



# BOSNIA AND HERZEGOVINA

## SELECTED ISSUES

September 2025

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July 29, 2025

Approved By  
European Department

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## REVISITING THE TAX WEDGE IN BIH<sup>1</sup>

*This paper revisits labor tax wedge issues in Bosnia and Herzegovina (BiH) in light of recent changes to minimum wages and social security contribution (SSC) rates. Using detailed information, it provides estimates of average and income-specific labor tax wedges in both the Federation of BiH (FBiH) and Republika Srpska (RS). These suggest that the effective tax wedge may be lower than suggested by conventional measures—particularly in (FBiH), where non-taxable employment benefits and preferential income tax treatments encourage tax-saving arbitrage. Reforms toward a more efficient, progressive and transparent system are necessary to boost fiscal and growth outcomes. There is significant scope for simplification, base broadening and greater progressivity, which could pave the way for future headline SSC rate cuts.*

### A. Introduction

**1. The tax wedge in BiH is a significant driver of labor market outcomes.** Taxes on labor, while an important feature of most tax systems worldwide, distort economic incentives by creating a wedge between demand and supply, through the differential between what employers pay for labor and what employees receive. The tax wedge tends to reduce the amount of formally traded labor – an effect that may be exacerbated in BiH given the high labor mobility with advanced European countries and the sizable informal sector. At the same time, labor taxes are important sources of revenue for the budget. Understanding the dynamics of the tax wedge is essential to balance revenue generation with economic growth and labor market health.

**2. Accurately measuring the tax wedge can provide important policy insights.** Compared to the generally accepted approach, we develop more precise estimates of the labor tax wedge in BiH considering specific characteristics of the labor legislation (see Section C). Given significant differences in statutory labor tax bases and rates between the Federation of BiH (FBiH) and the Republika Srpska (RS), tax wedge calculations are undertaken at the entity level. The analysis incorporates the impact of large non-taxable allowances present in both entities and calculates the tax wedge for different types of contracts (e.g., self-employment, full employed, temporary). Moreover, using granular administrative data from the tax administration, we estimate the tax wedge across income distribution. Finally, using these detailed calculations we assess the impact of recent policy changes on aggregate tax wedges in the entities and on system progressivity.

**3. This paper is organized as follows.** Section B provides an overview of the labor market and reviews the characteristics of labor tax legislation. Section C explains how the tax wedge calculation is done for each entity, while section D applies this methodology across the income distribution. Section E concludes.

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<sup>1</sup> Prepared By Bobana Čegar Babić, Alpa Shah and Ian Stuart

## B. Overview of the BiH Labor Market and the Tax System

### 4. **BiH's labor market has strengthened in recent years, but structural challenges remain.**

Over the past four years, unemployment declined from 18 to 13 percent, while labor market participation rose. Nevertheless, participation remains low, and the unemployment rate is among the highest in Europe. These statistics may be distorted by the presence of a large informal economy, particularly for lower-skill activities, where workers may be engaged in work but formally classified as unemployed. The World Bank estimates that 30 percent of workers are employed in the informal sector, which affects job security and limits access to social protection. Emigration is another factor affecting the labor market in BiH.

### 5. **Taxation of labor falls under the jurisdiction of the two entities and the Brcko District (BD).**

While VAT and excises are collected at the state level, direct taxes and SSC are under the jurisdiction of the entities and BD. In FBiH and RS labor taxation is regulated by the laws on personal income tax and SSCs<sup>2</sup>, while in BD it is regulated by the law on personal income tax, the law on the base and rate of contribution for health insurance, and the decision on the base and rate of contribution for unemployment protection.<sup>3</sup>

### 6. **Given the decentralized structure, the rates and bases for labor taxation differ between the entities** (Table 1).

- *PIT*. In FBiH and in BD, the PIT rate is a flat 10 percent for all types of income and is assessed on the amount of the gross salary reduced by the amount of calculated SSCs. In the RS, the rate is a flat 8 percent for income based on employment, 10 percent for income based on self-employment and 13 percent for other types of income, and the base is the gross salary minus the prescribed PIT deduction (in case of employment).
- *SSC*. The total SSC rate is 41.5 percent of gross wages in FBiH, 31 percent in RS, and 32 or 36.5 percent in BD, depending on whether the contribution for pension and disability insurance is paid to FBiH or RS pension fund, given the absence of pension disability insurance in BD. Reductions in the tax base also differ between the entities, and the burden of SSC in FBiH is divided between employers and employees, while in RS and BD contributions are borne entirely by workers.

<sup>2</sup> For FBiH: Law on personal income tax (FBiH Official Gazette, 10/08, ..., 65/13) and SSC law (FBiH Official Gazette, 35/98, ..., 6/23); for RS: Law on personal income tax (RS Official Gazette, 60/15, ..., 110/24) and SSC law (RS Official Gazette, 114/17, ..., 110/24).

<sup>3</sup> Law on personal income tax (BD Official Gazette, 60/10, ..., 5/25); Law on the base and rate of contributions for health insurance (BD Official Gazette, 37/09), Decision on determination of payers, basis and rate of contributions for unemployment insurance (Official Gazette of BD, 7/24).

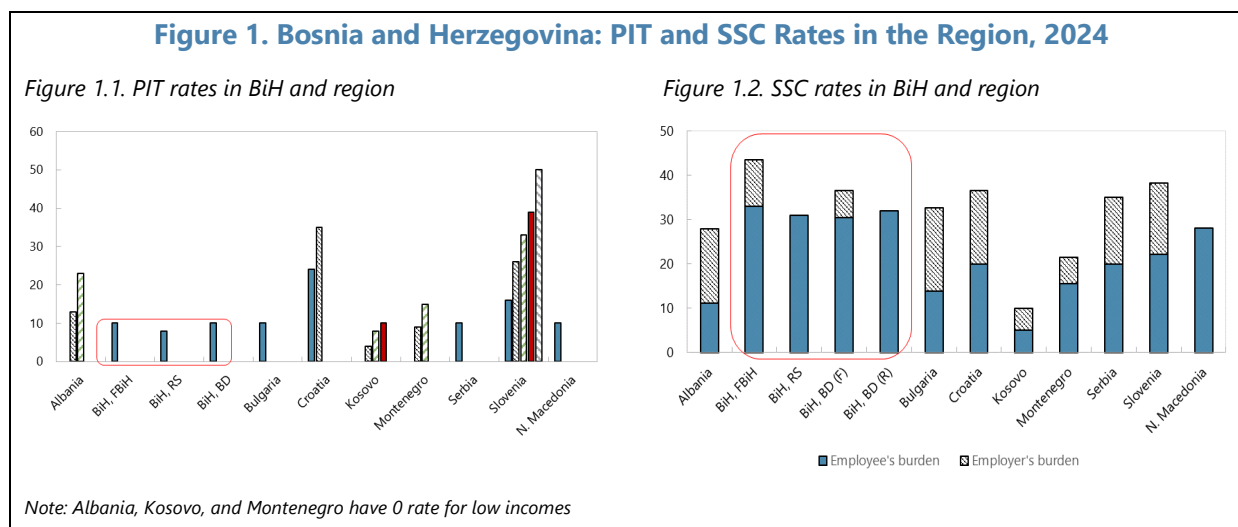
**Table 1. Bosnia and Herzegovina: Labor Tax Rates in BiH, 2024**

	FBiH		RS	BD
PIT rate (employment), percent	10		8	10
PIT base, monthly	Gross wage - SSC KM 300		Gross - 1,000 KM 1,000	Gross - SSC KM 1,200
Tax deduction, monthly	KM 150 for independent spouse and KM 150 for first kid, KM 210 for second kid, and KM 270 for third and every next one kid		KM 150 for each independent family members	KM 600 for independent family members, and additionally KM 120 or KM 600 if the taxpayer or independent family members have certain level of disabilities
	Interest paid on property loan		Interest paid on property loan	Interest paid on property loan
	-		-	Up to KM 1,800 annually for paid premium for life insurance
SSC rates, percent	Employee's burden	Employer's burden	Employee's burden	Employee's burden
Pension insurance	17	6	18.5	23 (6 is on employer's burden) if they use FBiH pension fund or 18.5 if they use RS pension fund
Health insurance	12.5	4	10.2	12
Unemployment protection	1.5	0.5	0.6	1.5
Child care insurance	-	-	1.7	-
Total	31	10.5	31	36.5 (where is 6 on employer's burden) or 32

