attention for the full achievement of PDOs by the end of the project: (a) the need for additional funding to scale up the BCT and the likelihood of an extension of one year of the project closing date, anticipating the need for further extensions in case of additional delays on procurement and design; (b) the need for further concerted actions to improve the overall corridor efficiency, actions that require an active dialogue with all parties involved in Croatia and BiH; (c) the need to finalize the BCT concession agreement between the PPA and LP once a final decision on the scaling up of the bulk terminal was taken; (d) the need to update the original traffic forecast taking into account the traffic decline in 2009 due to the global crisis (updated traffic projections were considered when the additional financing was prepared); (e) the need for advice to be provided to LP on its approach to raise financing in line with the project LDP (leading to a reduction in the state share), considering that the market conditions were less favorable to raise private capital than at the appraisal stage, again due to global crisis, LP financial performance continued to improve; and (f) the need for potential temporary budgetary support to be provided to the PPA to maintain a positive cash balance and a suitable debt service coverage ratio.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

Design and Implementation

58. The PAD's Results Framework was pretty complex and comprised a list of outcome indicators divided in five areas and of intermediate outcome indicators divided per project component. The complexity of the Results Framework was driven by the PDO itself, which included three main elements—improved capacity, efficiency, and quality of services in the Port of Ploče—focusing also on the coordination aspects of all the corridor participants. The PDO reflected the integrated approach to Corridor Vc development envisaged by the project and therefore tried to cover all three physical, financial, and operational dimensions of the corridor.

59. The design included both quantitative and qualitative indicators, covering both investments and institutional results, with baselines established for each indicator. Responsibility for data collection was mainly shared by the PPA and LP, with one indicator envisaged to be monitored by the railways and another one monitored by the Ministry of Finance and Ministry of Transport. Most of the indicators were to be collected annually, the exceptions being the lost time accidents, average vessel waiting time for available berth, ability to track cargo, and the cargo throughput, reported monthly.

60. During the project implementation, some of the original indicators selected to monitor progress toward the PDO proved to be difficult to collect (for example, Ploče Corridor [inland cost] cost versus Rijeka), while others were not directly linked to the project (rail yard capacity and average commercial speed of Corridor Vc).

61. The monitoring framework was amended two times: (a) first time in September 2011 when the additional financing package was processed, to capture the expected improvements in capacity triggered by the scaling up of the BCT and to reflect the adjusted traffic forecasts (downward) after the traffic setback in 2009 and (b) another one in June 2014, to simplify the Results Framework by removing the indicators not directly linked to the project and by revising target values for indicators affected by the evolution of traffic patterns (such as overall traffic and capacity of the BCT).

Utilization

62. Most of the performance indicators were monitored periodically and reported in the aide memoires of the supervision missions. The Port of Ploče made all the efforts to adequately collect the indicators and closely worked with LP toward providing accurate data.

2.4 Safeguard and Fiduciary Compliance

Environmental Safeguards

63. The project fell under Category A for the purpose of OP/BP 4.01 Environmental Assessment. The policy was triggered by the construction of the new port terminals—the CT and the BCT—and for each of these investments, an Environmental Impact Assessment (EIA) and EMP fulfilling World Bank requirements for a Category A project were prepared and publically consulted. Cumulative impacts of the port expansion were taken into account in the EIAs. The supporting port infrastructure within the port area was rated as of Category B with no expected significant environmental impacts. This component was managed and monitored through site-specific EMPs.

64. The major environmental issues envisaged at the project preparation stage were: (a) its potential impact on the biodiversity of the adjacent RAMSAR site located in the Neretva Valley and (b) the impact on marine and aquatic life that might have resulted from the dredging operations and bulk cargo manipulation. Given the nature of the project interventions supported by the project, which were primarily confined within the port perimeter as well as the specific location, the triggered safeguard policies were OP/BP 4.01 Environmental Assessment, OP/BP 4.04 Natural Habitats, and OP/BP 7.50 Projects on International Waterways.

65. During the project implementation, there were no environmental incidents or significant non-compliances. However, there were occasional temporary non-compliances in mitigation measures implementation and quality of monitored environmental features. Environmental concerns were not addressed in the concessioners' contracts (making their implementation in the operational period difficult), non-compliances were often not addressed on time, and the finalized Waste Management Plan was not delivered before the

project closing. Inconsistency in communication and capacity during the project duration has been noted.

66. It is worth noticing that some project activities (deposition of dredged materials) had a beneficial effect on natural habitats and endangered bird species. The PPA will need to make a decision upon the recommendations of the ornithologists to maintain a part of the deposit basin to ensure a follow-up of the positive effects.

67. Monitoring measures and related responsibilities prescribed in the EIAs by the Croatian Ministry of Environment and Nature Protection will ensure further implementation of environmental monitoring and mitigation measures during the operational phase.

68. Based on all -the above, the safeguards compliance rating for the overall project implementation is rated as Moderately Satisfactory.

Financial Management

69. Both Loan Agreements required project audit as well as audits for the PPA. The project has almost always been rated Satisfactory from the financial management standpoint. The proceeds of the initial loan have been 100 percent disbursed. With regard to the Additional Financing Loan, the disbursements reached 94 percent of the loan proceeds, with the rest being cancelled at the closing date. Semiannual interim unaudited financial reports were submitted to the World Bank on time in the agreed content and format. The latest submitted interim unaudited financial reports were for the first half of fiscal/calendar year 2016, and such reports have been found acceptable by the World Bank. The project and entity financial statements have been audited by auditors acceptable to the World Bank, on acceptable terms of reference. The audit reports for the PPA were submitted to the World Bank within the agreed time frame and were found acceptable. In addition, apart from some issues with the counterpart funding in 2009, the project benefited from sufficient budget allocation throughout the project implementation.

Procurement

70. Overall, the procurement arrangements are rated as Moderately Satisfactory. Procurement arrangements were well-defined and most of procurement procedures under the project was completed in 2014 with very few new procurements carried out in 2015 and 2016. The procurement procedures subject to post review were found to be in compliance with the procedures provided for in the Loan Agreement and the Procurement and Consultant Guidelines. Although emphasis was put on monitoring of civil works contracts work programs and compliance by contractors with the contract to limit the impact of claims by contract end, some of the contracts registered delays and will be finalized after the project closing date. This triggered the Moderately Satisfactory rating.

2.5 Post-completion Operation/Next Phase

71. Maintenance and operation of the physical investments under the project are going to be under the responsibility of the PPA and the operator LP. The CT/multipurpose

terminal and the BCT are subject to two concession agreements signed on January 18, 2010 by the PPA and LP, regulating the division of roles and responsibilities between the Port Authority and the concessionaire, the concession fees, and the investments expected from the concessionaire over the life of the concession. While the CT was transferred to the concessionaire in early 2011, the handover of the BCT can take place only after issuing of the Permit for Use, which is conditional upon the organization of the technical audit planned for December 2016.

72. The port entrance terminal/main gate (MG) is still to become operational, although the construction works were finalized. Toward this, the PPA needs to obtain the Permit for Use, which cannot be issued before (a) the HAC completes the construction of the connecting road infrastructure, which includes connecting road to 'Čeveljuša' junction and road connection to the city with rail overpass and (b) the construction of the infrastructure (lagoon and drainage canal) required for storm water removal from already constructed external parking lot. The design was finalized, but the related works were delayed due to the lack of clarity with respect to the ownership and maintenance of the infrastructure to be built (outside the maritime domain). Finally, the PPA committed to take over the piece of land on which the infrastructure is to be located and finance it, all to obtain the necessary permit and to enable the entrance terminal to become fully operational. However, to be able to do this, the PPA still needs the decision of the Ministry of Maritime Affairs, Transport and Infrastructure to allow the PPA to make this investment. After its operationalization, the PPA will maintain it with funding from its own budget and is also expected to maintain the project-financed equipment and information technology (IT) system procured under the PCS.

73. Overall, the discussions on the efficiency of Corridor Vc and on the coordination of all corridor participants will continue beyond the closing date of project, in the context of other World Bank-led initiatives aimed at increasing the regional connectivity such as the ongoing Sustainable Croatian Railways in Europe Project or the planned Railways Modernization Project in BiH.

74. With regard to financial sustainability, the PPA's financial situation is expected to improve once the new BCT is operational and LP starts paying a higher concession fee. In addition, when the additional financing was processed in 2011, it was anticipated that the PPA would need to receive budget support for repayment of the loan. Thus, the PPA received in 2016, a Government contribution of €7 million and, based on the cargo throughput and financial projections, it will need similar contributions in 2017 and 2018. However, it's worth noticing that the Port of Ploče traffic is very cyclical, and in case the cycle becomes favorable again, the financial projections will be improved.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Objectives. Rating: High

75. The project remained highly relevant throughout its implementation, being reflected in the Country Partnership Strategy (CPS) approved in 2008 and in the current CPS approved in June 2013 and covering the period 2014–2017.

