REPUBLIC OF CROATIA

SELECTED ISSUES

June 2016

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REPUBLIC OF CROATIA

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CONTENTS

REDUCING FRAGMENTATION AND IMPROVING FISCAL DECENTRALIZATION IN CROATIA[1]

## A. Fiscal Decentralization in Croatia

1.   The degree of expenditure and revenue decentralization in Croatia appears limited relative to peers. At about 16 percent of general government spending, subnational government spending in Croatia is modest compared to other south-eastern European (SEE) countries and to the EU-28 average, and particularly low compared to the most decentralized countries in the EU. A similar conclusion arises from the revenue comparison. Only a limited range of public functions have been fully decentralized in Croatia. Subnational governments are mostly responsible for communal services (housing and communal infrastructure, waste removal, etc.), and other general public services (road maintenance, etc.). Primary education is only decentralized with regard to school maintenance and investments, while wages are provided centrally.

Expenditure and Revenue Decentralization in Selected European Countries, 2014

Local Government Expenditure
(In percent of General Government Expenditure)
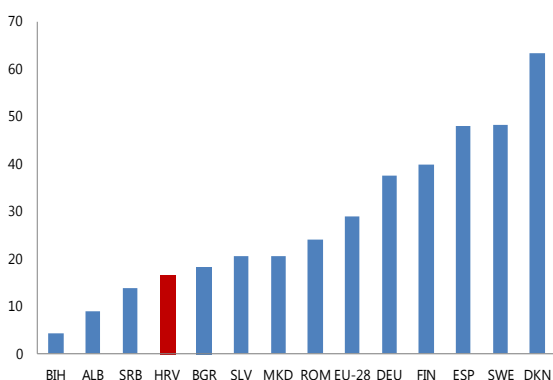
Local Government Revenue
(In percent of General Government Revenue)
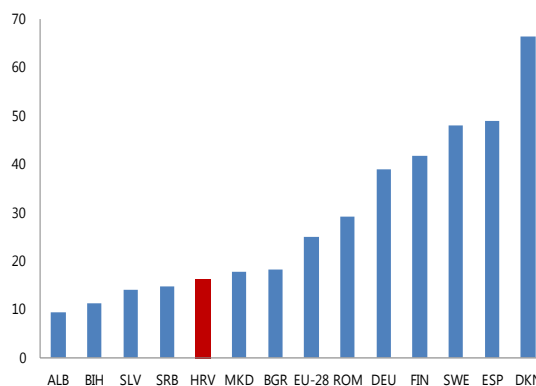
Sources: Eurostat.

2.   However, fragmentation of the subnational government structure is high and fosters inequality. Croatia has a two-tier subnational government structure consisting of counties representing the regional government and municipalities and cities representing the local level of self-government. There are 128 cities, 428 municipalities and 20 counties. The average population of local governments is relatively low and exhibits a wide divergence, with over one half of the local governments having less than 3,000 inhabitants compared to about 800,000 inhabitants in the city

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[1] Prepared by Ernesto Crivelli and Wei Shi.

of Zagreb. Around 70 percent of the municipalities have a population below 5,000 residents, which limits their capacity. All municipalities and cities are assigned the same spending responsibilities.[2] It is, however, difficult to secure a comparable range and quality of public service provision among local governments with low fiscal and administrative capacity. The limited administrative capacity is reflected in the very low absorption of EU funds at the local government level, with about 85 percent of municipalities covering as much as half the Croatian population not being able thus far to absorb any EU funds. There is also significant disparity in the provision of social protection at the local levels. For example, 7 percent of the households in the higher income regions of Zagreb and Split receive social benefits from the local governments, compared to around only 1 percent of households in some region.

3.   The fragmented local governance structure gives rise to numerous para-fiscal charges and burdens both business and citizens. It also complicates the business environment by creating policy uncertainty and worsening transparency. It is often unclear how many documents are needed to obtain a license to operate a business or a building permit. It is not uncommon for the regulations and supervisory requirements by the central government, municipalities, city authorities, and the various public agencies to overlap and complicate the business environment.

Number of Subnational Governments and Population, 2014

| Country	Levels of SNG	Number of municipalities	Average population of municipalities
Croatia	**2**	**556**	**7717**
Selected South-Eastern Europe			
Albania	2	373	7764
Bosnia and Herzegovina	3	143	26253
Bulgaria	1	264	27896
Macedonia	1	81	23795
Romania	2	2181	6326
Serbia	2	145	51710
Slovenia	1	212	9727
Selected highly decentralized countries in the EU			
Denmark	2	98	55300
Finnland	2	313	17534
Germany	3	11313	7200
Spain	3	8124	5687
Sweden	3	290	33993

Average Population of Municipalities
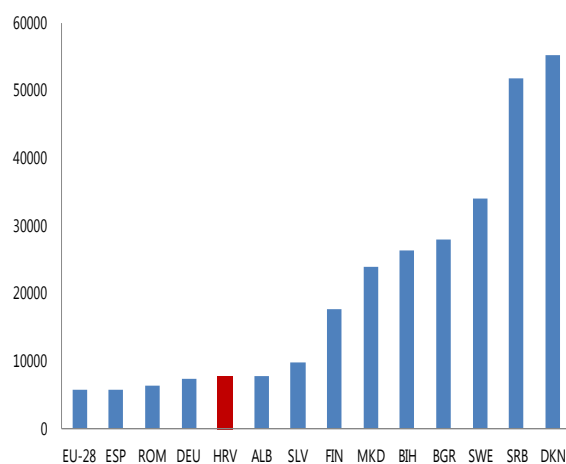
Sources: Eurostat, and The Council of European Municipalities and Regions (CEMR).

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[2] With the exception of large cities that have more than 35,000 inhabitants and are thus more capable to perform spending responsibilities otherwise allocated to counties.

4. **Subnational government spending has been increasingly tilted towards wages and operational costs.** More than half of subnational spending in Croatia was directed to operational costs and wages in 2014 despite the fact that the central government is responsible for the salaries of teachers and doctors. Public investment, on the other hand, constitutes less than a quarter of subnational spending. This spending structure has deteriorated over time. The share of wages and operational costs has increased by some 8 percent since 2006 at the expense of public investment. As a result, at about 1 percent of GDP, public investment at the subnational government level in Croatia is low compared to peers.

Composition of Subnational Government Expenditures

Croatia: Local Government Expenditure
(In percent)
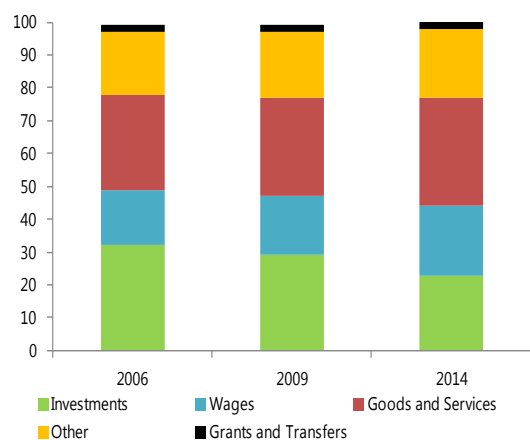
Local Government Investment in Selected European Countries
(In percent of GDP, 2014)
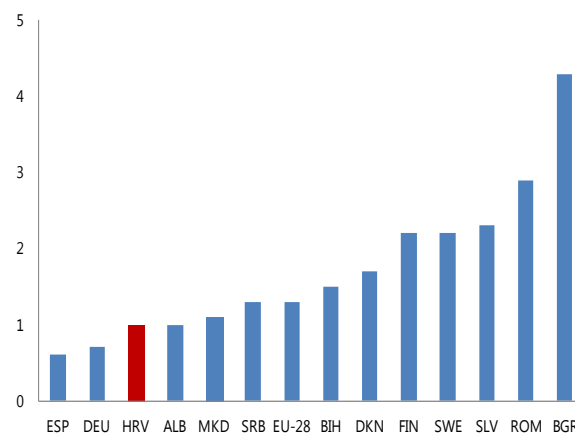
Sources: Eurostat.