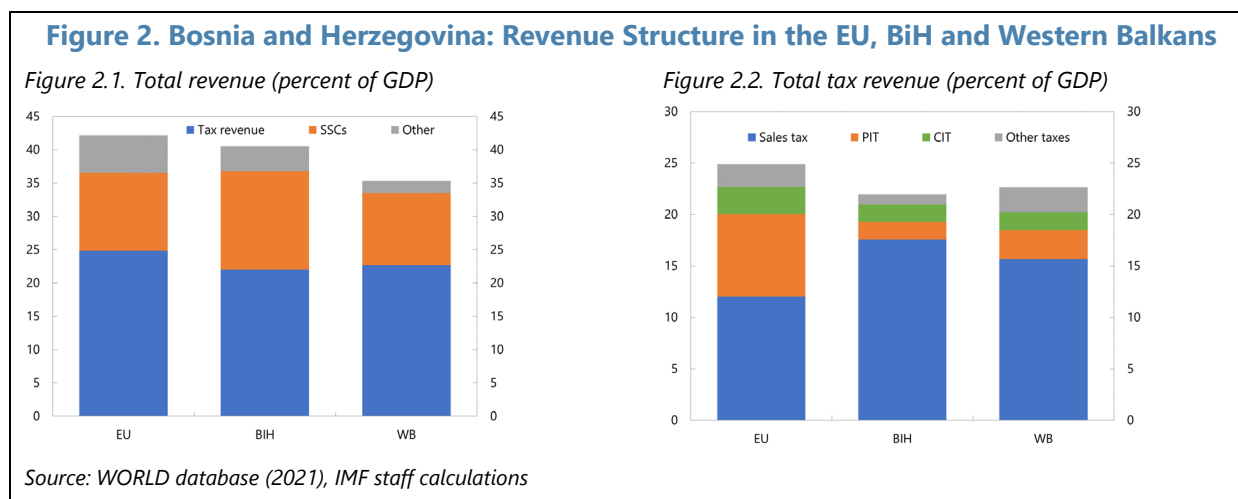
**7. PIT rates are among the lowest in the region, resulting in limited revenue generation** (Figure 1.1). Compounded by the high unemployment rate, the share of PIT in total revenues is low in both entities—5.9 percent in FBiH and 5.7 percent in RS. This contrasts with the average share of 8.6 for the Western Balkan region and 22.6 percent in the EU.

**8. While SSC rates are among the highest in the region, the generated revenue is still insufficient to cover all the needs of social security funds, necessitating central government transfers** (Figure 1.2). The rates are particularly high in FBiH. Social protection systems (primarily pensions and health) are financed entirely from collected contributions. Additional funds are typically provided through budget transfers.<sup>4</sup>

<sup>4</sup> For example, during 2024, the collected contributions for pension insurance were about 86 percent of the total paid pensions in both entities, and the difference was financed from general budget revenues, since the pension fund is part of the central government and the treasury system. In addition, both entity governments in the last couple of years in the budget have made transfers to health institutions to settle their arrears, and social insurance funds (among which the health insurance fund has the most significant financial participation) have the largest share in the total arrears of the general government. In FBiH it is 66 percent of total arrears (0.5 percent of FBiH GDP), and in RS 39 percent (0.2 percent of RS GDP).



**9. Labor taxes contribute a large share of revenues in BiH compared with other European countries.** At 40.5 percent of GDP (2021), the revenue-to-GDP ratio is above the Western Balkans (35.3 percent) average and marginally below the EU average (42.2 percent), but BiH stands out for its relatively low levels of PIT and corporate income tax (CIT), with most revenue collected from SSCs and VAT (Figure 2). Labor taxes (i.e., PIT and SSCs) generated about 40 percent of total revenue.



**10. Over the past two decades, the RS has notably reduced the tax burden on labor.** In 2016,<sup>5</sup> a solidarity contribution rate (introduced in the wake of the 2014 floods) was reduced and abolished in 2017. In 2018 the PIT deduction increased from KM 200 to KM 500, and in 2020 the SSC rate was reduced from 33 to 32.8 percent. In 2022, the PIT deduction was increased to KM 1,000, the

<sup>5</sup> Prior to 2016, several labor taxation amendments had been introduced. In 2009, the SSC rate was reduced from 42 percent to 30.6 percent, and the PIT rate from 10 percent to 8 percent. RS also amended the tax base – from 2009 the SSC base became the gross salary rather than take-home pay, and for PIT, the gross salary minus SSC. Two years later, in 2011, the SSC rate was increased from 30.6 percent to 33 percent, and the PIT rate from 8 to 10 percent. After the floods in 2014, RS introduced a new solidarity contribution (3 percent of the net salary), and a personal tax deduction of KM 200 per month.

SSC rate reduced from 32.8 to 31 percent, and the PIT rate reduced from 10 to 8 percent. However, the PIT base was amended to be the gross income without any deduction for SSC.

**11. In FBiH, the first amendment to labor taxation in 10 years will come into effect on July 1<sup>st</sup>, 2025.** There have been no notable changes since 2008, when the SSC rate was reduced from 43.5 percent to 41.5 percent, the PIT rate was increased from 5 to 10 percent, and a personal tax deduction of KM 300 per month was introduced. In the first half of 2025, the authorities adopted amendments to the SSC law, whereby the employer SSC is reduced by 5.5 ppts, reducing the overall SSC rate from 41.5 to 36 percent. This change was made to reduce the total costs of employers, which increased significantly at the beginning of 2025 due to a decision of the FBiH Government to increase minimum wage by 61.6 percent (from KM 619 to KM 1,000).

**12. Recent policy changes in FBiH are expected to have a marginally positive fiscal impact in 2025.** Besides the minimum wage increase in January, the pension insurance contribution rate will be reduced from 6 to 2.5 ppts of gross wages from July 2025, and the contribution to healthcare from 4 to 2 ppts. For workers who work 4 hours a day or less, the basis for calculating the contribution is their salary or 50 percent of the minimum wage, whichever is greater, providing some relief at the lower end of the income distribution. Staff calculations based on 2024 wage distribution data suggest that while the minimum wage increase alone will generate an 8 percent increase in revenue from PIT, SSC and other wage-related revenue, this is expected to be largely eroded by subsequent reduction in the SSC rates, resulting in a net increase in revenues of 1.5 percent relative to 2024, or 0.3 percent of FBiH GDP for the full year (Table 2). The SSC rate largely cut affects pension contributions which finances the central government budget.

	KM Million or %							
	2024	% of GDP	2025 (MW only)	% of GDP	% change relative to 2024	2025 (MW+SSC)	% of GDP	% change relative to 2024
PIT	763	2.2%	827	2.4%	8%	827	2.4%	8.3%
SSC - Pension	3,204	9.4%	3,469	10.1%	8%	3,187	9.3%	-0.5%
SSC - Health	2,299	6.7%	2,489	7.3%	8%	2,325	6.8%	1.1%
SSC - Employment	279	0.8%	302	0.9%	8%	300	0.9%	7.6%
Other Earmarked Fees	156	0.5%	167	0.5%	7%	167	0.5%	6.6%
<b>Total</b>	<b>6,701</b>	<b>19.6%</b>	<b>7,253</b>	<b>21.2%</b>	<b>8%</b>	<b>6,805</b>	<b>19.9%</b>	<b>1.5%</b>

*Source: Staff calculation using FBiH wage distribution data.*

### C. Estimating the Tax Wedge for BiH

**13. Tax wedge calculations for BiH require adjustment to reflect entity-specific legislation.** Simply defined, the tax wedge is calculated as all taxes on income, including PIT and SSC, as a percentage of total labor cost (gross salary and any SSC borne by the employer). In BiH, employees are often remunerated in the form of meal, transportation and vacation allowances, most notably in



FBiH, where such benefits can account for over 30 percent of average take-home pay (see Box 1). In RS, these allowances (except transportation) are treated as part of overall remuneration and taxed; in FBiH they are tax-free and should be reflected in any calculation of the tax wedge. As such, two methods will be used to calculate the tax wedge in BiH: the first, a simplified approach, commonly used in practice for cross-country comparison, takes into account only the statutory PIT allowance and rate, as well as SSC, while the second method includes these non-taxable benefits, as well as other tax deductions for dependent family members. The calculation assumes that all available non-taxable benefits are provided and used under labor contracts.<sup>6</sup> Under the second method, the total labor cost also includes other fees linked to the salaries (contribution for natural disasters protection, water protection and fire protection), according to entity legislation.<sup>7</sup>

### Box 1. Allowances Arising from Employment

**According to the labor laws or collective and branch agreements, employees are entitled to receive allowances arising from employment.** In both entities, the employer is obliged to increase the employee's income based on difficult working conditions, overtime work, night work, work during weekly rest or work during holidays. This fee ranges from 15 percent (in the case of work during a weekly holiday) to 50 percent (in the case of work during a holiday) of the net hourly wage for each hour of work. For each year of work, the worker has the right to a salary increase of at least 0.3 percent (in RS) or 0.4 percent (in FBiH). Branch collective agreements can define these allowances in a larger amount. These fees are taxed in both entities.

**Workers can also receive hot meal, vacation and transportation allowances.** In FBiH, the obligation to pay these benefits arises from the collective labor agreement and branch agreements, while in RS, the payment for a hot meal and transportation costs is an obligation under the labor law, while the payment of vacation allowances is defined by branch agreements. These allowances have different tax treatment within BiH and in FBiH they assume the role of salary to a certain extent.<sup>1</sup> Although they are not required by law, compensation for a hot meal in FBiH is received by about 70 percent of workers, and compensation for transportation and regress is received by about 40 and 45 percent, respectively (Table 1).