76. The current CPS, approved just before the EU accession on July 1, 2013, noted the need for Croatia to (a) create space for the private sector, while improving the role of the state as service provider and (b) improve its regional cooperation and mentioned the TTI Project as contributing to the regional positioning of Croatia as a gateway to BiH.

77. The TTI, with its emphasis on reforms to increase private sector participation in the port activities, measures to improve the dialogue among the Corridor Vc participants and the financing of infrastructure to increase the port capacity made an important contribution to the Government program and the current CPS.

Design and Implementation. Rating: Substantial

78. The project intended to develop trade along Corridor Vc by improving the capacity, efficiency, and quality of services on the southern end of Corridor Vc with particular focus on the Port of Ploče and on coordination aspects among all corridor participants. The project's components were adequately designed to achieve the PDO. Component 1 contributed to increased port capacity by completing the BCT, the CT, and the supporting small infrastructure. Components 2 and 3 will contribute to improved quality of services and efficiency through the PCS and the assistance provided to the PPA in implementing its business plan and signing a concession agreement or the new terminal.

3.2 Achievement of Project Development Objectives

Rating: Substantial

The assessment of the development objectives was undertaken based on all the indicators outlined in the PAD (increased capacity, efficient operations, quality of services, support regional development and private sector involvement) and not only by looking at the primary objective “to develop trade along Corridor Vc”.

Increased Capacity

79. Overall, this is rated Substantial.

80. The investments in major port infrastructure—new BCT, new CT/multipurpose terminal and new entrance facility—were completed, while the construction/rehabilitation of the supporting port infrastructure (road, rail, water, wastewater, and power supply) was also finalized.

81. The new CT was inaugurated in August 2010 and is fully operational, having a capacity of 66,000 TEU.

82. The construction of the BCT, completed in June 2016, is a major achievement given the value of the civil works contract of €53.6 million (the highest value so far implemented

on a World Bank-funded project in Croatia) and the fact that the contract management was mostly handled by the technical staff in the PPA with occasional support from external consultants. This is a major achievement also in the context of the relationship between the PPA and LP, which added more complexity to the contract management and the implementation of works. However, the BCT cannot become operational before the delivery of the related equipment (amounting to €30 million), which is under the responsibility of LP. According to the contract with the supplier, the current deadline for the completion of the delivery is July 2017, with significant delays compared to what was initially planned. The reasons for delays in the procurement of the equipment were related to the delays in obtaining the loan to finance the equipment by LP and supplier production problems (the supplier is a Chinese company and needed specific certificates to be able to deliver on EU market). Also, the fact that demand/traffic has been constrained in BiH made the whole infrastructure need less urgent and, as a result, made the achievement of the BCT less urgent for LP.

83. The delays in procuring the equipment added to the delays in the construction (four and a half years compared to the initial deadline—end of 2011), which were triggered by the multiple revisions to the infrastructure design and the design approval which took years, the delayed signing of the contract because it was happening in the middle of a major change in the Government, and the delays in contract execution which was two times longer than expected because of the contractor's inability to properly organize and implement construction works in a demanding marine environment. The indicator on the increase in the bulk port capacity will be met in the summer of 2017, once the BCT becomes operational.

84. The construction works for the port entrance terminal/main gate were finalized and the main gate will become operational by the summer of 2017, after finalization of the adjacent infrastructure and the issuance of the Permit for Use.

85. The smaller infrastructure contracts (port roads, drainage, and so on) were completed and the all the pertaining Permits for Use are to be obtained by the end of 2016.

86. Two of the three indicators related to capacity have been met and the third indicator will be met once the new BCT is operational.

Increased Efficiency

87. This is rated Substantial.

88. Four out of the five indicators related to efficiency were met. The fifth indicator related to unloading capacity at the new bulk terminal will be met once the terminal is operational.

Increased Quality of Services

89. This is rated Modest.

90. In addition to the investments in the port capacity, increased quality of services was to be achieved through introduction of a modern electronic PCS and strengthened corridor dialogue among corridor participants.
91. The PCS integrating all members of the port community has been developed and is ready to be tested once the full installment of the equipment for the managing and surveillance system at the port entrance is completed. Its implementation will be done gradually and transition arrangements will be discussed with each stakeholder.
92. Some of the modules of the PCS (announcement of ships, liquid cargo module, and customs) are currently being used by the liquid cargo terminal operator (Naftni Terminali Federacije doo), customs, agents, and forwarders who in their daily operations are involved in the storage and shipment of liquid cargo.
93. PCS will be fully operational once LP fully integrates its IT system with the PCS, which is expected in 2017.
94. With regard to strengthening corridor dialogue among corridor participants, the railways companies of Croatia and BiH signed in 2006 a memorandum of cooperation with the objective to improve coordination and effectiveness of rail transport along Corridor Vc and an action plan specifying individual coordinated actions that need to be undertaken to achieve the overall memorandum objective. However, the implementation of the memorandum was done to a limited extent. While in the initial stages of the project regular coordination meetings between representatives of Croatian and Bosnian Railways were held, in 2011, the focus on this cooperation significantly reduced due to, among other reasons, management changes in all three operators.
95. The World Bank team repeatedly drew the attention of the PPA and LP to the need to arrive at a common understanding of the challenges, obstacles, and possible solutions to trade competitiveness issues on Corridor Vc through stakeholders' meetings.
96. Toward the end of the project, the PPA commissioned a study looking at ways to improve efficiency and competitiveness of Corridor Vc and the competitiveness of the Port of Ploče. Within the context of this study, the PPA has completed Corridor Vc stakeholders' meeting in Sarajevo, Ploče, and Zagreb and has visited EU officials to discuss Corridor Vc issues. The implementation of the recommendations of this study will very much depend on the dialogue among all the corridor participants, which requires further enhancement and which is being tackled through other World Bank-supported initiatives related to regional connectivity.
97. There were two indicators directly linked to the quality of services; one already met and another one to be met once the PCS is fully operational.
98. In addition to the indicators directly linked to the PDOs, the Results Framework also included two sets of indicators related to (a) Support Regional Development Competitiveness and (b) Private Sector Involvement.

99. There were two indicators related to Support Regional Development Competitiveness.

100. The first one was related to cargo throughput (excluding liquid bulk) and was not achieved due to traffic evolutions during the project implementation. Although the port capacity has been substantially enhanced, due to circumstances outside of the PPA, the traffic in the Port of Ploče went through major fluctuations in recent years and as of May 2016, the cargo throughput is 2.5 million tons per year (the same value as 2005). The traffic in the Port of Ploče is highly dependent on the economic activities in BiH (about 90 percent of cargo traffic and 98 percent of containers traffic). At the beginning of the project, the bulk traffic was heavily concentrated among five large clients. These clients reduced to four during the project implementation and, in addition, all four are operating at reduced capacities. The lost bulk cargo throughput has not gone to other ports because of competitiveness issues but has reduced because of macro conditions affecting its hinterland.

101. With respect to the second one, related to Ploče Corridor (inland cost) cost versus Rijeka and Bar, the team was not able to locate the report prepared at the beginning of the project on how this PDO indicator was calculated. However, during the preparation of the port's master plan in 2006, a detailed analysis was carried out, comparing the transport costs from Ploče's main clients to alternative ports, focusing on Corridor Vc. The analysis concluded that the Port of Ploče and Corridor Vc had a net advantage both by road and rail to all major clients of the port, thus generating significant transport savings. While there have been improvements in the infrastructure, there is still room for improvement in the corridor's performance. The coordination problems between the three rail operators (HZ Cargo, Railways of BiH Federation, and Railways of Republic Srpska) are still causing delays in the transport of goods. In addition, there is a lack of coordination with regard to pricing policies. However, with regard to containers traffic, based on the analysis conducted by the MC – Mobility Consultants under the project in 2015, it was concluded that Ploče was competitive for containers transportation by rail up to 250 km compared to Bar and Rijeka.

102. With respect to Private Sector Involvement, both indicators were fully achieved. The concession agreement for the CT and the BCT was signed in January 2010 between the PPA and LP (concessionaire) within an improved legal framework. Based on this agreement, the CT was formally transferred to the concessionaire in early 2011. The BCT will be transferred immediately after the issuance of the Permit for Use (December 2016).

103. In addition, LP has been fully privatized. In the first phase, the state ownership in LP was reduced to less than 20 percent, with the private sector ownership being led by Croatian pension funds and banks. This was done in 2011 through recapitalization through an initial public offering on the Croatian stock market. This was the first equity raising of this type after the financial crisis and it was done in a very sensitive environment, with a lot of support from the World Bank and with no social unrests.