5. **Subnational governments have limited own-revenue sources.** Only one third of total subnational government revenue comes from own-revenues. The reliance on central government grants is even higher in smaller municipalities with low capacity. Own revenues are raised from communal fees and from local taxes on motor vehicles, boats and vessels, and gambling machines. About 45 percent of own-revenue is collected from land use, land development fees (including building permits), and other communal fees on businesses. The remaining gap between local governments' own revenue and their expenditure responsibilities is filled mostly by the sharing agreement on proceeds from personal income tax (and the municipal surcharge) and the real estate transfer taxes collected by the central government. In addition, grants are provided through a complex system of transfers, either through the Equalization Fund or directly from the central budget.

Croatia: Composition of Subnational Revenue (In percent, 2014)
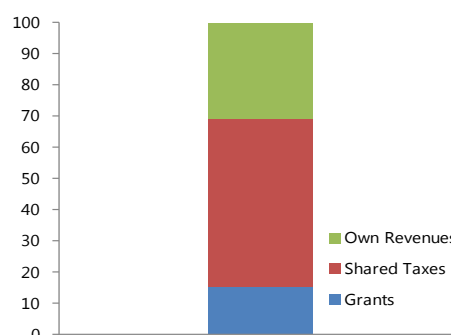
Source: Eurostat.

6. **Financial linkages with local government-owned utility companies contribute to further fragmentation and raise additional fiscal risks**. Local governments own shares in some 200 commercial and utility firms.[3] The size of these shares totals about 5 percent of GDP. The financial linkages between the local governments and the local utility companies take different forms. Local governments allocate to utility companies on average about 10 percent of their budgets on subsidies and capital grants. In addition, local governments often borrow through their utility companies (mainly to finance capital projects). Local governments also provide guarantees for utility companies' loans. While the subnational government debt is low (about 1.2 percent of GDP in 2014), financial linkages with utility companies create additional fiscal risks that is difficult to fully assess because their financial statements are not properly consolidated.

B. Best Practices in Fiscal Decentralization

7. **There are general good practices for the design of subnational government structure that should be complemented with country-specific considerations** which are related to the historical, geographical, socio-political, and economic factors. There is no "one size-fits-all" model for, or degree of, fiscal decentralization. Fiscal decentralization can improve efficiency of public service delivery through better internalization of the local preference in policy making and the fostering of strong accountability at the local level (Table 1). It is important, however, that subnational jurisdictions are not excessively small, since larger jurisdictions are often able to deliver services more efficiently due to economies of scale.

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[3] Local government-owned companies operate typically in areas such as water supply, drainage, sanitation and spatial development, cemeteries, retail markets and transport.

Advantages	Disadvantages
• Improves *allocative efficiency*: better match of public service delivery with local preferences	• Is technically inefficient if *economies of scale* in public service provision are important
• Increases *competition* between local governments, which may lead to better quality of services	• Creates *administrative duplication* and weakens the *technical capacity* for the provision of public goods
• Increases *political participation*, as the government gets closer to the people, and local accountability	• Increases *information costs* for citizens and voters

Source: Boex et al, 2004.

8.   It is necessary to broadly match the spending responsibilities to the overall resources available at each level of government. In this regard, the first step is to define spending responsibilities for government units, including reviewing and clarifying when there are overlaps, and reforming and reorganizing when the capacity of the local units falls short of their assigned responsibilities. Spending decentralization could potentially improve the quality of service delivery if accountability links between the key players along the delivery chain are strengthened by the decentralization process.

9.   Revenue arrangements should conform to the general principle that funds should follow functions. Overall resources made available at the subnational government level should be sufficient to finance their spending responsibilities. Furthermore, revenue assignments should be contingent on the spending functions they are intended to finance and the whole process be transparent and carefully monitored. Subnational governments could gather revenues from different sources: own-resource revenue, shared taxes, transfers from the central government, and borrowing (within specified limits). Finding the right mix of revenue should strike a balance among various policy objectives. On the one hand, encouraging reliance on own revenue could strengthen local accountability and promote local fiscal discipline. On the other hand, excessive tax autonomy may undermine efficiency and widen local disparity.

10.   A sound and transparent public financial management (PFM) framework should lend support to successful decentralization. Therefore, strengthening the PFM framework is usually required, particularly at the subnational government level, especially when capacity limitations arise. The following are a few good aspects of such a PFM system:

- *Accounting framework.* The accounting framework should be adequate in capturing the fiscal risks and should preferably be reconcilable with international standards.

- *Budgeting.* The budget envelope for subnational government should be realistic, prepared in a timely matter, and be well-aligned with the budgeting process at the national government level.

- *Monitoring.* Effective audit and control mechanisms should be in place, including timely and regular reporting as well as provisioning for corrective measures in case of misuse of public funds.

11.   An adequate institutional environment is essential for a successful fiscal decentralization. Recent empirical work finds that regional autonomy generally leads to efficiency gains in delivering public services such as health and education, while corruption has a negative impact. Therefore, transparency, good governance, and effective anti-corruption measures are important to ensuring successful decentralization. Furthermore, a prerequisite for successful decentralization is that subnational governments possess the administrative and technical capacity required to effectively carry out their assigned responsibilities. Supporting institutions, including democratic representation, sound budget processes, revenue collection capacity, and mechanisms to ensure coordination and cooperation between different levels of government—both at the political and the technical level—are crucial for the functioning of a multi-tier system of government.

C.   Improving Fiscal Decentralization in Croatia

12.   Croatia's fiscal decentralization structure lacks an elaborate concept and a regional development strategy. The optimal size of subnational governments needs to be reviewed to take into account the administrative capacity of local governments in the provision of public services to avoid excessive disparities in scope and quality. In the meantime, some form of shared provision of public services should be encouraged (Box 1). This cooperation would help smaller local governments deal with economies of scale and administrative and technical limitations, and thereby reduce the cost of providing public services and improve their quality. By engaging in building shared infrastructure projects, subnational governments would also increase their capacity to utilize access to EU funds.

Alternative ways of providing local public services

In the presence of large economies of scale, there are alternative ways in which local governments can provide public services without relying solely on own capacity and still retaining the benefits of local policy making and accountability:

- <u>Contracting with the private sector</u>. A local government may choose to contract with a private provider to produce a certain service, such as garbage collection or the operation of a local market. By doing so, it would be possible to capture the capacity and experience of specialized private sector providers.