<sup>6</sup> The same tax treatment is applicable in both the public and private sectors. While in the public sector salaries are prescribed and non-taxable allowances are paid on top of salary, in the private sector, total income is negotiated and comprises both taxable income and non-taxable benefits.

<sup>7</sup> Method 2 in FBiH includes mandatory fees for water protection, rehabilitation of the disabled and a contribution for protection against natural disasters. The contribution for the rehabilitation of the disabled is calculated on the amount of the gross salary (0.5 percent) and contributes to the increase of the tax wedge, but this growth is not noticeable through the results considering that non-taxable benefits had a much stronger impact on the reduction of the tax wedge. Fees for water protection and natural disaster protection are separated from the net amount.

**Box 1. Allowances Arising from Employment (Concluded)**

		Meal	Vacation	Transportation
Who is obliged to pay	FBIH	Employers who do not have organized meals at the workplace (in kind)	Not mandatory by the law; defined by the branch agreements	Not mandatory by the law; defined by the branch agreements
	RS			Employers who do not have organized transportation to and from working places
Prescribed (minimum) amount <sup>1)</sup>	FBIH	From 0.5 to 1 percent of average net salary	Defined by individual branch collective agreements (usually up to non-taxable)	Defined by individual branch collective agreements (usually up to non-taxable)
	RS	In kind: 0.75 percent of average net salary; in cash: 0.85 percent of average gross salary	Defined by individual branch collective agreements (in most cases it is amount of minimum salary)	Ticket price in public transportation
Tax treatment	FBIH	Non-taxable up to 1 percent of average net salary	Non-taxable up to 50 percent of average net salary	Up to the price of the ticket in public transport, and in the case of using your own car from 15% of the price of 1 liter of gasoline per kilometer traveled, and at most up to the price of one and a half monthly tickets in public traffic
	RS	Taxable unless it is organized in kind up to 0.75 percent of net salary	Taxable	Up to the ticket price in public transportation
Monthly amount (2023)	FBIH	KM 245	KM 46	Around KM 66 in average
	RS	KM 197 + PIT + SSC	No data	No data
Annual net amount paid out	FBIH	KM 810.3 mn	KM 97.6 mn	KM 121.6 mn
	RS	No data	No data	No data

<sup>1)</sup> These allowances can be defined in larger amounts by individual branch agreements or individual labor contracts

**Employers can also pay other types of benefits to workers.** Most often, it is about the payment of severance pay upon termination of employment, per diems during official travel, compensation for the use of one's own car for official purposes, jubilee awards, one-off cash assistances for holidays, as well as assistance in the event of the death of an employee (to family) or a family member or in cases of serious illness. In both entities, the payment of these benefits is tax-free only up to a certain amount.

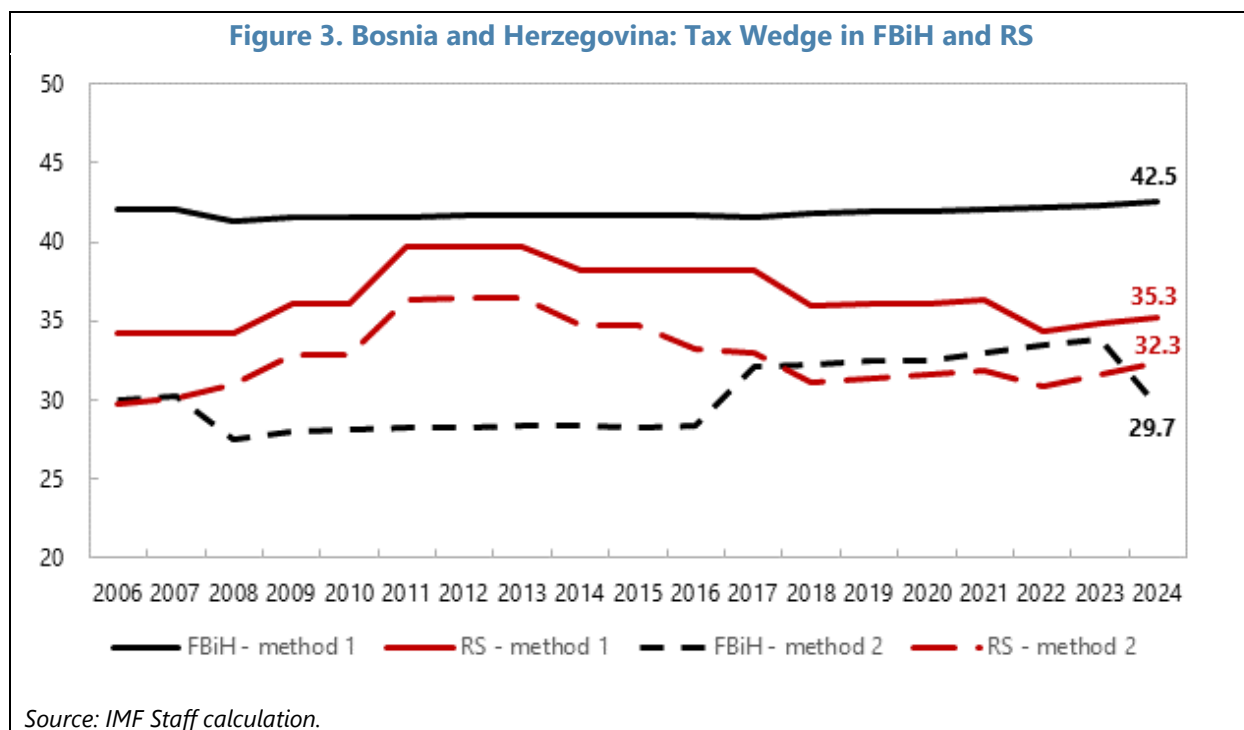
<sup>1)</sup> For example, the employee and the employer agree that the employee's income will be KM 1,000 per month, and in accounting terms it is shown as a salary of KM 700 increased by allowances of KM 300. The subject of taxation is only the salary of KM 700.

Source: 2024 IMF Selected Issues Paper

**14. Using the detailed methodology, tax wedges in both entities are found to be nearly identical.** The tax wedge is estimated at 32.3 percent of the gross average wage in RS and 29.7 percent in FBiH (Figure 3). While under method 1, FBiH tax wedge is significantly higher due to higher headline PIT rates, lower PIT allowances and a higher SSC rate, the inclusion of the large non-taxable benefits under method 2 means that the effective tax burden falls by 13 ppts and the wedge is slightly lower in FBiH than in RS. In RS, the tax wedge under method 2 is slightly lower compared to method 1, which is the result of a reduced tax base for dependent family members and included non-taxable transportation allowance.

**15. The tax wedge has varied over time in both entities.** In RS, this is a result of frequent changes in the legal framework as discussed earlier. In FBiH, while under method 1, there were no significant changes over time, under method 2, there was a decrease in 2008 due to the introduction of tax deduction for dependent family members, and an increase from 2017, due to the reduced

level of permitted non-taxable meal and vacations allowances.<sup>8</sup> In 2024, FBiH further reduced the tax wedge by permitting employers to pay each worker monthly non-taxable cash assistance in the amount of up to KM 461, in order to mitigate the negative consequences on purchasing power caused by price increases.



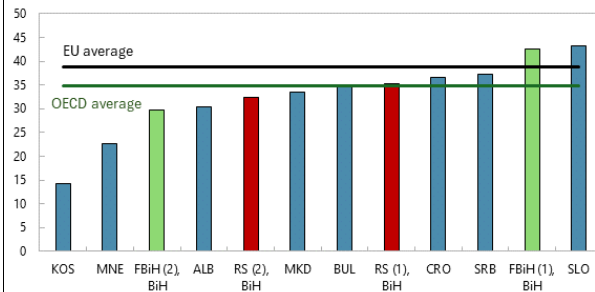
**16. The standard tax wedge in BiH—driven primarily by SSC—is among the highest in Europe but falls significantly when non-taxable allowances are considered.** According to both methodologies, RS is in the middle in comparison with the region and has a lower tax wedge than the EU average (Figure 4.1).<sup>9</sup> The average share of SSC in the tax wedge in BiH is 89 percent, higher than the average share in the region (Figure 4.2.). For OECD countries, the share of PIT is on average 38 percent, while in the EU the share of PIT in total tax wedge is 35.2 percent (see Annex 1). It should be noted that in the Western Balkans region, in most cases, the social insurance system is primarily financed from contributions, while in many European advanced economies general tax revenues are also used to finance social protection – this arrangement may also have influenced their relative shares of PIT and SSC in the tax wedge.

<sup>8</sup> Until October 2016, the allowance for a meal was tax-free up to 2 percent of the average take home salary per working day, and after that it was reduced to 1 percent, and the vacation allowance was tax-free up to 70 percent of the average salary, and then the limit was reduced to 50 percent.

<sup>9</sup> For comparator countries, both methods are likely to yield similar results, given that non-taxable allowances are not a typical feature of most labor tax regimes. As such, the tax wedge for other countries is calculated using only method 1.