104. Looking at the project’s Results Framework, out of the 15 final PDO indicators, 9 of them have been fully met and 3 others will be met once the BCT and the port entrance terminal/main gate (MG) are operational (summer of 2017).

3.3 Efficiency

Rating: Negligible

105. The economic analysis indicates that overall the project approaches a rate of return of 12 percent (using a 6 percent discount rate) and can be considered as economically efficient. The results were substantially influenced by much lower traffic than expected. The actual economic performance will depend on the port capacity to attract additional traffic. Details are provided in annex 3.

Table 2

Both Terminals	
Net Present Value (NPV) (€1,000)	77,412
Economic Internal Rate of Return (EIRR)	11.5%
Benefit/Cost Ratio (B/C Ratio)	1.70

Multipurpose/ Container Terminal Only	
NPV (€1,000)	-30,910
EIRR	-0.2%
B/C ratio	0.40

Dry Bulk Terminal Only	
NPV (€1,000)	86,141
EIRR	16.3%
B/C ratio	2.46

106. From the financial point of view, based on the assumptions described in annex 3, the project is not financially viable, with a financial internal rate of return of -10 percent. This is triggered by the fact that the traffic was much lower than the forecast, but also by the fact that the concession fees, in particular the annual fixed fee, is lower than anticipated for both terminals.

3.4 Justification of Overall Outcome Rating

Rating: Moderately Satisfactory

107. The PDOs remain highly relevant to the current priorities of the Government of Croatia and are well aligned with the World Bank's latest strategy for the country. Therefore the relevance of objectives is rated High and relevance of design is rated Substantial. With regard to achievement of the PDOs, the project is rated Substantial. However, the efficiency is rated Negligible since it will very much depend on the capacity to attract additional traffic.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

108. Not applicable.

(b) Institutional Change/Strengthening

109. Major institutional improvements have been achieved under the project with respect to private involvement in the Port of Ploče. These have been triggered by (a) the privatization of LP to eliminate the conflict of interest between regulatory and commercial roles of the public and private sector, (b) revision of the priority concession between the PPA and LP to have a balanced agreement to govern their relationship, and (c) extension of the priority concession agreement for the two new terminals.

110. In addition, the development of the electronic PCS, integrating all members of the port community into a seamless information system, will enable integration of information flows along Corridor Vc, thus facilitating systematic performance measurement across the transport chain.

111. The project also attempted to institutionalize Corridor Vc development by (a) signing the memorandum between the BiH and Croatian Railways and the related action plan; (b) setting up working groups for the PCS and the rail corridor system; and (c) holding regular meetings to monitor the implementation of the agreed actions. This initiative was pursued in the first years of project implementation, but was basically stopped in 2011 when there were changes in the management of the three railways companies.

(c) Other Unintended Outcomes and Impacts (positive or negative)

112. The deposition of dredged materials to the deposition basins during the BCT construction created favorable conditions for nesting of rare birds and consequently increased their population in the area.

113. Also, it is noteworthy mentioning that Port of Rijeka Authority showed interest in integrating the PCS of Ploče for their business needs using the knowledge and know-how from the PPA. Implementation of PCS Ploče in port community Rijeka will be done based on defined business rules of Port Community Rijeka and according to business rules of stakeholders and Port of Rijeka Authority. Also, the Ministry of Maritime Affairs, Transport and Infrastructure expressed its intention to implement and use PCS Ploče as a unique PCS for all ports in Croatia and to integrate it with the national maritime system CIMIS.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

114. No beneficiary survey or stakeholder workshops were conducted at ICR stage.

4. Assessment of Risk to Development Outcome

Rating: Moderate

115. With respect to the physical investments, the risks stem from the operationalization of the BCT and of the main entrance facility. On the BCT, the Government and PPA will need to follow up closely with LP to make sure that the equipment for the BCT (already ordered and currently being produced) is delivered as per the agreed deadlines and the terminal is operational by summer of 2017. On the main entrance facility, the PPA will need to make sure that all the conditions are met for this facility to become operational by the summer of 2017.

116. In addition, with respect to the PCS, there is a risk stemming from the potential reluctance of the stakeholders to connect with the PCS and the PPA will need to develop an interfacing strategy with all of them.

117. From commercial perspectives, the traffic remains a risk and, although this is highly and mostly dependent on macroeconomic factors, the PPA will need to continue the dialogue on improving the Corridor Vc competitiveness with all the corridor participants, building on the recommendations of the study conducted under the project. It is worth mentioning that the Port of Ploče traffic is very cyclical and, since the project was closed at a time of low demand and low price for the commodities produced by BiH clients, there is a certain traffic risk. However, when this cycle becomes favorable (like it was temporarily the case in 2010), the infrastructure will be justified again.

118. The cooperation between BiH and Croatia Railways and coordination among the key stakeholders still needs to be enhanced. The World Bank will continue its involvement in the region through other ongoing initiatives.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

119. The World Bank prepared an important project with well-selected objectives and supported by appropriate physical investments and technical assistance activities. The project interventions were essential to develop trade along Corridor Vc and the objectives of TTI remain very relevant today. The project development objectives reflected the guidance at the time of preparation on PDO formulation and the results framework was considered innovative and comprehensive. However, expectations changed over time and if the project were to be prepared now, the formulation of the PDO and the results framework would have been different.

120. The PAD was especially articulate regarding the background analysis that was behind the alternatives agreed to be pursued under the project.

121. Project preparation was carried out with adequate technical and financial resources, being fully consistent with the World Bank's fiduciary and safeguards requirements. Extensive consultations were conducted with various partners including the EBRD, EIB, and EC to present the proposed project and to make sure it was aligned with other ongoing initiatives at that time. The risks faced by the project were properly identified and some of them (cost overruns, traffic-related issues, and insufficient cooperation among key stakeholders) materialized. The project was ready for implementation, with the engineering design for the first year's activities complete and read before Board presentation. In addition, the procurement documents for the first years' activities were complete and the Project Implementation Plan was finalized before negotiations.

122. One aspect that could have benefited from additional consideration is the initial project implementation time frame. Five years for the design and implementation of such complex infrastructure proved to be optimistic and, in the end, required several extensions.

(b) Quality of Supervision

Rating: Moderately Satisfactory

123. The project was closely supervised by the World Bank team and sufficient budget and staff resources were allocated. Regular supervision missions and technical visits, including site visits, were conducted throughout the project implementation. The composition of the supervision teams reflected the project needs, including transport experts, engineers, financial, and procurement and safeguards specialists, both from Washington, D.C. and from the field. Mission aide memoires and implementation status and results reports (ISRs) were well-written, reflecting progress, delays, and challenges and including honest ratings on the project implementation objectives and implementation progress. The discussions held with the counterparts and the input provided to this ICR indicated that the team in the Port of Ploče really appreciated the support and the constructive manner in which the World Bank team handled the project.

124. However, while in the first half of the project there was continuity in the leadership of the project on the World Bank's side, the second half was characterized by a high turnover of the project team leaders (4 starting in 2011). World Bank supervision was proactive as illustrated by the decision to positively respond to the need for the additional financing and to restructure it two times. Critical implementation issues that the supervision missions addressed included overrun of construction costs during the first part of the project, management of the environmental compliance, and need for technical experts to support the PPA team. During the second phase, the project could have benefited from more attention to soft project interventions (such as facilitation of dialog among Corridor Vc participants) and less focus on the physical investments.

125. Apart from the regular supervision activities, it is worth mentioning the special efforts that the World Bank team put in, especially into the first part of the project, into reviving the cooperation among the Corridor Vc participants by initiating the preparation

of a semiannual corridor newsletter with input from corridor participants and sharing information about activities under the TTI Project. These efforts continued after 2011, but in a less structured manner. The World Bank team continued to engage with various stakeholders, but there was no institutionalized way to follow up on various issues.

126. Also, recognizing the complexity of the concession agreements between the PPA and LP, the World Bank team was actively involved in this activity and constantly reviewed various drafts, making concrete recommendations and advising the implementation team on the required specific expertise.

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately Satisfactory

127. The ICR rates the overall World Bank performance as Moderately Satisfactory, considering the satisfactory rating performance in ensuring quality at entry and the moderately satisfactory quality of supervision.

5.2 Borrower Performance

(a) Government Performance

Rating: Moderately Satisfactory

128. The Government proved commitment to the project objectives since its preparation, as outlined in the LDP signed in October 2006. The LDP was detailing specific measures to be taken by the Croatian Government to achieve the project objectives with respect to increasing the private involvement in the Port of Ploče (including legislative changes), providing the PPA the necessary budget from the state budget, and enhancing the dialog among Corridor Vc participants. In addition, the two loans financing the project were ratified on time and the implementation could start as planned. Apart from a temporary problem in 2009 (due to budget constraints triggered by the financial crisis), the project had no issues with the counterpart funding.