- <u>Contracting with other local governments or creating special service districts</u>. Another possibility is for a number of small jurisdictions to collaborate on the production of certain public services by creating special service districts. For instance, two or more small local jurisdictions can share water supply services to improve cost-effectiveness. Or small jurisdictions can contract these services directly from a larger neighboring local government.

Source: Boex et al, 2004.

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13.   A review of spending responsibilities should be guided by the general principle of reducing regional disparities. It should consider the financial and administrative capacity of local

governments, avoid duplication and overlap of functions, and improve transparency and accountability. A clear allocation of spending functions should be made, and a minimum set of financial standards established. The mandatory functions of subnational governments can be formulated based on (i) pre-determined minimum quality standards and (ii) functions that can be assumed depending on the available financial resources and administrative capacity.

14.   Subnational governments should gradually increase their reliance on a limited and well-defined number of own-source taxes. Ideally local governments should reduce the number of administrative fees and be funded primarily from taxes. Direct grants from the state budget should be provided mostly for decentralized services based on costs per user. A modern property tax is a good candidate for raising local governments own resources, as it can be levied on a wide tax base with the potential of providing a relatively stable revenue stream. The scope for collaboration with the central government in this area is significant, particularly in the initial steps of transition, which requires a large investment in updating cadastres and land registries and in enhancing administrative capacity.

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CROATIA'S CREDIT-LESS RECOVERY[1]

1. **This chapter describes the credit-less recovery in Croatia. There are indications that the deleveraging process may be gradually coming to an end**. Some new EU member states have experienced even larger credit contractions than Croatia. Section B looks at the relatively accommodative monetary stance of the Croatian National Bank (CNB) and the ability and willingness of banks to lend. Section C examines the deleveraging and increase of precautionary savings of non-financial companies (NFCs) and households.

A. The Credit-Less Recovery in Croatia and Peers

2. **Croatia's recovery since late 2014 has been moderate**. Croatia's recession lasted six years and was thus the longest among the new EU member states.[2] It is well-established that recessions last longer when combined with a financial sector crisis.[3] Luckily, Croatia did not face a banking crisis, but unfortunately it had one of the characteristics of a country facing a financial crisis; namely, excessive bank lending that was funded from abroad.

3. **Domestic bank lending continued to grow in real terms during the first part of the recession**, albeit at a slower pace. It only began to decline in 2012, as the recession persisted and some European countries faced sovereign debt challenges. The realization of the extent of the legal difficulties to recover debt may have also contributed to this contraction (Annex I). There were many law suits, related in particular to Swiss franc denominated and indexed loans. In 2013, the CNB introduced stricter provisioning requirements, with a view to prevent ever-greening and to encourage banks to deal with their increasing NPLs. The prevailing difficult economic

Real GDP of Croatia and Peers
(100 = Q4 2008 1/)
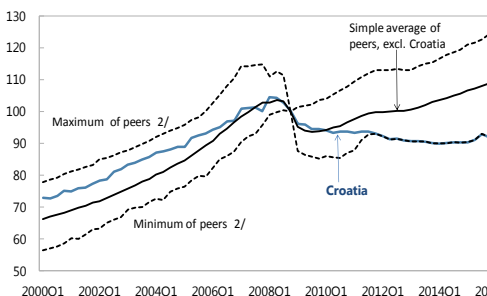
Sources: Croatian National Bank, Haver, and IMF staff estimates.
1/ Index set at first quarter with negative annual real GDP growth. Only Poland did not experience a recession following the collapse of Lehman Brothers on September 15, 2008. Quarterly data are seasonal adjusted.
2/ Peer countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovenia, and Slovakia.

Croatia - Real GDP and Domestic Credit
(100 = Q4 2008 1/)
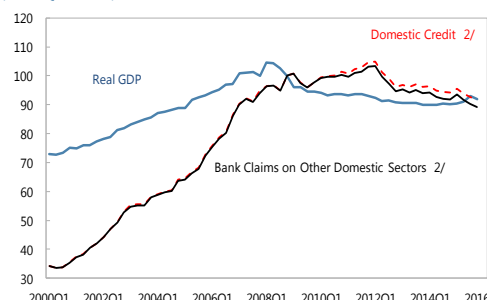
Sources: Croatian National Bank, Haver, and IMF staff estimates.
1/ Quarterly real GDP data are seasonal adjusted.
2/ Real credit deflated by GDP deflator.

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[1] Prepared by Tonny Lybek.

[2] Peers considered in this paper are the new EU member states: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

[3] Kannan et al. (2013) find that recessions associated with financial crises, following credit booms and real estate booms, typically are more severe and last longer. However, in their sample, the median of recessions is only three quarters, while five quarters for financial recession, hence much shorter than in Croatia.

environment also meant that there was less demand for credit, with the exception of the government.

4. **Credit-less recoveries are common.**[4] New lending should usually not be determined by legacy debt, but should ideally be extended if the expected net present value (ENPV) is positive for both the borrower and lender. The lack of Croatian banks' ability or appetite to lend seems to be mostly due to the challenging economic environment. However, it could also be influenced by the large level of legacy debts and the manner in which they are being resolved. When legacy debt impedes the *ability* and/or *willingness* to borrow and lend—a protracted balance sheet recession is likely. When

Domestic Bank Credit
(100 = Q4 2008 1/)

Sources: Haver, Croatian National Bank, Bank of Latvia, and IMF staff estimates.
1/ Index set at first quarter with negative annual real GDP growth. Only Poland did not experience a recession following the collapse of Lehman Brothers on September 15, 2008. Domestic bank credit deflated by the GDP deflator.
2/ Peer countries include Bulgaria, Czech Republic, Estonia, Hungary, Latvia since 2003 Q3, Lithuania, Poland, Romania since 2007, Slovenia from 2007, and Slovakia from 2006.

enterprises and households realize that they are over-leveraged, their primary focus becomes repaying debt and increase savings, rather than investing or consuming. Since late 2008, some peers have experienced larger real credit contractions than Croatia, despite that fact that they had stronger recoveries. This confirms the fact that the deleveraging path is usually influenced by various country-specific determinants. Since subdued credit growth could potentially impede the recovery, it has been widely discussed in the region (IMF, 2015), as well as in Croatia.[5]

B. Supply of Credit

5.   **The CNB has maintained a relatively accommodative monetary stance within the limitations of the quasi-peg to the euro.**[6] The CNB has continued to reduce the interest rates of some standing facilities[7] and ensure ample excess liquidity.[8] In February 2016, it introduced a new