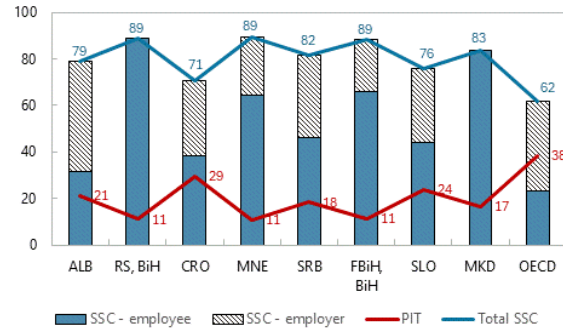
**Figure 4. Bosnia and Herzegovina: Tax Wedge Level and the Structure in the Region**

Figure 4.1. Tax wedge in the region



Source: IMF Staff calculation and OECD Taxing Wages Report 2025

Figure 4.2. Composition of the tax wedge in the region



### 17. The fragmentation of the tax system creates incentives to reclassify employment

**income to income from other sources.** The tax wedge based on income from employment is the highest and the only one that tends to increase at higher levels of income (Figure 5). While the tax system should ideally remain neutral to all forms of labor employment, the more favorable tax treatment for income through temporary service contracts, royalties, or self-employment, in combination with weaker tax compliance, can lead to the shift of income from one source to another and generate significant benefits for the employee and savings for the employer.<sup>10</sup> In some cases, income is entirely reported under more favorable contractual types, even when in practice the arrangement is one of formal employment. In FBiH, reclassification can reduce the tax wedge as much as 24 percent at higher income levels and 18 percent in RS. The link between SSC and social security benefits could also be strengthened. Pensions, for example, are not strictly linked to years of contribution and reported income, limiting incentives to report income accurately.<sup>11</sup>

<sup>10</sup> For example, in FBiH if a taxpayer is employed and earns second income based on self-employment, the additional income is taxable for PIT purposes, but not for SSC. In the case of the temporary service contract and copyright income, contributions are 10 percent, and the tax base is reduced by 30 and 20 percent, respectively, based on recognized costs and additionally by the amount of the calculated contribution for healthcare. In RS, on self-employment income (if the taxpayer is already employed by another employer) is taxed at 10 percent, and contributions are 18.5 percent on a base that is 30 percent of the average salary in RS. In the case of the temporary service contract and the copyright, the tax rate is 13 percent, but it is reduced by the amount of the calculated contributions, and in the case of the copyright contract, the recognized costs that additionally reduce the tax base range from 40 to 60 percent. Of the contributions, only the pension insurance contribution (18.5 percent) is paid.

<sup>11</sup> There is no upper limit to the income on which contributions are paid, but there is a defined maximum pension level that puts taxpayers with high incomes at a disadvantage in terms of the ratio of payments and benefits. These links are further weakened when the taxpayer works part-time. Although the paid contribution of that person may be equal to or higher than the payments of a person who works full-time, the pension track of the first group is reduced in accordance with less reported working hours. For health insurance, in both entities, taxpayers who are not full-time employed but earn income based on temporary services contracts and casual jobs are in a disadvantageous position. They are obliged to pay a contribution for health insurance based on those incomes, but they do not exercise the right to health care on that basis.

**Figure 5. Bosnia and Herzegovina: Tax Wedge Depending on the Income Source**

Figure 5.1. Tax wedge in the FBiH

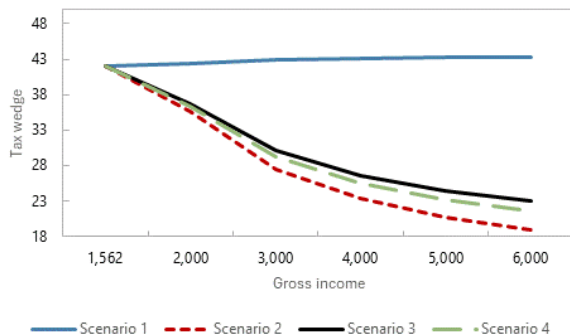
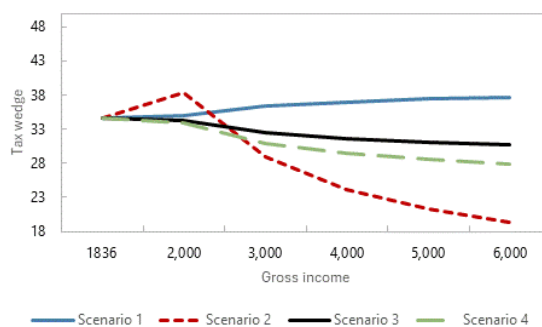


Figure 5.2. Tax wedge in the RS



**Notes:**

- Scenario 1. All income is employment based income.
- Scenario 2. Full employment at the MW; the rest is self-employment income.
- Scenario 3. Full employment at the MW; the rest is based on temporary services contract.
- Scenario 4. Full employment at the MW; the rest is royalty fee.

Source: IMF staff calculation based on relevant legislation

**D. The Tax Wedge Across the Income Distribution**

**18. The tax system in both entities displays limited progressivity.** In both entities, the PIT and SSC rates are flat and progressivity comes from the PIT deduction, which has a higher percentage share in the amount of lower incomes. Given that the PIT deduction in RS is 3.3 times higher than in FBiH, progressivity is more pronounced in RS (Figure 6). In FBiH, with no changes, progressivity has not changed over time, while RS has seen an increase in progressivity due to an increase in the personal deduction (from KM 200 to KM 500 and later to KM 1,000). Progressivity of the tax wedge in BiH is lower compared with both the regional and the EU average (Figure 7).

**Figure 6. Bosnia and Herzegovina: Tax Wedge Progressivity in BiH and the Region**

Figure 6.1. FBiH tax progressivity

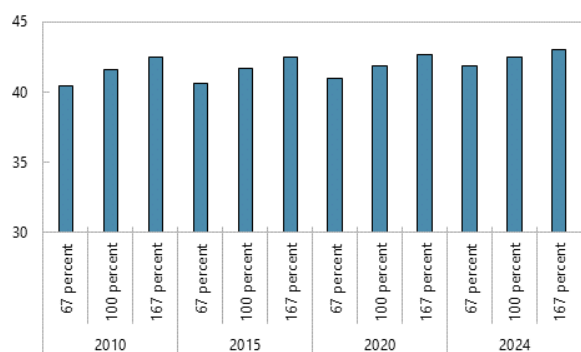
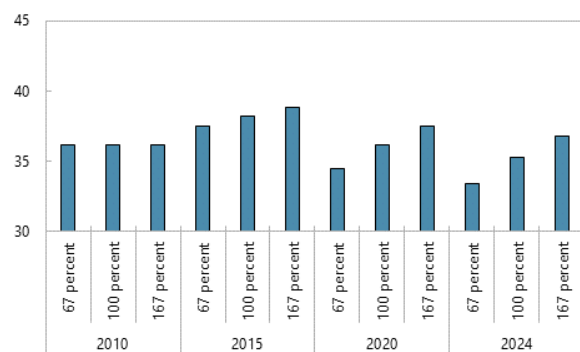
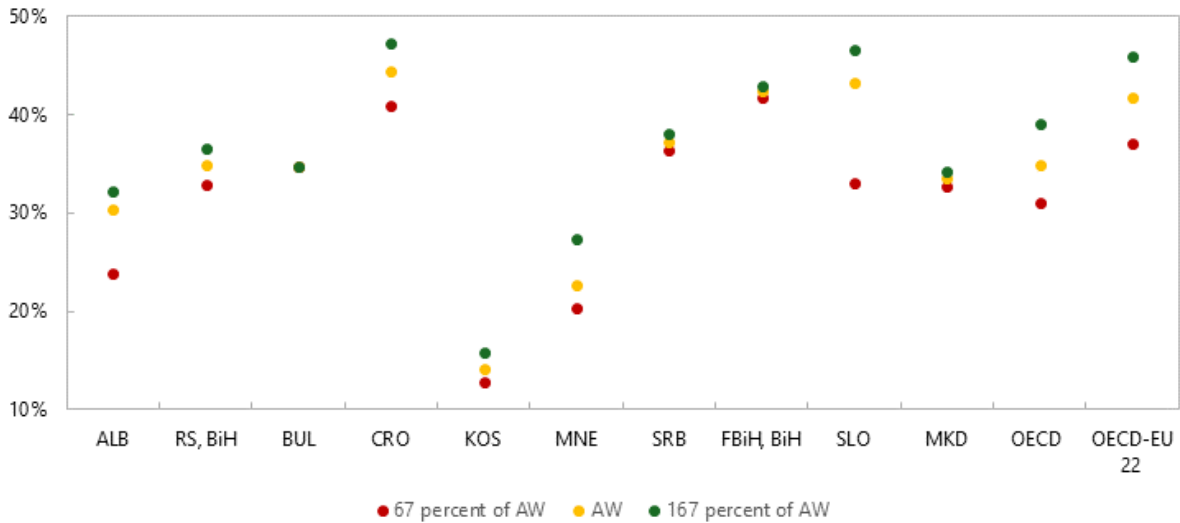


Figure 6.2. RS tax progressivity



**Figure 6. Bosnia and Herzegovina: Tax Wedge Progressivity in BiH and the Region**  
(Concluded)

Figure 6.3. Tax progressivity in the region



Note: Progressivity is calculated by comparing the tax wedge levels depending on the personal income level, whereby income is divided into three levels: income below the amount of the average wage (more precisely, 67 percent of AW), income equal to the average wage, and income above the average salary (167 percent of AW)

Source: IMF staff calculation and OECD Taxing Wages Report 2025

**19. Increases in minimum wages had a limited impact on overall tax progressivity.**

Increases in the minimum wage and average wage lead to a greater number of workers who have a higher tax wedge, but rates increase only marginally, by up to 1 percentage point. Conversely, Figure 7 shows that employees with a salary below the minimum wage (mainly part-time workers) face the largest tax wedge, because the law defines that the basis for contributions in those cases is the minimum wage.