129. However, it should be noted that more active involvement of the Government during project implementation could have mitigated the delays in the approval of the contract for the BCT and the delays in the completion of the infrastructure adjacent to the main entrance.

(b) Implementing Agency or Agencies Performance

Rating: Moderately Satisfactory

130. The overall responsibility for project coordination was with the PPA through a Project Implementation Unit (PIU), gathering relevant experts from its various departments. The PIU will be responsible for the day-to-day management of the project including procurement, financial management, and liaison with the World Bank.

131. The PPA made all the efforts to establish and maintain an operational team responsible with the implementation of the project. In addition to the staff fully dedicated to the project (PIU), the PPA benefited from consultants and technical advisors recruited to support them directly. Financial performance of the PPA and monitoring of the project performance indicators have been reviewed on a continuous basis during the project implementation and progress reports were prepared periodically.

132. Given the magnitude of the investments and their complexity, the completion of the works for the CT/multipurpose terminal, the BCT, and the main entrance facility represent major achievements for the PPA. Some noteworthy facts are that the civil works contract for the BCT is of the highest value so far implemented on a World Bank-funded project in Croatia and the contract management was mostly handled by the technical staff in the port authority, that is, the civil servants, and quite independently (the Central Government played a marginal role) with only occasional support from external consultancy. Moreover, the contract management and works implementation were challenging given also the delicate relations with the concessionaire (which were not always smooth, and depended on political influence).

133. However, it should be noted that in the end the project took twice the initial implementation period and this was not entirely attributable to additional financing. In addition, the focus was mostly on the physical investments, leaving other project interventions (such as facilitating the cooperation among the Corridor Vc participants) on the second plan.

(c) Justification of Rating for Overall Borrower Performance
Rating: Moderately Satisfactory

134. Overall borrower performance takes into consideration both the Government and the implementing agency (Port of Ploče) performance during preparation and implementation. On the basis of justification provided above, the borrower's overall performance is rated Moderately Satisfactory.

6. Lessons Learned

135. The following are the lessons learned:

- Duration of project implementation should be realistically considered from the beginning when the project finances such large and complex physical investments.
- The project design and the PDO statement should pay particular attention to the issue of attribution and avoid claiming impacts that are beyond the scope of the project.
- The complexity of projects reliant on regional cooperation makes them very challenging and special attention needs to be paid to the related project interventions and to facilitating the dialog among the various stakeholders.

- Factoring in aspects outside the control of entities involved in the project implementation is crucial when there are many stakeholders contributing to the project.
- The impact of global markets on regional markets can be significant. During the TTI Project implementation, the market for steel production changed totally in 2011 - 2012 as Asia invested massively in 2009 and 2010 in new production capacity, changing the economics of steel production in Southeast Europe and impacting clients of the port in BIH.
- The ability of the World Bank to quickly react to a changing project environment is highly relevant and the project did a very good job at correctly identifying the risk to its implementation.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

136. Input provided by the PPA is included in annex 7. It includes a description of the project implementation, challenges faced, and results, with an emphasis on the good collaboration between the PPA and the World Bank team.

137. The borrower reviewed the draft ICR and had no comments on with the content of the report and proposed ratings.

(b) Cofinanciers

138. The cofinancing from the EBRD was cancelled in 2012 due to (a) the additional financing provided by IBRD in 2011; (b) the cost of EBRD financing which was higher than IBRD; and (c) the early involvement of IBRD into the design of the big port infrastructure.

(c) Other partners and stakeholders

(e.g. NGOs/private sector/civil society)

139. Not applicable.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in €, Millions)

Components	Appraisal Estimate (€, millions)	Actual/Latest Estimate (€, millions)	Percentage of Appraisal
Component 1: Port Infrastructure Development (Original and Additional Financing)	63.30	129.68	205
Component 2: Trade and Transport Integration	1.70	2.20	129
Component 3: Project Implementation	4.00	1.32	3
Total Baseline Costs	69.00	133.20	193
Physical Contingencies	9.30	—	—
Price Contingencies	5.10	—	—
Interests during the implementation	—	4.70	—
Total Project Costs	83.40	137.90	165
Front-end fee PPF	—	—	—
Front-end fee IBRD for original loan	—	—	—
Front-end fee IBRD for the Additional Financing	0.10	0.125	125
Total Financing Required	83.50	138.03	165

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (€, millions)	Actual/Latest Estimate (€, millions)	Percentage of Appraisal
Borrower - Port of Ploče Authority	—	0.10	4.40	4,400
Ministry of Finance	—	21.00	27.10	129
EBRD	—	11.20	0.40	4
IBRD	—	58.80	58.80	100
IBRD Additional Financing	—	50.00	47.30	95
Total Financing Required	—	141.1	138.0	98

Annex 2. Outputs by Component

1. Outputs by component are summarized in table 2.1.

Table 2.1.

Component	Output	Comment
<i>Component 1: Port Infrastructure Development</i>		
BCT	Construction completed	The terminal is still to become operational subject to the delivery of equipment (under the responsibility of LP)
CT/multipurpose terminal	Construction completed	The terminal is operational
Supporting port infrastructure	Construction works completed	The main entrance facility is still to become operational subject to completion of the connection road infrastructure and construction of the infrastructure for the storm water removal
<i>Component 2: Trade and Transport Integration</i>		
PCS	System developed	Its implementation will gradually start after finalizing the delivery of the equipment
<i>Component 3: Project Implementation</i>		
Business plan and concession	Both concession agreements signed	CT/multipurpose terminal transferred to the concessionaire BCT still to be transferred to the concessionaire after obtaining the Permit for Use
Technical services	Consultancy services to support the design and implementation of the project components completed	
Audit services	Contract signed and audits submitted on time	
Training	Procurement and safeguards training completed	
Procurement support	Accounting software updated	

Annex 3. Economic and Financial Analysis

1. This annex presents the economic reevaluation of the project, referring to the two major investments of the project: the construction of the new BCT and the construction of the new CT/multipurpose terminal. At the appraisal of the project, the costs of these investments were covering 95 percent of the total costs, while at completion, they were representing 80 percent of the total project costs.
2. The results are presented in table 3.1, using a discount rate of 6 percent.

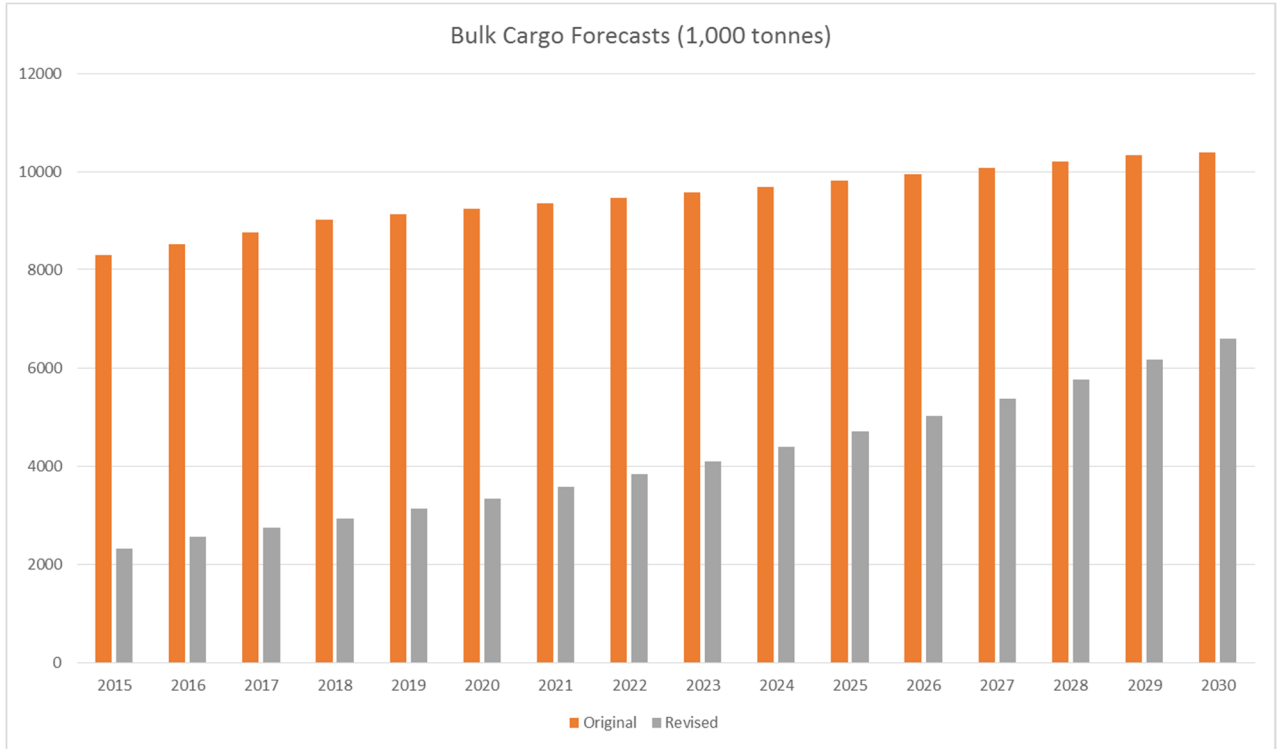
Table 3.1.