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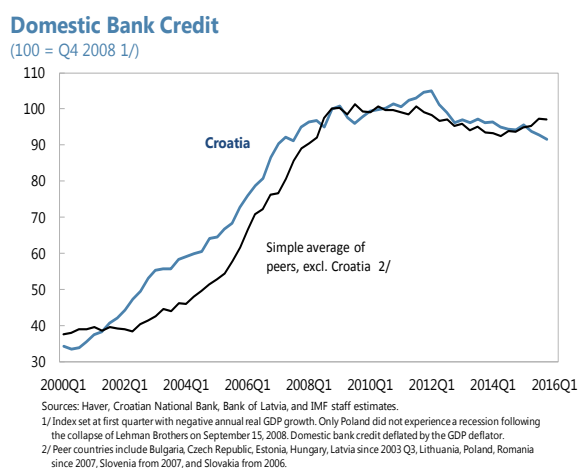
[4] Abiad et al. (2011) find that about one out of five recoveries are credit-less, but that growth during the recoveries are a third lower than so-called other recoveries.
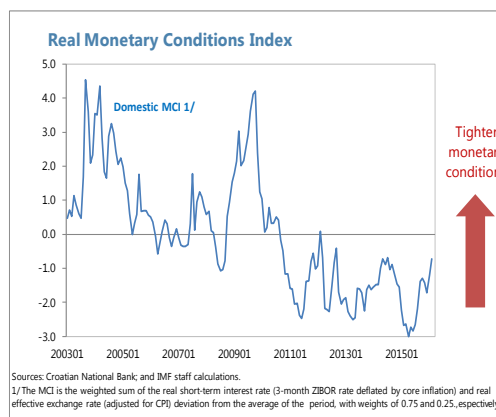
[5] See for instance, HUB (2016), Pintarić (2015), and Box 3 in CNB Monthly Bulletin No. 216. The latter concludes (page 23): "Credit growth reacts faster to changes in credit demand, while the changes in credit standards affect credit growth with a somewhat greater lag. The analysis also indicates that it is difficult to expect a recovery of credit activity without some improvement in the economic outlook and in demand, despite the high liquidity of the monetary system supported by the CNB."

[6] According to IMF's classification, Croatia's *de jure* exchange rate is a managed float without a predetermined path, while the *de facto* exchange rate arrangement is a crawl-like arrangement.
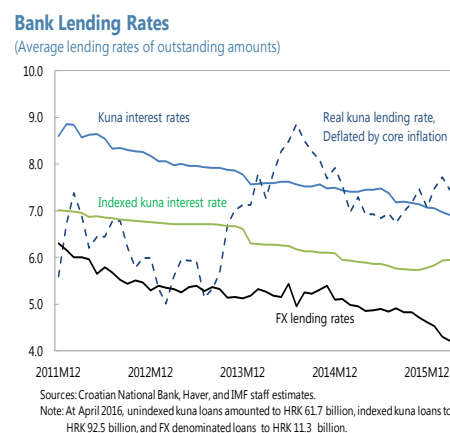
[7] In 2015, effective October 31, the Lombard rate was halved from 5.0 percent to 2.5 percent, the CNB discount rate reduced from 7.0 percent to 3.0 percent, the rate on short-term CNB liquidity credits cut from 6.0 percent to 4.0 percent, and the penalty rate on required reserves was lowered from 12.0 percent to 8 percent. The CNB overnight deposit rate has been zero since April 24, 2013.

quarterly four-year reverse repurchase facility with a view to facilitate stable long-term kuna funding. At this juncture, given the high levels of both deposit and loan euroization, there is no alternative to the quasi-peg to the euro. The scope for monetary policy space is therefore limited, and is determined by the perceived currency risk, asymmetry of information, and transaction costs that may affect capital mobility. Furthermore, the monetary policy stance of the European Central Bank (ECB) is very relevant for many borrowers that have loans denominated or indexed to the euro.

6.   A monetary condition index (MCI) indicates that the CNB has been leaning against the wind, within the limitations of its exchange rate anchor and financial stability objectives. In spite of its caveats, an MCI can be a useful tool to gauge the relative monetary stance.[9] A staff constructed a *real* MCI for Croatia shows that the real relative monetary stance eased after the initial financial stress caused by the collapse of Lehman Brothers disappeared.[10] It also shows a further easing as the Croatian recession protracted. For Croatian borrowers with loans denominated or indexed to euro,

Real Monetary Conditions Index

Sources: Croatian National Bank; and IMF staff calculations.
1/ The MCI is the weighted sum of the real short-term interest rate (3-month ZIBOR rate deflated by core inflation) and real effective exchange rate (adjusted for CPI) deviation from the average of the period, with weights of 0.75 and 0.25, respectively.

the easing by the ECB may have been partially neutralized by changes in Croatia's risk-premium.

7.   Nominal lending interest rates of Croatian banks have declined somewhat in recent years. Lending rates are usually determined by the funding costs and a profit margin that should be sufficient to cover other operational costs and risks. The funding costs are, in turn, affected by the risk-premium that reflect country risks. Other factors include borrowers' past performance, availability of collateral, and how easily it can be executed and liquidated. An increase in the risk of lending—for instance, due to high costs of debt recoveries—could lead to an increase in lending rates, even when funding costs

Bank Lending Rates
(Average lending rates of outstanding amounts)

Sources: Croatian National Bank, Haver, and IMF staff estimates.
Note: At April 2016, unindexed kuna loans amounted to HRK 61.7 billion, indexed kuna loans to HRK 92.5 billion, and FX denominated loans to HRK 11.3 billion.

[8] Effective October 7, 2015, the CNB revoked the regulation relating to compulsory CNB bills. Effective January 13, 2016, the requirement to maintain part of the statutory reserves in foreign exchange was abolished, hence providing banks more flexibility in managing their liquidity and reducing their regulatory costs.
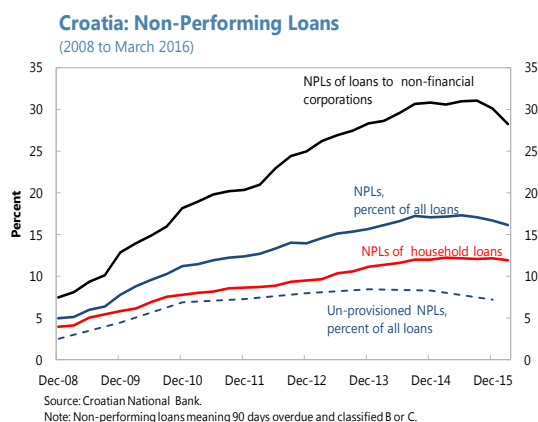
[9] For a discussion of the MCI, see, for instance, Osborne-Kinch and Holton (2010). For a more advanced application of the MCI to Croatia, see Benasić (2012).

[10] We use the annual change of the real effective exchange rate (REER) index adjusted for consumer prices, as calculated by the CNB, compared to the average annual change during the period; and the 3-month ZIBOR monetary market rate deflated by core inflation, as defined by the CNB, compared to the average for the period under analysis (2003 – March 2016). The respective weights of the two components are 0.25 and 0.75.

decline. Deflation has increased the *real* lending rates. However, the purchasing power of many borrowers has also benefitted, since the deflation is mainly due to lower energy and food prices.

8.   The manner in which the stock of legacy NPLs is handled can affect new bank lending.
The stock of NPLs is high, as in some other EU new member states, particularly for loans to enterprises involved in trade, real estate, and construction. In 2013, stricter provision requirements were gradually introduced. This has facilitated the sale and write-offs of NPLs. However, there are still some tax issues that remain to be resolved. NPLs can constrain liquidity, capital, and management capacity, as well as the willingness of banks to lend (Aiyar et al., 2015). There could even be "NPL illusion"—akin to money illusion— particularly if the focus is solely on the NPL ratio before provisions. Banks with high NPL ratios and relying on wholesale funding or in need of new capital may be penalized by markets if provisioning levels are not given due consideration.[11]

Croatia: Non-Performing Loans
(2008 to March 2016)

Source: Croatian National Bank.
Note: Non-performing loans meaning 90 days overdue and classified B or C.