**Figure 7. Bosnia and Herzegovina: Tax Wedge per Income Distribution**

Figure 7.1 Income distribution and tax wedge in the FBiH

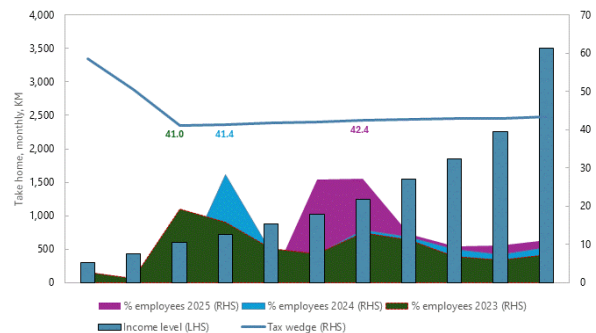
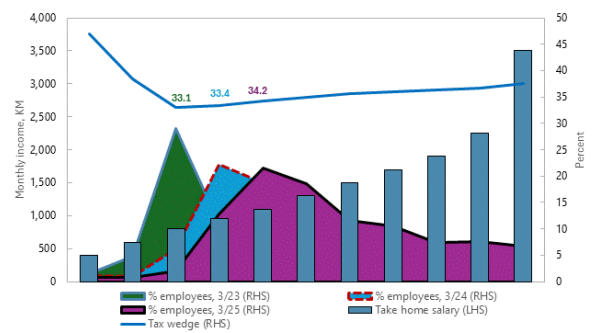
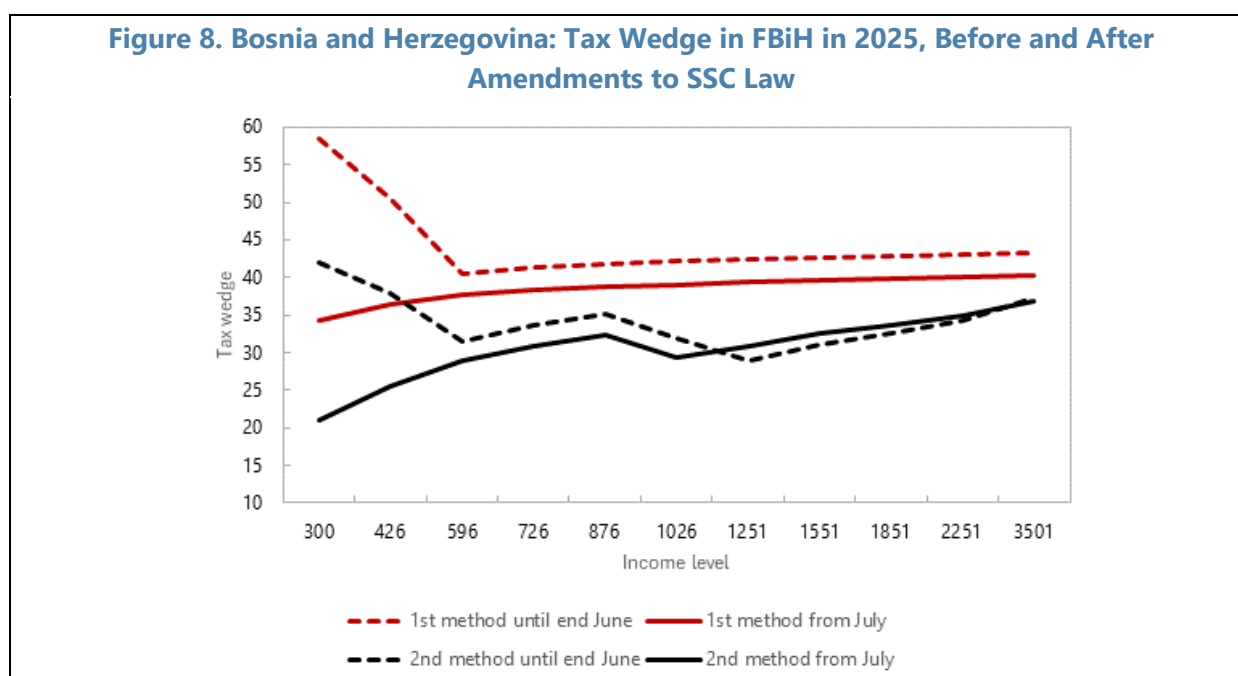


Figure 7.2 Income distribution and tax wedge in the RS



Source: IMF Staff calculation

**20. However, changes in the tax regulations adopted in FBiH in 2025 may have distributional impacts.** With amendments to the law on contributions that came into effect on July 1, 2025, under both calculation methodologies, the headline SSC rate reduction will reduce the tax wedge. Moreover, the amendment will reduce the tax wedge for employees earning below the minimum wage through a recalibration of the SSC tax base which will be amended to 50 percent of MW for those who work less than four hours per day, or personal gross income for those who work more than four hours per day. Under the first method, amendments will not have any distributional impact for employees who earn more than MW. However, under the second method, there may be distributional impacts because, in July, the regulation that enabled the payment of tax-free compensation of KM 450 per month ceases to be valid. This compensation was paid mainly to those workers whose salary in 2024 was KM 1,000 or more to maintain wage differentials following the increase in the MW, without creating additional costs for employers in the form of taxes and contributions.



## E. Conclusions and Policy Considerations

**21. The labor tax system in BiH exhibits several inefficiencies.** After accounting for non-taxable allowances, the labor tax wedge in BiH is lower than the level implied by the simplified approach. However, non-wage benefits and differential treatment of various types of labor income have created a complex and opaque system that is prone to avoidance or evasion. This undermines revenue collection and keeps statutory SSC rates high on formal employment income. Differences in tax treatment between the entities (and BD) adds to the administrative burden for businesses that operate in both entities and creates opportunities for tax arbitrage.

**22. Labor tax wedge reforms should aim to improve labor market outcomes and growth potential without undermining fiscal revenue.** This requires simplifying the system, removing preferential treatment for certain categories of work, and broadening the tax base to include currently untaxed compensation.<sup>12</sup> Reductions in tax rates will need to be combined with offsetting revenue measures to sustain financing of social benefits. Minimum wage hikes, such as the one in January 2025, are not a sustainable substitute for tax wedge reductions. Greater harmonization of tax treatment of labor taxation across entities would reduce distortions and compliance costs. Reviewing the link between SSC contributions and benefits could strengthen incentives to contribute. Once compliance improves, a second marginal PIT tax bracket at a higher rate could be introduced to enhance progressivity and revenue from higher earners.

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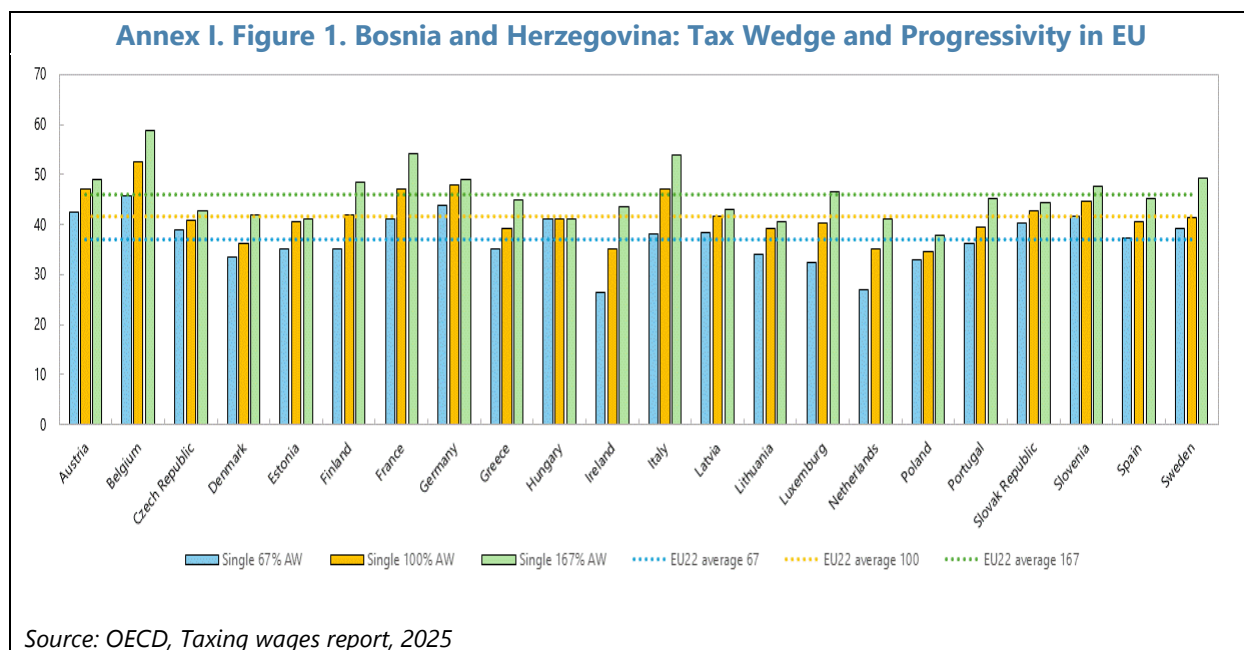
<sup>12</sup> Since non-wage benefits appear to increase with income levels, a reform that expands the tax base to all labor income would increase the overall progressivity of the system.