Both Terminals		
NPV (€1,000)		77,412
EIRR		11.5%
B/C ratio		1.70
Multipurpose/Container Terminal only		
NPV (€1,000)		-30,910
EIRR		-0.2%
B/C ratio		0.40
Dry Bulk Terminal only		
NPV (€1,000€)		86,141
EIRR		16.3%
B/C ratio		2.46

3. The CT/multipurpose terminal was built in 2007–2010 and inaugurated in August 2010, being fully operational. The cost-recovery-based concession arrangements have been established between the PPA and LP (concessionaire) in January 2010. Based on this agreement, the CT was formally transferred to the concessionaire in early 2011. The contract for the construction of the BCT was signed March 29, 2012, the works were completed in 2016, and the terminal is ready for operations subject to the equipment installation by the port operator LP.

4. The observed bulk cargo traffic has been much lower than expected. In 2015, the total volume of bulk cargo was 2.3 million tons against more than 8 million tons forecast. Even considering a fast progress in attracting additional traffic, the updated forecasts remain much below the original preparation figures.

Figure 3.1. Bulk Cargo Forecasts



5. The observed volume of containers has been well below expectations.

Figure 3.2. Containers Forecasts

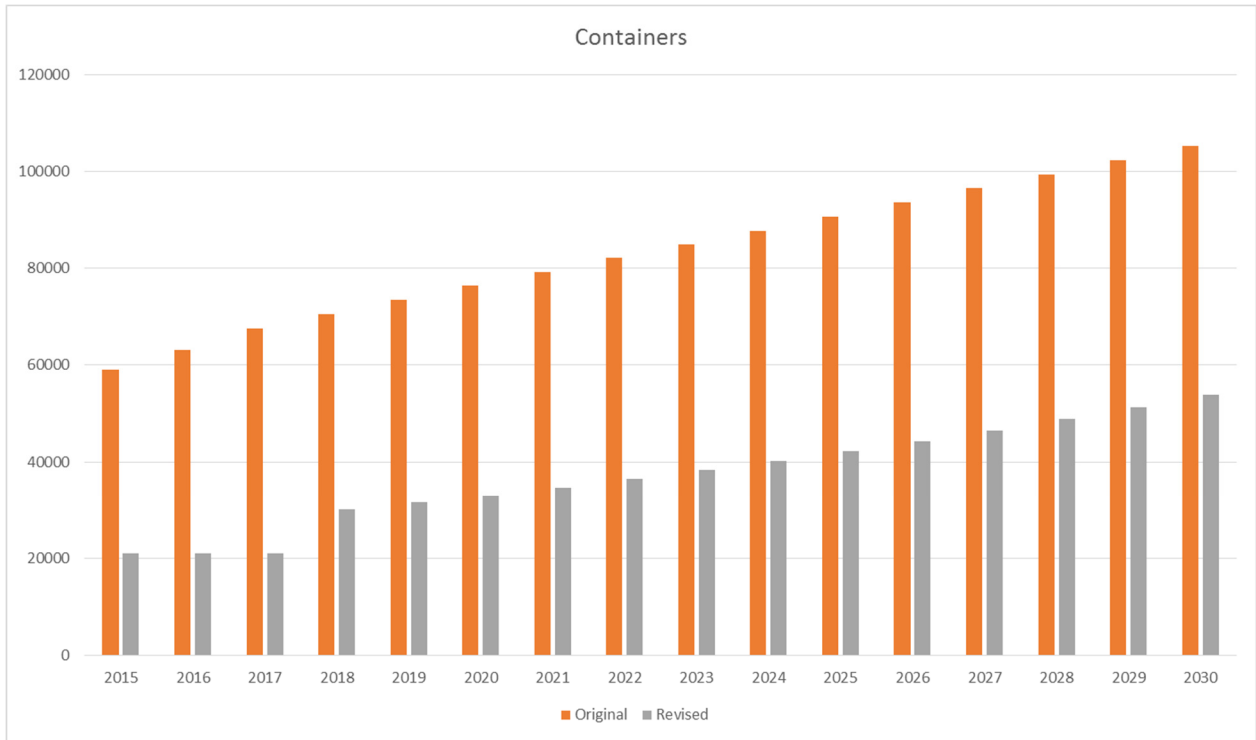


Table 3.2. Investment Cost Comparison (€, millions)

	BCT	CT	Common Costs
Original Cost	83.8	33.6	10.3
Revised Cost	70.6	38.6	20.5

6. In the case of the BCT, despite the decrease in investment cost, the much lower than expected cargo forecasts led to a much lower economic performance; however, it was still satisfactory.

7. In the case of the CT/multipurpose terminal, the increase in investment costs and lower container traffic forecast lead to a poor economic performance.

8. The overall project approaches 12 percent and can be considered as economic efficient. The actual economic performance will depend on the port capacity to attract additional traffic.

Table 3.3.

	BCT	CT	Total operation
Original EIRR	29.6%	15.2%	26.0%
Revised EIRR	16.3%	0%	11.5%

9. **Economic aspects.** The economic analysis of the proposed scaled-up BT indicates that it is economically sound with an NPV of €33.9 million (using a 12 percent discount rate) and a rate of return of 15.3 percent. Compared with the original design, the scaled-up terminal brings an economic rate of return of 73.8 percent (NPV of €75 million), as a result of greater productivity and expanded potential client base.

10. From a financial point of view, the main objectives for the port were to (a) improve the financial performance by increasing capacity and technical efficiency of the PPA and concession holders to capitalize on traffic growth potential and thereby (b) create a self-financing port system to eliminate subsidies from the Government in the medium term.

11. The financial forecast has been prepared based on the following key assumptions:

- The financial analysis has been prepared in nominal prices with an annual inflation rate of 2 percent. Foreign exchange rates used were: 7.32 for euro to kuna; 6.09 for U.S. dollar to kuna; and 1.208 for U.S. dollar to euro, as applicable at the time of appraisal. These rates were kept for the updated model.
- The original model assumed that during the period 2010–2040, traffic volume would grow from 38,900 TEUs to 134,000 TEUs for containers; from 3.1 million tons to 7.8 million tons for bulk to be handled at the bulk terminals; and from 5.3 million tons to 11.3 million tons for total traffic in the entire port area. Revised assumptions indicate much lower levels of traffic, reaching 80,000 TEUs, 5.7 million at the bulk terminals, and 9.5 million at the entire port by 2040.
- Port tariffs are assumed to remain at the current level adjusted for inflation, after a 5 percent increase in 2011 for bulk cargo, reflecting the significantly higher productivity level of the new BCT. The 5 percent increase in 2011 was not materialized.
- The estimated concession fees consist of an annual fixed fee of €50,000 and a variable fee of €5 per TEU for containers, and an annual fixed fee of €100,000 and a variable fee of €0.10 per ton for bulk cargo.
- To handle growing cargo volume, new terminal operators would provide new equipment estimated at €42 million for bulk cargo and €4 million for containers. Actual amounts for bulk cargo was €30 million.
- While the estimated project cost of €83.4 million (including contingencies) of which €75.6 million was considered for the financial evaluation representing the port infrastructure, the revised amount reaches €138 million, of which €129.7 million correspond to infrastructure.
- The Government committed to provide subsidies totaling at least €29 million to cover counterpart funds. Subsidies reached €16 million in 2015 and expected subsidies for the period 2016–2020 are of €7 million per year. We do not consider further subsidies after 2020.