- **Liquidity does not appear to constrain lending.** There is currently ample excess liquidity in the Croatian banking system. Deposits have been increasing, the CNB has ensured abundant liquidity, and global liquidity is also plentiful. Lending to the government has increased, but given the ample liquidity and capitalization of banks, it does not appear that "crowding-out" is the reason behind the current contraction in credit to the private sector. Banks have even been repaying their foreign funding, typically from parents. At end-2008, net foreign liabilities amounted to 7 percent of total bank assets. In contrast, by October 2015, banks had a small net foreign asset position.

- **Capital does not seem to currently constrain banks' ability to lend.** On average, the banking system is well capitalized and provisions have improved. At the earlier stages of the protracted recession, NPLs continued to rise and some banks may have become more reluctant to lend due to uncertainty about future potential losses. In other words, they may have wanted to "reserve" excess capital for potential losses from existing loans. However, this currently seems to be less of a constraint after some banks boosted their capital and provisions, and as the growth of NPLs decelerated and seems to have halted. The capital adequacy ratio for the system was 21.0 percent at end-2015, i.e., well above the minimum requirement.

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[11] Econometric studies often point to the correlation between the NPL ratio and credit growth without fully acknowledging such correlation does not necessarily mean causality and ignoring the fact that the potential capital constraint for new lending is the un-provisioned part of the NPLs.
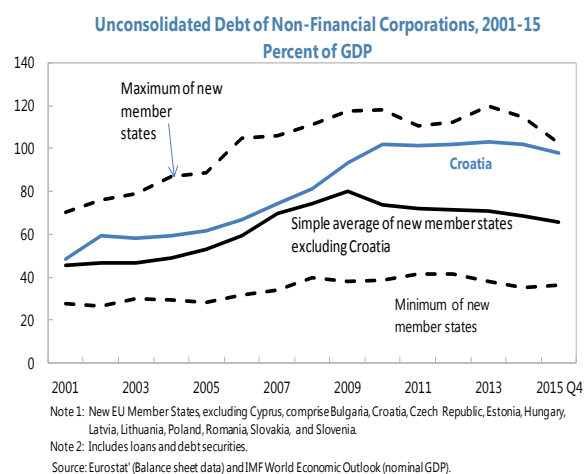
- **Many banks have established internal units to address the legacy NPLs and are now also speeding up the selling or writing-off NPLs.** Large holdings of legacy NPLs tend to absorb the administrative capacity of a bank, which could adversely impact its ability to lend. The recent apparent stabilization in the NPL ratio would thus help re-direct banks' administrative capacity to new lending.

- **The handling of legacy NPLs has implications for new lending.** To the extent permanent measures to address the stock of NPLs will help reduce costs and uncertainty about future debt recoveries, they will obviously facilitate new lending. However, it is too early to assess the impact of recent reforms, such as the new Consumer Bankruptcy Act (which came into force in 2016), the consolidation of the Pre-Bankruptcy Settlement Law with the old bankruptcy legislation, and the envisaged taxation changes for provisions. Nevertheless, these reforms are steps in the right direction.

9.   Banks' *willingness* to lend appears to be improving as the recovery solidifies. Banks did reportedly tighten their credit policies after the collapse of Lehman Brothers, perhaps focusing more on helping their existing clients than developing new ones. Recent lending surveys, however, suggest that banks have eased somewhat their credit policies, probably in light of the improved business environment since late 2014.

C.   Demand for Credit

10.   Total debt of Croatian non-financial companies (NFCs) continued to increase after the recession, but began to stabilize in 2011 and has since declined.[12] It is, however, still high compared to peers. At end-2015, this debt was around 98 percent of GDP (unconsolidated) and slightly below 80 percent of GDP (consolidated). The share of *domestic bank claims* peaked at 35 percent of GDP in 2011 but has since declined to 28 percent of GDP at end-2015. The decline during 2015 can largely be attributed to sales and write-offs of NPLs. Preliminary data suggest a further decline in 2016 Q1, in part due to exchange rate effects. The bulk of the remaining debt is financed externally,

Unconsolidated Debt of Non-Financial Corporations, 2001-15
Percent of GDP

Note 1: New EU Member States, excluding Cyprus, comprise Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
Note 2: Includes loans and debt securities.
Source: Eurostat' (Balance sheet data) and IMF World Economic Outlook (nominal GDP).

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[12] In 2012, the Pre-Bankruptcy Settlement Law was adopted with a view to restructure the debt of viable but over-indebted companies. It did help some companies, but the legislation was not optimal, reportedly gamed, and challenged. In 2015, this law was merged into the normal bankruptcy legislation.

including from parent companies.[13] NFC deposits with domestic banks peaked at almost 17 percent of GDP in 2007, but declined during the recession to nearly 12 percent in 2012, whereupon they have increased to almost 16 percent of GDP by end-2015. These developments suggest that the financial position of the average NFC and hence the ability to borrow has been improving.

11.   As balance sheets of NFCs are being repaired, profits have increased, and business confidence indicators improved the willingness to borrow appears to have strengthened. Preliminary figures suggest that net profit over equity of all NFCs increased from about 2.3 percent in 2014 to 4.2 percent in 2015. Employment also increased for private NFCs. Recent lending surveys and anecdotal information, show an increased demand for loans. Combined with the fact that the standard vulnerability indicators of NFCs have improved since mid-2013,[14] deleveraging may already have come to an end for some companies, particularly exporters.[15]

12.   Balance sheets of Croatian households are slowly being repaired, but debt levels remain high compared to peers. During the boom, income and the value of real state, functioning as collateral, increased and facilitated new borrowing. As the recession hit, households focused on repaying debt, and boosted their precautionary savings. Debt of Croatian households, of which about 95 percent are bank loans, is still high compared to peers. Total *bank* debt of households when adjusted for the Swiss franc conversion is now estimated at about 35 percent of GDP. During the recession and the moderate recovery, bank deposits of households increased. The financial position of households, and hence their ability to borrow, have thus on average improved.

Unconsolidated Loans of Households in Central and Eastern Europe, 2001-15
(in percent of GDP)
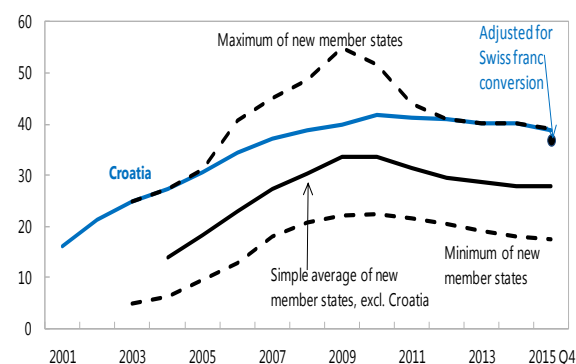
Note 1: ESA1995 definition is used until 2004, whereupon ESA2010 definition is used, except for Estonia, when it is 2008.
Note 2: New EU Member States, excluding Cyprus, comprise Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.
Source: Eurostat (financial balance sheet data) and IMF's *World Economic Outlook* (nominal GDP).

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[13] The relatively high debt of Croatian NFC could in part be because leasing of buildings and equipment is not that common in Croatia and in part because of a large share of tangible assets, for instance due to the prominence of tourism. For details, see (page 44–45) the *CNB Financial Stability Report No. 16*, 2016.