## Annex I. Tax Wedge in the EU

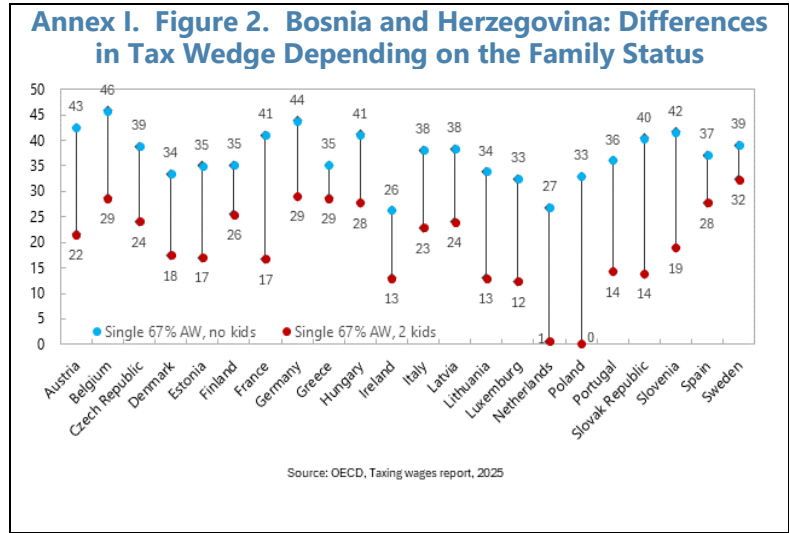
**1. The EU tax wedge has surpassed pre-pandemic levels.**<sup>1</sup> In 2020, it declined in most countries due to lower nominal wages and COVID-19 tax relief, with reductions seen in 20 of 22 observed EU countries—except Sweden and Portugal. The largest drops were in Italy, Hungary, Finland, and Luxembourg. By 2022, the tax wedge rose again as wages increased, inflation accelerated, and pandemic measures ended. That year, 19 countries saw increases, 9 saw further decreases, and one remained unchanged. Although changes were generally modest, the average tax wedge in 2024 is the highest since 2019. The sharpest increases were in Slovenia—due to a new mandatory health contribution—and Italy, where average wages exceeded the threshold for lower contribution rates.

**2. The tax wedges vary considerably.** For a worker with an average wage (AW) Belgium has the highest tax wedge (52.6 percent), and Poland has the lowest (34.7 percent), with a cross-country average difference of 8.8 percentage point between workers earning 167 percent and 67 percent of the AW (Annex I. Figure 1). Tax progressivity varies notably by income level: the average tax wedge is 37.1 percent for a single worker at 67 percent of AW, rising to 41.7 percent at AW and 45.9 percent at 167 percent of AW. Progressivity is most pronounced in Ireland (17.3 pp) and Italy (15.9 pp).

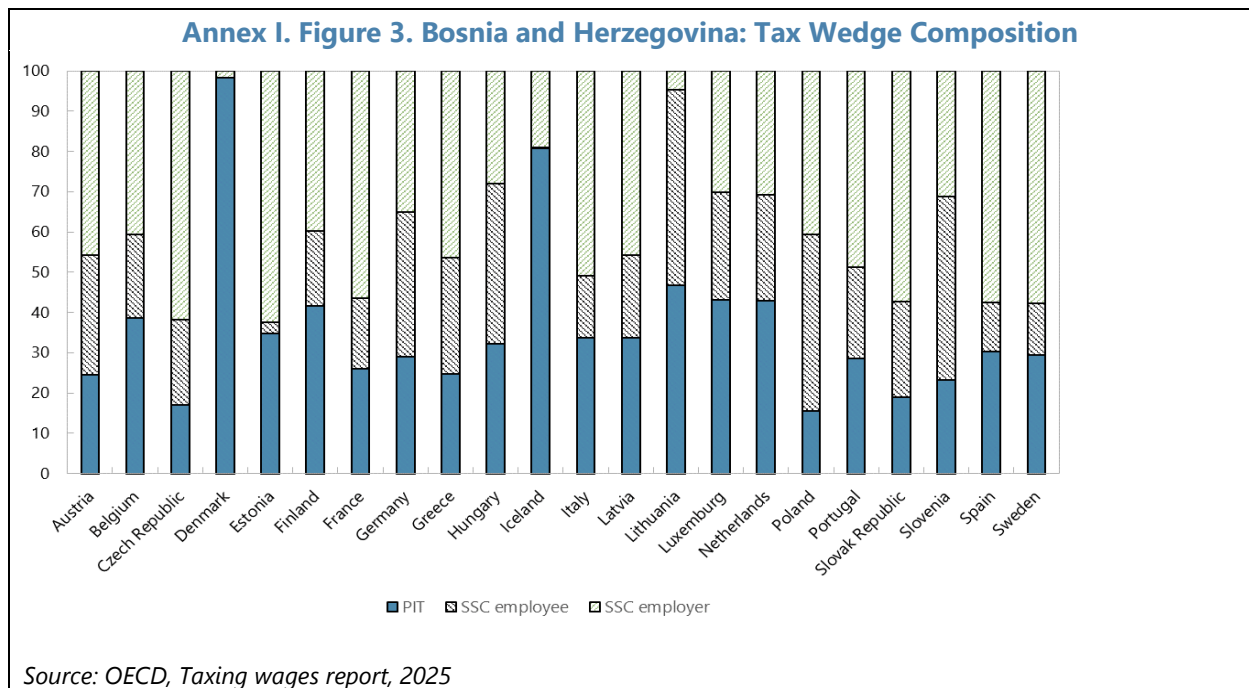


<sup>1</sup> The analysis was done on the basis of data for 22 EU members, which are also members of the OECD, namely Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Spain, and Sweden.

**3. The tax wedge is significantly lower for families with children.** Across all family types—regardless of income level or whether one or both parents are employed—the average tax wedge is below that of a single worker earning the average wage (AW). The difference is most pronounced when comparing a single worker at 67% of AW to a single parent with two children. (Annex I. Figure 2.)



**4. PIT accounts for 35 percent, while SSC for 64.8 percent of the tax wedge** (Annex 1. Figure 3.). In all observed countries except Denmark—where PIT comprises 98.3 percent—PIT accounts for less than half of the tax wedge. Poland has the lowest PIT share at 15.5 percent. SSCs are shared between employers and employees in all countries except Denmark, with employer contributions making up a larger portion (41 percent) than employee contributions (23.8 percent).



# THE REAL ESTATE MARKET IN BOSNIA AND HERZEGOVINA<sup>1</sup>

*Housing prices in Bosnia and Herzegovina (BiH) have been rising rapidly in recent years, mirroring trends in the broader region. While the House Price Index (HPI) and private credit growth have increased significantly, financial stability risks remain contained due to the relatively low share of mortgage lending in banks' portfolios and modest levels of household indebtedness. Nonetheless, authorities should remain vigilant and systematically monitor a broad set of housing market and credit indicators to detect potential vulnerabilities early. The authorities should accelerate the implementation of borrower- and capital-based tools—such as loan-to-value (LTV) and debt-service-to-income (DSTI) limits, and the countercyclical capital buffer (CCyB)—and improve coordination among financial stability institutions to ensure a timely and effective policy response.*

## A. The Role of the Real Estate Market in Financial Stability

**1. Residential real estate plays a key role in financial stability due to its importance for household finances.** Housing is typically the largest asset for most households, while mortgages represent their most significant liability. Changes in house prices directly influence household wealth, shaping consumption and investment decisions. When property values rise, households experience a wealth effect, increasing spending and supporting economic growth. Conversely, declining house prices can erode household balance sheets, reducing consumer confidence and leading to lower spending, which can amplify economic downturns. Moreover, the housing market's performance is closely tied to the banking sector, given that mortgage lending constitutes a substantial portion of financial institutions' loan portfolios. A downturn in the real estate sector can lead to higher default rates, weakening bank balance sheets and restricting credit availability, thereby exacerbating financial instability. As a case in point, the 2008 Global Financial Crisis (GFC) was largely triggered by excessive mortgage lending, particularly in the subprime segment, which led to a housing bubble. When house prices collapsed, widespread mortgage defaults resulted in severe losses for financial institutions, triggering a banking crisis and a deep global recession.