12. Under this hypothesis, the project is not financially viable, with a financial internal rate of return of –10 percent. This is triggered by the fact that the traffic was much lower

than the forecast, but also by the fact that the concession fees, in particular the annual fixed fee, is lower than anticipated for both terminals.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team Members

Names	Title	Unit	Responsibility/Specialty
Preparation/Lending			
Gerald Paul Ollivier	Senior Infrastructure Specialist	GTI02	Task Team Leader
Michel Audige	Consultant	GTI05	Lead Transport Specialist
Henry Kerali	Lead Transport Specialist		Lead Transport Specialist
Gregoire Carrier	Consultant	ECSSD - HIS	
Stjepan Gabric	Senior Water Supply and Sanitation Specialist	GWA03	Project Officer
Vladimir Skendrovic	Consultant	GTI03	Infrastructure Specialist
Gregoire Carrier	Consultant	ECSSD - HIS	
Stjepan Gabric	Senior Water Supply and Sanitation Specialist	GWA03	Water Specialist
Sunja Kim	Consultant	ECSSD - HIS	Senior Financial Specialist
Vladimir Skendrovic	Consultant	GTI03	Infrastructure Specialist
Martin Humphreys	Senior Transport Economist	ECSSD	Senior Transport Economist
Anders Halldin	Safeguards Specialist	Consultant	Safeguards Specialist
Gregoire Carrier	Traffic and Economic Evaluation	ECSSD	Consultant
Paulus Guitink	Senior Transport Specialist	ECSSD	Transport Specialist
Andrina Ambrose	Senior Finance Officer	LOA	Finance Officer
Yash Pal Kedia	Railway Specialist		Consultant
Graham Smith	Peer Reviewer	EASTR	Peer Reviewer
Bert Kruk	Peer Reviewer	TUDTR	Peer Reviewer
Jean-Francois Marteau	Peer Reviewer	AFTR	Peer Reviewer
Liljana Sekerinska	Consultant	ECSSD	Transport Specialist
Jann Masterson	Operations Officer	ECSSD	Operations
Hana Huzjak	Consultant	ECSSD	Operation Analyst
Juderica Dias	Project Assistant	ECSSD	Project support
Supervision/ICR			
Gerald Paul Ollivier	Lead Transport Specialist	GTI02	Task Team Leader
Jean Francois Marteau	Co-Task Team Leader and Program Leader	ECCU5	Program Leader
Elizabeth Wang	Task Team Leader		Team Leader
Ivana Ivicic	Consultant	GEN03	Environment Specialist
Nurul Alam	Senior Procurement Specialist	ECSO2 - HIS	Procurement Specialist
Andrina A. Ambrose-Gardiner	Senior Operations Officer	OPSPQ	Operations
Reynaldo Bench	Consultant	GTC01	Transport
Bogdanka Krtinic	Program Assistant	ECCHR	Operation support

Names	Title	Unit	Responsibility/Specialty
Ljiljana Boranic	Team Assistant	ECCHR	Mission support
Vickram Cuttaree	Program Leader	EACPF	Program Leader
Juderica Zilla Josephine Dias	Senior Executive Assistant	DECDG	Project support
Michel Luc Donner	Transport Specialist	TWITR - HIS	Infrastructure Specialist
Stjepan Gabric	Senior Water Supply and Sanitation Specialist	GWA03	Water Specialist
Nadia Badea	Operations Officer	GTI03	Team Leader
Antonio Nunez	Transport Specialist	GTI03	Transport Specialist
Ioannis Dimitropoulos	Transport Specialist	GTI03	Transport Specialist
Antonia Viyachka	Procurement Specialist	GGO03	Procurement Specialist
Bradley Christopher Julian	Consultant	CASPL	Port and Maritime Specialist
Irina L. Kichigina	Chief Counsel	LEGAM	Legal
Sunja Kim	Consultant	ECSSD - HIS	Infrastructure Specialist
Agnes I. Kiss	Regional Environmental and Safeguard	OPSPF	Environment Specialist
Vladislav Krasikov	Senior Procurement Specialist	GGO08	Procurement Specialist
Lamija Marijanovic	Financial Management Specialist	GGO21	Financial Management Specialist
Mirela Mart	Financial Management Specialist	ECADE - His	Financial Management Specialist
Wolfhart Pohl	Lead Environmental Specialist	GEN2B	Environment Specialist
John W. Fraser Stewart	Senior Natural Resources Mgmt. Specialist	GCCIA	Environment Specialist
Jukka-Pekka Strand	Senior Infrastructure Finance	GEEFS	Infrastructure Specialist
Natasa Vetma	Senior Environmental Specialist	GEN03	Environment Specialist
Anneliese Viorela Voinea	Financial Management Analyst	GGO21	Financial Management Analyst

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US\$, Thousands (including travel and consultant costs)
Lending		
FY05	12.97	93.56
FY06	33.57	243.03
FY07	15.12	58.69
Total:		395.28
Supervision/ICR		
FY07	6.29	51.74
FY08	20.21	85.23
FY09	30.12	128.21
FY10	18.95	88.29

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	US\$, Thousands (including travel and consultant costs)
FY11	24.06	84.25
FY12	18.70	58.79
FY13	23.30	79.36
FY14	18.18	75.39
FY15	23.54	88.00
FY16	27.41	81.51
FY17	5.35	16.52
Total:		837.29

Annex 5. Beneficiary Survey Results

(if any)

Annex 6. Stakeholder Workshop Report and Results

(if any)

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

Introduction

Loan No. 7410-HR

1. On November 14, 2006, IBRD approved Loan No. 7410-HR of €58.80 million (US\$75.30 million equivalent) with a closing date of December 31, 2011 to the PPA. The Loan became effective on March 20, 2007.
2. Due the new scaled-up bulk cargo terminal and changes in project as well as delays in construction, the Loan was extended several times, finally until December 31, 2015. The grace period ended on April 30, 2016 and the Loan proceeds have been 100 percent disbursed.
3. The repayment deadline (maturity) is 15 years including a grace period of 5 years with level repayment of principal, and capitalized interest during construction. Contracted interest rate is 6 months LIBOR plus a fixed margin of 0.52 percent to withdrawn funds and 0.25 percent to non-withdrawn funds.
4. The guarantor, Croatia, participates in the financing of the project in the amount of €21 million as well as securing the necessary funds—donations during the period of repayment. The PPA expects support from the state budget in the next six years (during the repayment period).
5. Original components of the PPA project are described in table 7.1.

Table 7.1. Financing Plan (€, millions)

Source	Total
Government	20.94
IBRD Loan 7410-HR	58.80
EBRD Loan	11.20
PPA	0.06
Total	91.00

6. The original project was supposed to be financed with an EBRD loan in the amount €11.20 million, but this loan was cancelled in 2012.

Loan No. 8077-HR

7. On September 14, 2011, IBRD concluded a new Additional Loan Agreement No. 8077-HR in the amount of €50.00 million (US\$66.92 million equivalent) with a closing date of June 30, 2014. The purpose was to finance the total additional costs of €51.3 million associated with scaling up and financing gap coverage for the BCT and the CT. At the same time, the closing date for Loan No. 7410-HR was extended to June 30, 2014.
8. Delays in construction caused the extension of the Loan several times, finally until May 31, 2016.

9. The grace period ended on September 30, 2016, so additional withdrawal applications for expenditures related to services/works/goods performed/delivered before May 31, 2016 could be sent to IBRD by the end of September 2016. The Loan proceeds have been 96 percent up to August 31, 2016.

10. The maturity is 23 years including a grace period of 12 years (the first annuity is on 2023); contracted interest rate is 6 months EURIBOR plus a variable margin.

11. Presently, the PPA participates in financing interest. It is estimated that the repayment of the Loan will be from PPA's own funds.

12. Updated sources of financing due to additional financing are described in table 7.2.

Table 7.2. Updated Sources of Financing due to Additional Financing

Sources of financing	€	%
IBRD Loan (7410 HR)	58,800,000	41.70
IBRD Loan (8077 HR)	50,000,000	35.46
EBRD Loan	11,200,000	7.94
Republic of Croatia Government budget	21,000,000	14.89
Total	141,000,000	100

Restructurings

13. **First restructuring.** On February 2, 2010, IBRD approved the first restructuring for Loan No. 7410-HR by an Amendment Letter, increasing the percentage of category 'Works' to be financed on 90 percent.

14. **Second restructuring.** By Amendment Letter dated June 19, 2014, IBRD approved (a) an extension of the closing date of the Loan No. 7410-HR and Loan No. 8077-HR from June 30, 2014 to December 31, 2015, (b) a reallocation of Loan No. 7410-HR proceeds among the categories, (c) a change in the percentage of eligible expenditures of Loan No. 7410-HR, and (d) a change in the project's description.

15. **Third restructuring.** On October 26, 2015, IBRD extended the closing date of Loan Agreement No. 80770-HR for an additional five months until May 31, 2016.