[14] The liquidity position; solvency risk; and interest payments compared to the change in earnings before interest, tax, depreciation, and amortization (EBITDA) have all improved since mid-2013. See CNB's *Financial Stability Reports* for details.

[15] Like in many other countries, many small and medium-sized enterprises (SMEs) feel credit rationed. They are typically the most risky borrowers, with the least collateral, and the shortest track record. The Croatian Developing Bank (HBOR) and Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO) have developed programs to alleviate this challenge. For instance, recently a new €2.5 million capital fund was launched to secure co-financing for small innovative enterprises.

13.   Consumer confidence is slowly improving, hence the willingness to borrow may gradually increase and the deleveraging could approach the end. Disposable income for the average household has begun to increase, facilitated by the increase of income tax thresholds, effective 2015; slightly higher nominal wages; improved purchasing power due to deflation; and modestly improved employment prospects. The conversion of Swiss franc loans has significantly reduced the currency risk for many borrowers—although it is in part being converted to interest risk. The standard vulnerability indicators of households have improved, particularly since mid-2014,[16] and are now close to their levels before the collapse of Lehman Brothers. The *willingness* to borrow seems to have improved somewhat, according to recent lending surveys, although recent figures could be distorted by the Swiss franc conversions.[17] Further improvement of employment prospects and of businesses profitability would, however, be needed to support this emerging trend.

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[16] The liquidity position, solvency risk, and interest payments compared to the change in disposable income have all improved since mid-2014. See CNB's *Financial Stability Reports* for details.

[17] The results of the lending surveys are regularly reported by the CNB. For more details on the surveys, see, for instance, Box 3 in *Monthly Bulletin No. 216*, Croatian National Bank.

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Annex I. Data Issues

The data used in this paper were aggregates to facilitate country comparisons. For deeper country analysis, it would be preferable to use loan at data adjusted for exchange rate effects and write-offs of non-performing loans (NPLs), etc. In January 2015, the Croatian National Bank (CNB) implemented the 2010ESA definitions for monetary statistics, which triggered several reclassifications, and data series were recalculated back to January 2011.[1] Using changes in banks' stocks of claims on a gross basis can be misleading. First, loans shown on the asset side of a bank's balance sheet are not reduced by the appropriate provisions, which are shown under liabilities. Secondly, exchange rate changes vis-à-vis the kuna can also affect the stock, particularly of non-euro foreign currencies, like the Swiss franc. Finally, there are many one-offs, including: the fall in gross placements as the Croatian Ministry of Finance took-over guaranteed debt of shipyards; transfer and sales of loans to non-banks, which have become increasingly important since 2013; and the bankruptcy of the small Centar Banka in 2013. The CNB has taken these factors into account in the reported "transaction" data. The methodology was further improved in early 2016,[2] with a view to better take into account write-offs that have become increasingly important.[3] The chart shows the change in banks' claims on households comparing gross stocks and adjusted for the above mentioned factors (dotted line), as calculated by the CNB.

Croatian Bank Claims on Households
(Annual percentage change)
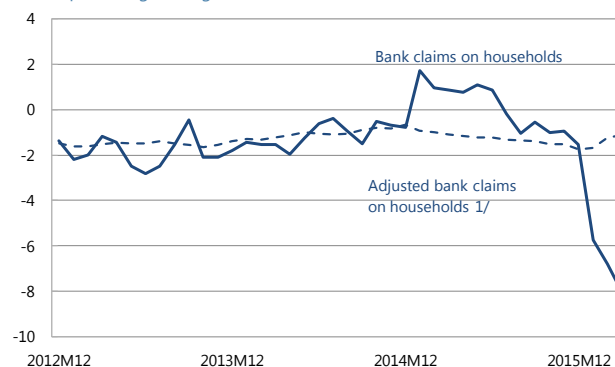
Sources: Croatian National Bank, Haver, and IMF staff estimates.
1/ Dotted line adjusted for exchange rate changes and write-offs of NPLs. For details, see Annex 1 in *CNB Monthly Bulletin No. 221*, February 2016, Croatian National Bank.

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[1] For details, see Annex 1 in *CNB Monthly Bulletin No. 211*, February 2015, Croatian National Bank.

[2] For details, see Annex 1 in *CNB Monthly Bulletin No. 221*, February 2016, Croatian National Bank.

[3] In 2015, write-offs reportedly amounted to HRK 3.9 billion.

REGIONAL UNEMPLOYMENT, THE MINIMUM WAGE, AND INCENTIVES TO WORK[1]

A. Labor Market Developments and Regional Unemployment

1.   Croatia's structural and cyclical unemployment rates are very high, at about 11.5 percent and 5 percent respectively in 2015. While the high level of cyclical unemployment reflects the still wide output gap, the high structural unemployment has been persistent, which reflects the lack of substantial structural reforms.

2.   Unemployment disproportionately impacts lower-skilled labor. Workers with medium-skills[2] constituted nearly 63 percent of all unemployed in 2014, followed by low-skilled workers—around 26 percent of total. Highly-skilled workers constituted only around 12 percent of the unemployed. Long-term unemployment has increased sharply during the recession (long-term unemployed are about 60 percent of the total unemployed) and stand much higher than in peers.

3.   Overall employment has dropped by about 11 percent from its pre-crisis level in 2008. The SME sector contributed most to the decline (5 percentage points), followed by the SOE sector (4.2 percentage points), and large privately owned enterprises (2.1 percentage points). However, SMEs remained the most important employer and continued to employ more than 60 percent of all workers, while the proportion of those employed by the public enterprises declined.


Evolution of Employment Losses during Recession, 2008–2014
(percent of 2008 employment level)
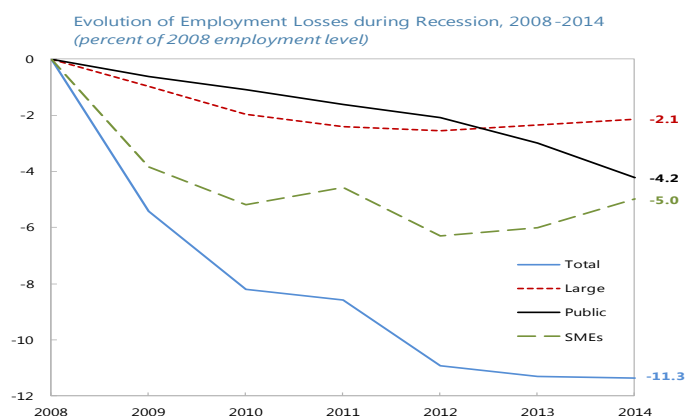
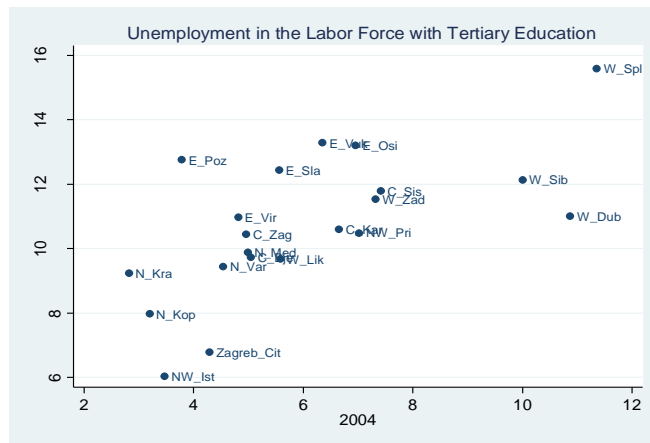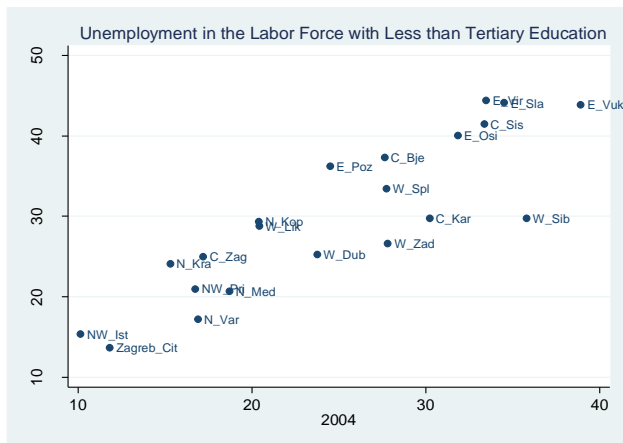Source: CNB and staff calculations.