**2. Real estate is closely monitored by the authorities responsible for financial stability, using a wide range of indicators and policy tools.** Key indicators include house prices, household indebtedness, mortgage credit growth, and financial conditions. To mitigate risks, authorities employ macroprudential tools such as loan-to-value (LTV) and debt-service-to-income (DSTI) limits to curb excessive borrowing, countercyclical capital buffers to strengthen bank resilience, and sectoral risk weights to control credit expansion in real estate. Stress tests and scenario analyses allow regulators to assess the potential impact of adverse market shocks on banks, households, and the broader economy. Effective policy responses require timely adjustments based on evolving

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<sup>1</sup> Prepared By Carolina Lopez-Quiles and Adrian Music

market conditions, close coordination among regulatory bodies, and proactive intervention to prevent real estate cycles from fueling systemic financial instability.

## B. Macroprudential Policy and the Real Estate Market

**3. Macroprudential policy plays a key role in managing housing sector risks.** The strategic implementation of sector-specific macroprudential instruments plays a crucial role in mitigating the accumulation of systemic risks that arise from overheating in the housing market. Macroprudential tools can be broadly categorized into two groups: those that aim to contain the build-up of risk (such as borrower-based measures) and those that enhance resilience (such as capital buffers).

**4. Borrower-based measures directly target the demand for credit.** They place limits on the borrowing capacity of households, thereby reducing the risk of excessive leverage and enhancing the resilience of both borrowers and the financial system. Loan-to-Value (LTV) limits help maintain a buffer against market fluctuations and reduce the risk of default by imposing restrictions on the amount of credit that can be extended relative to the appraised value of the property. Most EU countries have some LTV limits lower than 100 percent in place, and the average LTV limit in Europe is 80 percent.<sup>2</sup> Similarly, Debt-Service-to-Income (DSTI) or Loan-to-Income (LTI) limits promote sustainable borrowing practices by establishing a cap on how much of a borrower's income can be dedicated to servicing debt, ensuring that borrowers do not overextend themselves financially ([IMF, 2013b](#)). In addition, DSTI or LTI limits can function as automatic stabilizers by becoming more restrictive when house prices outpace disposable income growth. This helps temper credit expansion and mitigate the procyclical feedback between credit and house prices. Although in principle these measures could be tightened and loosened cyclically, in practice many countries use them as systematic, permanent measures, often due to the lengthy legal process of implementation and the fact that they only apply to new loans ([ECB, 2022](#)).

**5. Capital-based measures can be further differentiated by their objectives, calibration, and application to specific sectors or systemic risks.** Sectoral capital requirements can target specific risk exposures – such as mortgage loans with high LTVs by increasing their risk weights ([IMF, 2013b](#)). Countercyclical capital buffers, which are activated depending on the phase of the financial cycle, would closely follow mortgage credit cycles.

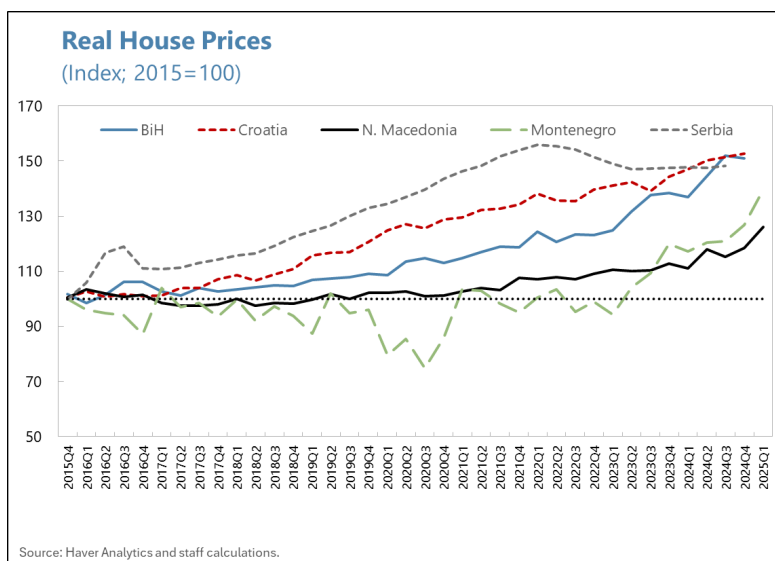
**6. A comprehensive set of indicators should be employed to evaluate the necessity for policy intervention, with particular emphasis on the expansion of mortgage loans and the fluctuation of house prices.** Some key indicators like house price indices, and house price deviations from historical trends can measure house price overvaluation and underscore the risks of price corrections. Mortgage loan growth and lending conditions are good indicators of market overheating. Average LTV ratios can give a sense of loss given default (LGD) for the bank, while LTI ratios and DSTI ratios can be used to assess household over indebtedness.

<sup>2</sup> [IMF Integrated Macroprudential Policy Database \(iMaPP\)](#).

- a. **House price indicators.** Indicators to track house price developments include the House Price Index (HPI), House Price-to-Income Ratio, or the Price-to-Rent Ratio.
- b. **Credit indicators.** Indicators of lending activity are useful to track the financial cycle and developments in financial markets. Examples include Household Debt-to-GDP, Mortgage Debt-to-Income Ratio, average Loan-to-Value Ratios, average Debt-to-Service-to-Income Ratio, mortgage credit growth, and lending rates. Filtering techniques can also be used to calculate the position in the financial cycle, i.e. the difference between the current credit-to-GDP ratio and its long-term trend. A common approach is the Hodrick-Prescott (HP) filter.
- c. **Banking sector exposure.** Some indicators can illustrate the exposure of the banking sector to the real estate market. For instance, the share of mortgage loans to total loans in bank portfolios, the share of NPLs in mortgage loans, and the level of loan loss provisions. If banks are also invested in the real estate market, real estate assets as a percentage of total assets could also be useful.
- d. **Market activity indicators.** These indicators can help to gauge overheating in the market. Some examples are transaction volumes (the number of sales or purchases over time), building permits and housing starts, and vacancy rates (the share of unoccupied housing units). Real estate valuation gaps, measuring the deviation of current house prices from estimated fundamentals, can help detect overheating.

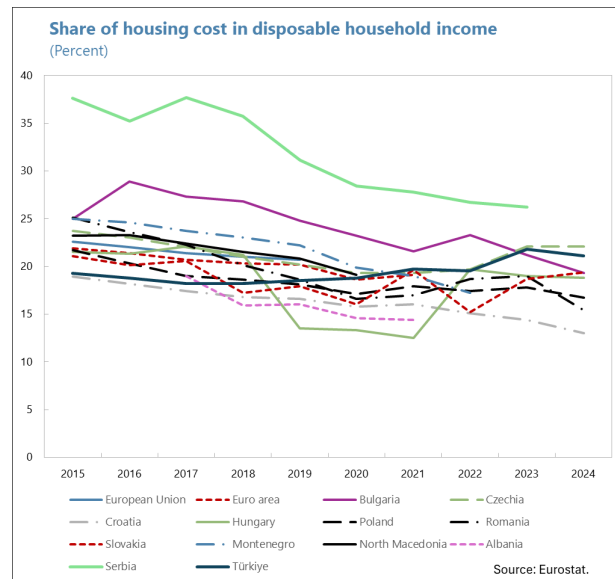
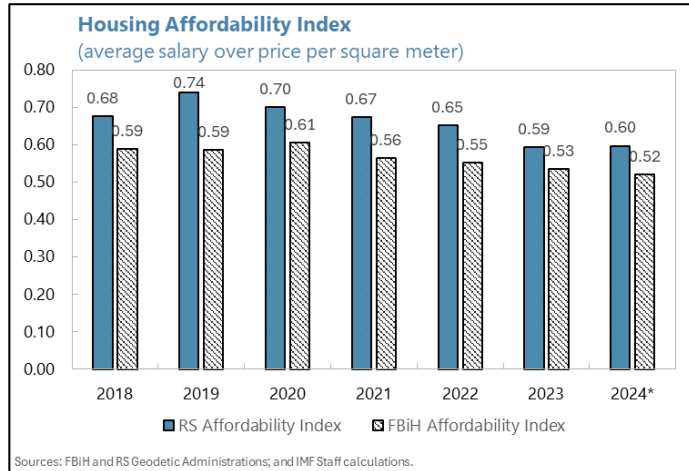
## C. (Residential) Real Estate Developments in BiH and the Region

**7. Housing prices in BiH have soared in recent years, in line with those in the region and the EU.** House prices have been on an upward path in real terms since 2018 after a period of flat house prices that followed the GFC. This pattern is common across countries in the region such as Croatia, Montenegro, North Macedonia, and Serbia. A similar pattern emerged in the EU, however EU house prices seem to have stabilized since 2022. Year-on-year real house price growth in BiH was over 13 percent at the end of 2023, the highest price growth peak since the onset of the GFC, when house price growth reached 38 percent y-o-y at end 2007.