Achievement of Objectives and Outputs by Components

Project Components and Costs

Table 7.3. Updated Financing Plan and Cost Table (Additional Financing, in €, millions)

Components by financiers	MoF		IBRD 7410		IBRD 8077		PPA		EBRD		TOTAL	
	PA	RA	PA	RA	PA	RA	PA	RA	PA	RA	PA	RA
A. Port Infrastructure Development	21	26,3	46,9	52,78	49,9	47,2	0	3,4	9,9	0	127,7	129,68
Bulk cargo terminal	7,4	12,9	16,6	18,2	49,9	38	0	1,5	9,9	0	83,8	70,6
Container/Multipurpose terminal	9,3	12,6	24,3	24,38	0	0	0	1,6	0	0	33,6	38,58
Port supporting infrastructure	4,3	0,8	6	10,2	0	9,2	0	0,3	0	0	10,3	20,5
											0	
B. Trade and Transport Integration Component	0	0	1,5	2,1	0	0	0	0,1	0	0	1,5	2,2
Port community system	0	0	1,5	2,1	0	0	0	0,1	0		1,5	2,2
C. Project Implementation Component	0	0,8	5,3	0,52	0	0	0,1	0	0	0	5,4	1,32
Technical assistance to PPA	0	0	1,4	0,1	0	0	0		0		1,4	0,1
Consultant services and audit	0		2,3	0,4	0	0	0		0		2,3	0,4
Consultant services for preparation	0	0,8	1,6	0,01	0	0	0		0		1,6	0,81
Training and implementation costs	0		0	0,01	0	0	0,1		0		0,1	0,01
TOTAL PROJECT COSTS	21	27,1	53,7	55,4	49,9	47,2	0,1	3,5	9,9	0	134,6	133,2
Interest during implementation	0		4,7	3,4	0		0	0,9	1,2	0,4	5,9	4,7
Commitment charges	0		0,3		0		0		0,03		0,33	0
Front-end fees	0		0		0,1	0,1	0		0,1		0,2	0,1
TOTAL DISBURSEMENT	21,0	27,1	58,7	58,8	50,0	47,3	0,1	4,4	11,2	0,4	141,0	138,0

Note: The PPA amount includes €1.77 million - delay damages (5) Contr. - CT and main port road; PA = planned amount; RA = realized amount.

16. As shown in table 7.3, the total project cost initially was estimated at €91 million, with €58.80 million from an IBRD loan, €11.2 million from EBRD, €20.94 million from the Government (Ministry of Finance), and €0.06 million from the PPA. The project included three components: (a) Port Infrastructure Development, (b) Trade and Transport Integration, and (c) Project Implementation.

17. The total project cost at final stage was estimated at €141.2 million, including IBRD loans, Government, and PPA financing, but without interests during the implementation period, charges, and front-end fees. These costs are capitalized for the original loan, while the EBRD loan in the amount of €11.2 million was cancelled. All of these made the total costs of the amount of €141.1 million.

- (a) **Component 1.** The Port Infrastructure Development component included the following subcomponents: (a) construction of a new BCT with an initial capacity of 4 million tons; (b) construction of a container/multipurpose terminal with an initial capacity of 66,000 TEU; and (c) construction/rehabilitation of the supporting port infrastructure (road, rail,

water, wastewater, and power supply) within the port area including a new entrance facility. The third subcomponent connected the new terminals with the existing utility infrastructure inside and outside the port. Initially, estimated costs were €76.7 million but total cost with contingencies was of €127.8 million.

- (b) **Component 2.** The Trade and Transport Integration component included the development and rollout of a modern electronic PCS, integrating all members of the port community (shipping lines, shipping agents, forwarders, stevedoring companies, rail and road transport, border agencies, customs) into a seamless information system enabling accurate and timely exchange of information and automated processing, where appropriate. This component built on the detailed analysis on procedures and information flows prepared under the PPF. It included (i) necessary hardware (for example, servers, computers); (ii) networking costs; (iii) software; (iv) extensive training of users and administrators; (v) technical services; and (vi) security features. The intention was to facilitate the system integration of information flows along Corridor Vc by defining document exchange interfaces based on international standards. These interfaces were to facilitate systematic performance measurement across the transport chain. Initially, estimated costs were €2 million but total cost with contingencies was €1.5 million.
- (c) **Component 3.** The Project Implementation component included the services required to support the successful implementation of the project. This covered in particular: (a) technical assistance to the PPA to implement its business plan and establish the concession for new terminals; (b) technical services required for the supervision of project components; (c) audit services for the project and PPA; (d) training on project management, procurement, and financial management; (e) procurement support; and (f) incremental implementation costs. Initially, estimated costs were €2.9 million but total cost with contingencies was €2.4 million.

Ad A. Component 1: Port Infrastructure Development

- (a) **The BCT.** The contract for the construction of the BCT was signed with J.V. Cyes (Spain) and Viadukt (Croatia) on March 29, 2012, while the contract for supervision of the construction works was awarded to J.V. IGH and Investinženjering Zagreb. Works on construction of the BCT are completed. Total costs of BCT construction are HRK 385 million (VAT excluded), which is 5 percent below original contract price due to savings made during construction. Transformer station needed for electricity supply (constructed by Croatian Electricity Company, in coordination with the PPA) of the new terminal is now also completed and ready for operations. Technical inspection (precondition for issuing of Permit for Use) is expected to take place in the period from 29th November to 2nd December 2016, and the terminal is presently ready for the start of equipment installation (under the responsibility of port operator LP based on signed concession agreement). However, due to delay in equipment delivery by supplier, delivery of equipment is not expected to start before the beginning of 2017, and is

expected to be completed by the summer of 2017, with the terminal starting its operation immediately after that. Handover of the BCT from the PPA to the concessionaire LP is expected to take place after issuing of the Permit for Use, which is expected by end of 2016.

(b) **The CT.** The CT was inaugurated in August 2010 and is fully operational. The cost-recovery-based concession arrangement has been established between the PPA and LP (concessionaire) in January 2010. Based on this agreement, the CT was formally transferred to the concessionaire in early 2011.

(c) **The Supporting Port Infrastructure**

- (i) Port entrance terminal/main gate (ET) construction contract was signed with J.V. Mucić and Viadukt and G.K. Grupa (Croatia) on September 10, 2013, while the contract for supervision of the construction works was awarded to IGH. Total costs of ET construction was of HRK 86.5 million (instead of the agreed amount of HRK 84.5 million). Construction works are completed so technical inspection is expected to be held at the beginning of 2017. However, the Permit for Use cannot be issued before the HAC completes the construction of the connecting road infrastructure, which includes connecting road to 'Čeveljuša' junction (in advanced phase of completion), and road connection to the city with rail overpass (still in construction). Those works, implemented by J.V. Strabag A.G. and Skladgradnja under a contract with the HAC, are going according to plan, and should be completed by the end of 2016. Also, while construction of internal and external parking areas is completed (as part of ET construction contract), infrastructure needed for removal of rainwater from external parking area is in design stage. The contractor should be the HAC but since the PPA is the only interested party, it was agreed that the PPA would finance it, all to obtain the necessary permit and enabling the ET to become fully operational.
- (ii) Reconstruction of the main port road no. 1 is completed in amount of HRK 10.5 million (instead of the agreed amount of HRK 10.8 million). Construction contract was signed with Vodoprivreda Vrgorac. Technical inspection took place in July 2016 and the Permit for Use was issued.
- (iii) Rehabilitation of the road No. C1-B with facilities, in the amount of HRK 6.8 million (instead of the agreed amount of HRK 7 million) was finalized at the end of January 2016. Construction contract was signed with Poduzeće za ceste Split. The road is in use.
- (iv) Protective structure (embankment) construction contract was signed with Neretvanski Sliv. The contract was finalized in March 2016. Total cost of construction was HRK 6.2 million (instead of the agreed amount of HRK 7.7 million). The technical inspection is expected at the beginning of 2017, followed by the issuance of Permit of Use.

- (v) Construction of rainwater collector 13 and 13a was completed within the contracted amount of HRK 3.4 million. Construction contract was signed with Vodoprivreda Vrgorac. Technical inspection took place in September 2016 and the Permit for Use was issued.
- (vi) Construction of rainwater collector 4 was finalized within the contracted amount of HRK 4.4 million. Construction contract was signed with J.V. Vodoprivreda Vrgorac and Vodoprivreda Split. Technical inspection took place in September 2016 and the Permit for Use was issued.

Ad B. Component 2: Trade and Transport Integration

18. In November 2010, the agreement was signed between the PPA and the business associations Actual IT Koper, Slovenia, and S&T Croatia from Zagreb for the PCS hardware platform and software. Operational acceptance of the system was made in January 2013 with an operational acceptance validity period of three years. During that period, the contractor was obliged to provide accommodation service equipment (servers and so on) at an alternative location in Zagreb and to provide application services and technical maintenance in accordance with the agreed scope of services and the accepted price of the host. After it became clear that contrary to obligations under the concession agreement, LP and its related companies do not want to participate in the PCS (although during the design and construction of the PCS were taken into consideration and implemented all the requirements and specifics of their organization and mode, and also organized training for their employees to use PCS) and opted for further expansion and financing of internal software solutions, the PPA had to justify the expectations of other stakeholders in the port community who have embraced this system. This did not imply additional financial cost and on the other hand allows them to meet the requirements about record keeping after Croatian accession to the EU. PCS was put into production on July 1, 2013 with the following modules: announcement of ships, liquid cargo module, and customs. Announcement of ships is working in the proceedings announcement of ships with liquid cargo. Current users are liquid cargo terminal operator (Naftni Terminali Federacije d.o.o.), customs, agents, and forwarders who in their daily operations perform tasks related to the storage and shipment of liquid cargo at the terminal. During the period of production, according to new business rules of some stakeholders, the PPA has involved in PCS new users like Industrija Nafte and Top Logistics.