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[1] Prepared by Murad Omoev.

[2] Skill levels are defined according to educational attainment: (i) low-skilled persons are those with less than lower secondary education; (ii) medium-skilled persons are those with upper secondary and post-secondary non-tertiary education, and (iii) high skilled persons are those with tertiary education.

4.   The geographic distribution of employment losses have been unequal. In relative terms, the east counties were hit hardest while the northern counties and the City of Zagreb fared better given their initial share of employment.

Initial share of total employment, 2008
(percent of total)
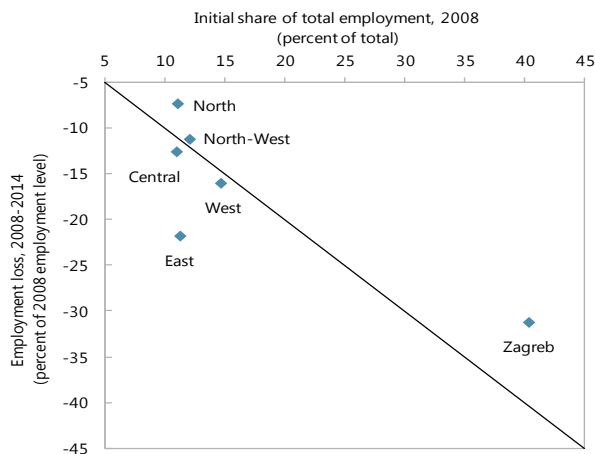
Source: Croatian Bureau of Statistics and staff calculations.

5.   Regional disparity in unemployment rates is very high, with the unemployment rate in the eastern counties nearly four times as high as in Zagreb. Moreover, the difference in regional unemployment rates, especially among low- and medium-skilled workers, has been persistent for many years.

Source: Croatian Bureau of Statistics and staff calculations.
Note: Bje= Bjelovar-Bilogora; Cit= City of Zagreb; Dub= Dubrovnik-Neretva; Ist= Istria; Kar= Karlovac; Kop= Koprivnica-Križevci; Kra= Krapina-Zagorje; Lik= Lika-Senj; Med= Međimurje; Osi= Osijek-Baranja; Poz= Požega-Slavonia; Pri= Primorje-Gorski kotar; Sis= Sisak-Moslavina; ; Sib= Šibenik-Knin; Sla= Slavonski Brod-Posavina; Spl= Split-Dalmatia;Var= Varaždin; Vir= Virovitica-Podravina; Zad= ZadarVuk= Vukovar-Sirmium; Zag=Zagreb.

B. Factors Leading to the Large Differences in Regional Unemployment

Structural characteristics

6. **Croatian regions with lower economic development experience higher unemployment.**
The high-unemployment eastern and central regions have a GDP per capita that is about 40 percent
lower than in the north and north-western regions. The differences in the unemployment rates
across regions among the lower-skilled workers generally tracked closely the developments in the
regional unemployment rates during 2000-2014.

7. **Persistent differences in unemployment rates across regions can be attributed to several structural characteristics of regional economies**:
infrastructure development, economic distance to
EU markets, and share of export-oriented
manufacturing sector in regional economies. For
example, the northern and north-western regions
have strong industrial base and enjoy close
economic proximity to the EU, whereas the central

| Region	Unemployment rate (%), 2014	Unemployment rate among the low-skilled (%), 2014	Value added per capita (Kuna)
East	36.0	57.7	43,272
Central	29.0	52.4	50,443
West	24.6	40.7	54,500
North	20.0	35.9	50,978
North-West	15.4	28.6	82,239
City of Zagreb	11.2	24.4	116,786
Average	22.7	40.0	66,370

Note: Central—County of Zagreb, Sisak-Moslavina, Karlovac; Eastern—Bjelovar-Bilogora, Vukovar-Sirmium, Osijek-Baranja, Slavonski Brod-Posavina, Požega-Slavonia, Virovitica-Podravina; North—Krapina-Zagorje, Varaždin, Međimurje, Koprivnica-Križevci; North-west—Primorje-Gorski kotar, Istria; West—Lika-Senj, Zadar, Šibenik-Knin, Split-Dalmatia, Dubrovnik-Neretva.

and eastern regions are not well-connected to the EU markets. Moreover, the underlying production
structure of the western coastal regions is heavily tilted toward services (especially tourism).

Labor supply and reservation wage

8. **The implicit tax on returning to work from unemployment—the unemployment
trap[3]—seems to be too high in many counties.** This makes work a financially less attractive option
relative to receiving welfare benefits. For example, for a family of four with one wage earner (67
percent of the average wage), a non-working spouse, and two children, the implicit marginal
effective tax rate on returning to work varies between 85 and more than 100 percent.

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[3] The unemployment trap–or the implicit tax on returning to work for unemployed persons—measures the part of
the additional gross wage that is taxed away in the form of increased taxes and withdrawn benefits such as
unemployment benefits, social assistance, housing benefits when a person returns to work from unemployment.