19. Changes related to customs procedures, resulted from Croatian accession to the EU on the PCS have manifested themselves in a way that the customs module in PCS underwent some modifications to help PCS users to keep stock records according to the new customs procedures. These changes and modifications to help PCS users have manifested in a way that some users use records from PCS information system in daily business without use of their homemade solutions.

20. It is important to emphasize that Port of Rijeka Authority showed an interest and intention to integrate PCS of Ploče for their business needs according to knowledge and know-how from the PPA. Implementation of PCS Ploče in Port Community Rijeka will be followed by defined business rules of Port Community Rijeka and according to business

rules of stakeholders and Port of Rijeka Authority. There is also intention of Ministry of Maritime Affairs, Transport and Infrastructure to implement and use PCS of Ploče as a unique PCS for all ports in Croatia and to integrate it with the national maritime system CIMIS. This should be the most proper way regarding implementation of PCS which will lead to integration of terminal operators with PCS. According to data exchanged and information, all data will be exchanged through one system to national system which will lead to better and faster information exchange regarding daily business and ports to be more effective.

21. **Control and management system on entrance terminal.** PCS which has been developed and will be always upgraded is used as the main infrastructure system for messages exchanged on the entrance terminal where the control and management system will be used for trucks, vehicles, cargo, and drivers' control. The control and management system will integrate control and security system with PCS and deliver information from entrance in system to all users in an automated way. This information will be exchanged among users and other subsystems. The final objective of the PCS is to integrate all the members of the port community into one system which will act as a single window on a local level. This will be done gradually—transition arrangements are being discussed with each stakeholder. The control and management system as part of PCS will involve all port users and will exchange some cargo and truck information with the national system CIMIS as needed. The contract for the procurement of the equipment for the managing and surveillance system at the port entrance has been extended to October 2016 due to some adjustments triggered by the Traffic Regulation Program. The equipment to be delivered beyond May 31, 2016 (costing about €100,000—approximately 15 percent of the initial contract value) will be paid by the PPA from own funds. Immediately after finalizing the IT system, the testing phase will be initiated. The PPA and LP have recently discussed some adjustments to their IT system to be able to integrate it with the control and management system on entrance terminal which is based on PCS as infrastructure system for message exchange.

Ad C. Component 3: Project Implementation

- (a) **Business plan and concession.** Both concession agreements for the BCT and CT are completed, negotiated, and signed to the satisfaction of IBRD.
- (b) **Technical services.** Contracts for the purposes of different consultancy services within Component 1 implementation are realized. These contracts are related to main design and bidding documents for terminals and infrastructure; analysis of information flows, advisory services, bids evaluation, and supervision for a PCS; revision of the main design for terminals; soil investigation; advisory services for the preliminary and main designs for terminals; technical and designer supervisions; health and safety coordinator II; managing and surveillance system specification and supporting services for building permit for ET; project management; technical assistance to the PPA to improve efficiency and competitiveness on Corridor Vc and the competitiveness of the Port of Ploče; and feasibility study for the berth in the Port of Ploče.

- (c) **Audit services.** Contract for financial audit (2012–2015) was signed with Iris Nova in the amount of HRK 0.6 million.
- (d) **Training on project management, procurement, and financial management.** Some members of the PIU had undergone procurement trainings and procurement seminars and safeguards training workshops.
- (e) **Procurement support.** This included translation services and upgrading of the accounting software.

The IBRD's and the Borrower's Performance

22. During the implementation of the TTI, IBRD's project team has provided guidance, advice, and help. The communication between IBRD's and PPA's teams has been at a high level, encouraging and enabling open conversation and information exchange. Not only that, IBRD's team reviewed and commented on documentation, provided approvals whenever required, supervised and monitored implementation of the project, and also supported an additional increase of scope of initial project and requests for restructuring the loans. Thanks to this, more infrastructural construction works are done, making the port more attractive and modern.

23. The PPA's team appreciates the cooperation of members of IBRD in the implementation of the International Federation of Consulting Engineers contracts. Valuable help was obtained during the implementation of environmental measures and the design of the environmental monitoring program.

24. Without continuous help, support, understanding of the opportunities, and circumstances in which the project was performed, and especially the professionalism of IBRD members, the implementation of the project would certainly have been more difficult and complex.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Annex 9. List of Supporting Documents

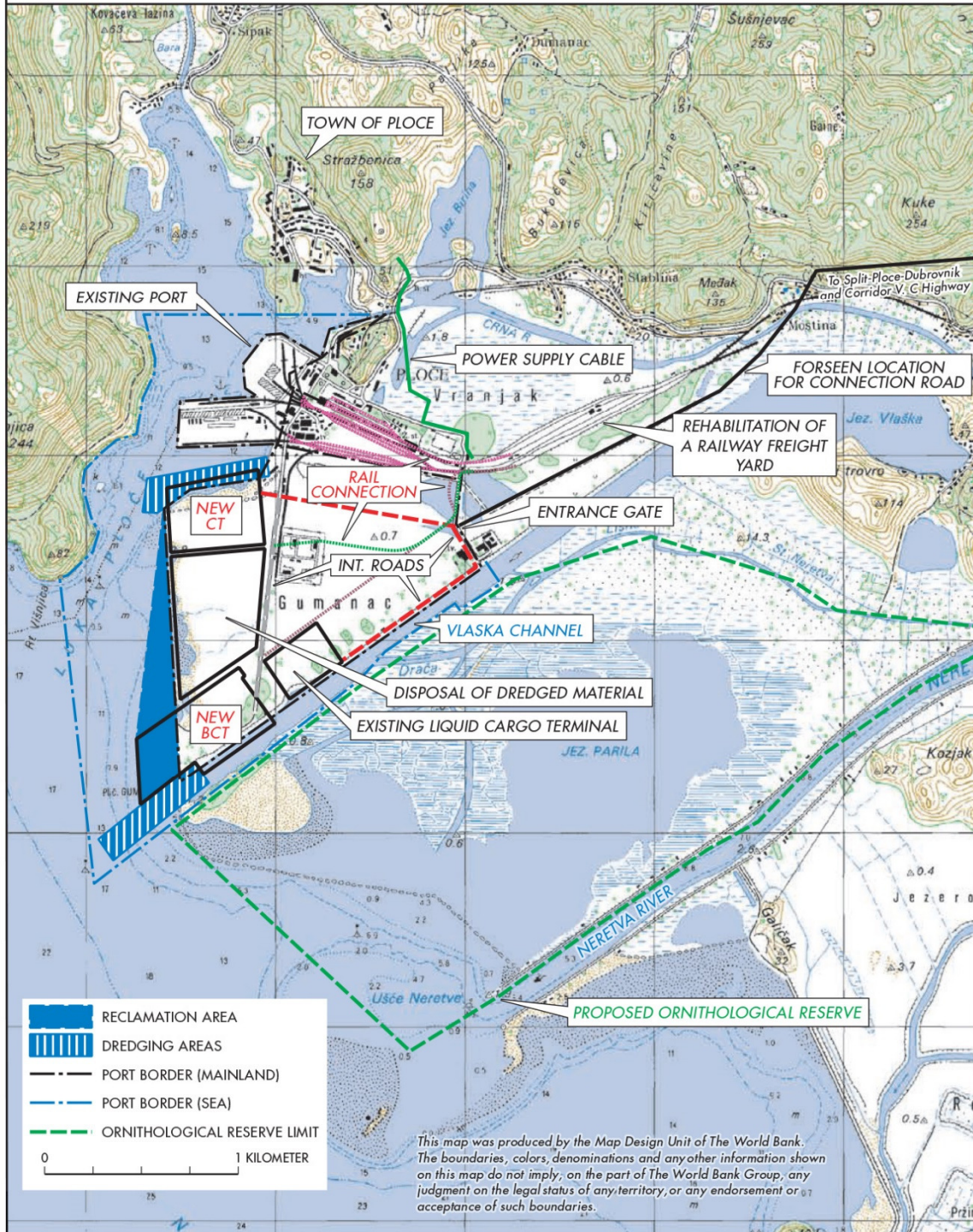
- Project Concept Note
- Project Appraisal Document
- Project Paper Additional Financing
- Environmental Framework
- Aide Memoires
- Implementation Status Reports
- Restructuring Papers
- Borrower Progress Reports

CROATIA

TRADE AND TRANSPORT INTEGRATION PROJECT

THE LOCAL DIMENSION

PLOČE PORT DEVELOPMENT COMPONENTS



SEPTEMBER 2006