Unemployment Trap—Implicit Tax on Returning to Employment, 2014
(percent of gross earnings)
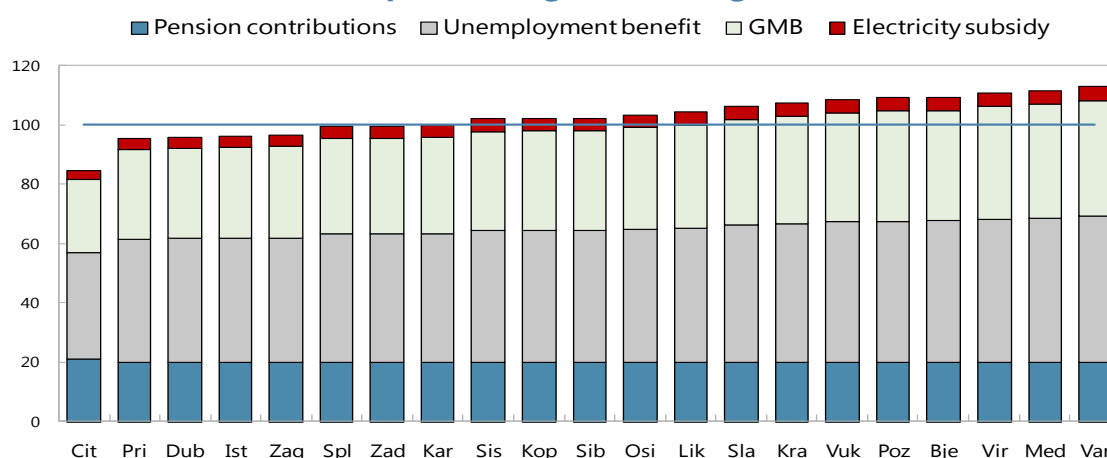
Note: Staff calculations based on OECD methodology for one earner household consisting of a married couple with 2 children younger than 14 earning 67 percent of average county gross wage.
Pension contributions (20 % of gross wage); Guaranteed Minimum Benefit (GMB)—1600 Kuna; Unemployment benefits are estimated as an average monthly payment during the first year of unemployment; electricy subsidy—200 Kuna.

9. **Staff estimates that a higher marginal effective tax rate leads to an increase in the unemployment rate in the labor force with less than tertiary education**. For example, a one percent increase in the unemployment trap is associated with an increase in unemployment of more

Regression Analysis: Poverty trap and Lower Skilled Unemployment [1,2]

| Dependent variable: unemployment rate in the labor force with less than tertiary education.			
	(1)	(2)	(3)
Poverty trap—the implicit tax on retuning to work for unemployed persons, (%)	2.75**	2.90***	2.08***
	(0.012)	(0.007)	(0.009)
Minimum-to-average wage ratio (%)	-3.22**	-3.07**	-1.22
	(0.011)	(0.012)	(0.216)
Value added Per Capita (thousand Kuna)	-0.320**	-0.41**	-0.30**
	(0.030)	(0.018)	(0.019)
Constant	-72.20	-88.62	-95.05**
	(0.239)	(0.138)	(0.023)
Sample: 21 counties, 2014	21	20	17
R2	0.64	0.63	0.85
Adjusted R2	0.57	0.56	0.82
Degrees of freedom	17	16	13
RMSE	6.270	6.010	3.677

Source: IMF Staff calculations.

Notes: 1/ p-values in parentheses (*** $p<0.01$, ** $p<0.05$, * $p<0.1$)

2/ The analysis uses OLS estimation for regressions (1) and (3), and robust regression estimation for regression (2). Regression (3) excludes four outliers (the City of Zagreb, Medimurje, Krapina-Zagorje, and Varaždin).

than 2 percentage points. The results are robust to the inclusion of controls for GDP per capita, productivity, and minimum wage.

The Minimum Wage

10.   **The national minimum wage is high relative to peer countries and for Croatia's less developed counties.** When compared to peers, Croatia's minimum wage of around €400 a month is higher than that of peers both in absolute terms and relative to income per capita. The high earnings disparity among Croatia's counties translates into large relative differences when the national minimum wage is measured in percent of the average wage in each county.
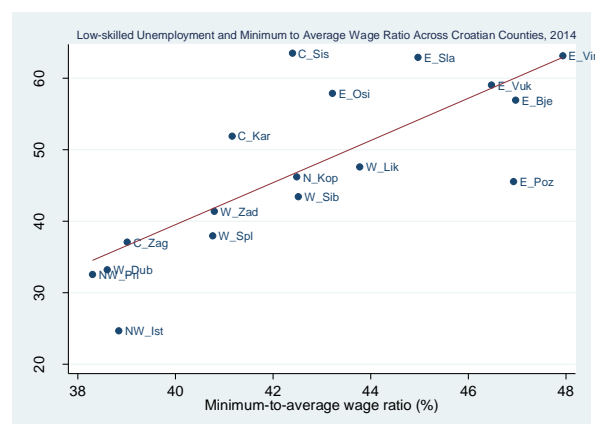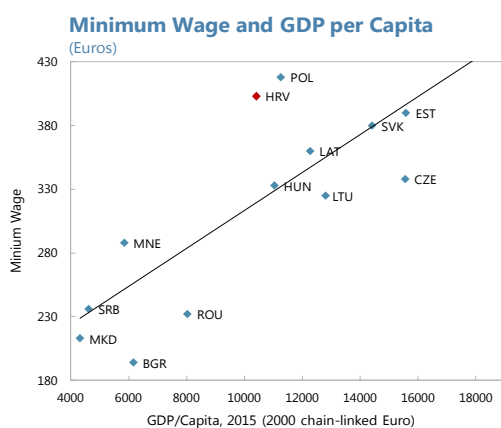
Source: Croatian Bureau of Statistics and staff calculations.

For example, in Istria, which is one of the most developed and has the lowest unemployment, the minimum wage is only about 39 percent of the average wage. In contrast, the minimum wage exceeds 45 percent of the average wage in the eastern counties, where the unemployment rate is around 35 percent and almost 60 percent among low-skilled persons for which the minimum wage would be more binding.

11.   **The regression results suggest that the effect of the higher minimum wage on lower-skilled unemployment is mixed.** The estimates of regressions 1 and 2 imply an association between higher minimum wages and lower unemployment. This is probably due to the high disincentives to work (unemployment trap), which leads to a high reservation wage as explained above. Higher wages would be needed under these circumstances to provide sufficient incentives to seek employment. However, the demand for lower-skilled labor would be constrained by higher wages, especially in counties with lower productivity. When the three northern counties with large export-oriented manufacturing sector and high productivity are excluded (regression 3), the results become statistically insignificant. As regards to the effects of the minimum wage on unemployment disparity among Croatia's counties, the econometric results suggest that a higher ratio of the minimum-to-the average wage is associated with an increase in low-skilled unemployment relative *to Zagreb.* For example, an increase in the minimum-to-average ratio by 10 percent is associated

with an average 1.2 percentage point rise in the unemployment rate among low-skilled persons in a region with 25 percent low-skilled unemployment rate.[4]

Regression Analysis: Minimum Wage and Low Skilled Unemployment

Dependent variable: Δ log of unemployment rate	OLS	s.e.	
Δ log of minimum-to-average wage ratio	0.46	0.26	*
Δ log of unemployment rate in Zagreb	0.44	0.09	***
Constant term	0.02	0.01	**
R2	0.19		
Sample: 20 counties, 2008-2014			

Source: IMF Staff calculations

Notes: *** indicates 1 percent statistical significance.
  ** indicates 5 percent statistical significance.
  * indicates 10 percent statistical significance.

12.   The results above highlight the need to rationalize social benefits in order to reduce the "unemployment trap" and reservation wage and to advance structural reforms to support employment creation. Furthermore, the relatively high unit labor cost in Croatia points to the need to maintain competitiveness by ensuring that wages do not move out of line with productivity gains.

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[4] The results are stronger if the outliers for northern counties of Međimurje, Varaždin, and Krapina-Zagorje are excluded from the sample. These results suggest that an increase in the minimum-to-average ratio by 10 percent is associated with a 1.65 percentage point rise in the unemployment rate among low skilled workers in a region with 25 percent low-skilled unemployment rate.

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