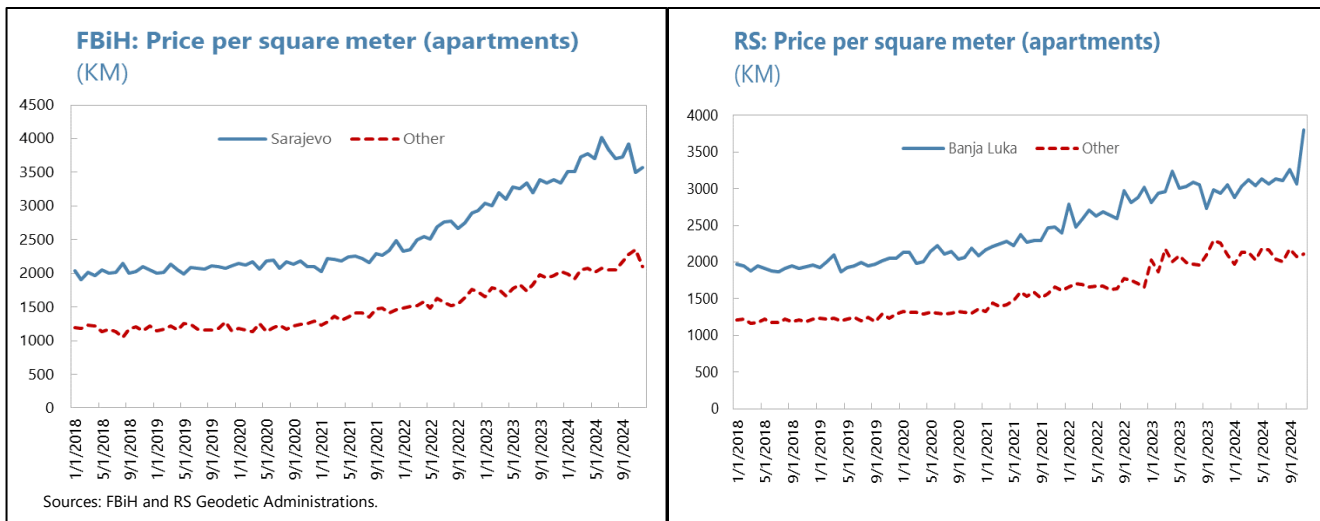
**8. Housing has become less affordable in BiH.** On average, housing has become less affordable than before the pandemic, as indicated by the declining housing affordability index.<sup>3</sup> The faster increase in housing prices compared to the rise in average net wages has made apartments [flats] less affordable. This trend has been consistent in both Republika Srpska (RS) and the Federation of BiH (FBiH). With an average monthly net wage, a person

in 2024 could afford 0.6 and 0.5 square meters of an apartment in RS and FBiH respectively, 13 percent less than in 2018. As a measure to ease affordability pressures on young prospective homeowners, the authorities have amended the VAT law to allow VAT refunds on home purchases of newly built units for first-time homebuyers. The amendment has been in force since mid-April. However, there has been no impact on increasing home purchases so far, as the implementing bylaws are still under discussion. This measure is not expected to have a major impact on VAT revenues as the stock of eligible housing and the age caps limit the number of cases where this would be implemented. Considering total housing costs as a share of disposable income, housing affordability has improved recently in the EU, the euro area, and several CESEE countries.

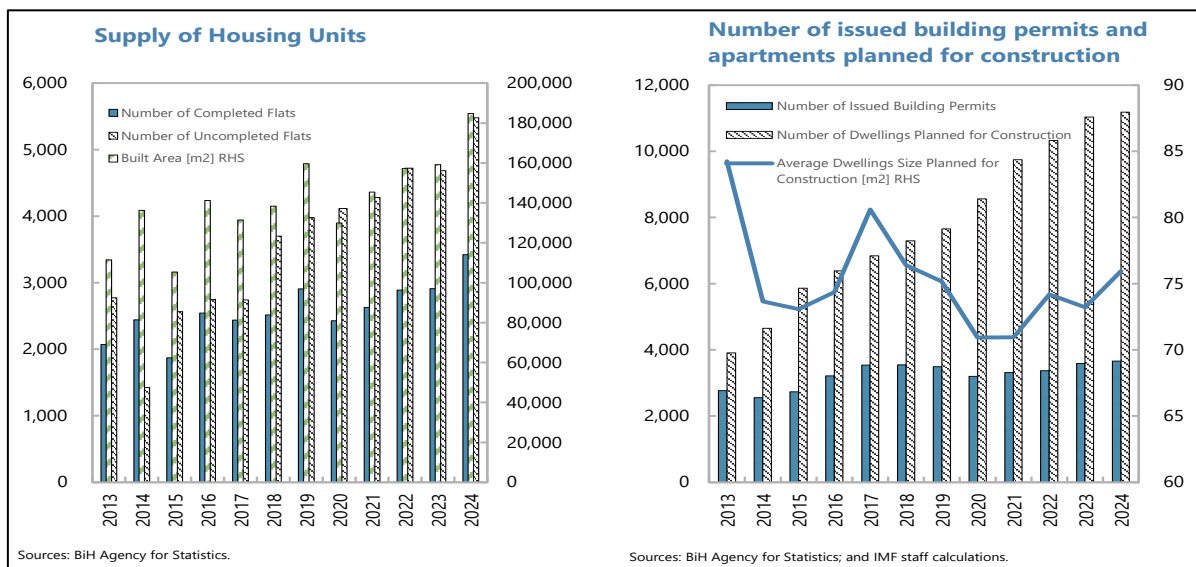


**9. In terms of regional and demographic trends, prices indicate some movement to the capital in FBiH, less in RS** (Figure 1). Apartment prices have experienced more upward pressure in Sarajevo than other areas of FBiH since 2022. This could be due partly to demographic movements from rural areas, or to increased investment in Sarajevo. In RS, prices in Banja Luka and other areas have co-moved, suggesting less evidence of an exodus from rural areas to the capital. These trends are harder to identify in house prices, as they appear much more volatile than apartment prices.

<sup>3</sup> Housing affordability index is calculated as the ratio between the average net monthly wage and the average price per square meter of an apartment.

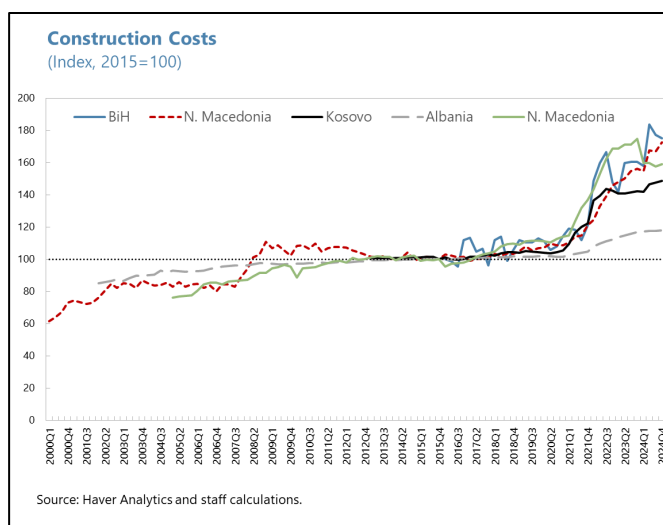


**10. On the supply side, construction of new housing units has been increasing over recent years, but this trend is slowing.** Over the last decade, there has been a general upward trend in the number of completed new flats, with a notable peak in 2024, indicating an increased housing supply. Additionally, the number of ongoing projects has risen significantly, likely reflecting constructors' optimism about robust developments in the housing market over the recent years. However, the increase in the number of new apartments planned for construction appears to have stabilized in 2024. With no evidence of tightened procedures for issuing permits, the dynamics in construction plans may reflect developers' perception of market saturation, particularly given the already high number of ongoing projects. Additionally, there is no evidence of changing preferences toward building apartments with more square footage, as the average size of built flats has marginally declined. Construction costs have also increased significantly in BiH and the region. While the overall constructed area has fluctuated, it shows an overall increasing trend, with the highest value recorded in 2024. The number of buying transactions in the housing market has also decreased in recent years, primarily due to fewer transactions involving existing homes.



**11. BiH exhibits higher construction costs compared to some neighboring countries, which likely has impacted supply.**

There has been a notable upward trend since the end of 2021, reaching a peak in mid-2024. This substantial rise reflects not only inflationary pressures and supply chain disruptions but also, anecdotally, a shortage of construction labor. The burdensome regulatory framework - particularly in large urban areas - is likely affecting the dynamics of construction costs. Moreover, the significant minimum wage increase in FBiH in 2025 may put further upward pressure on the already expensive construction environment.



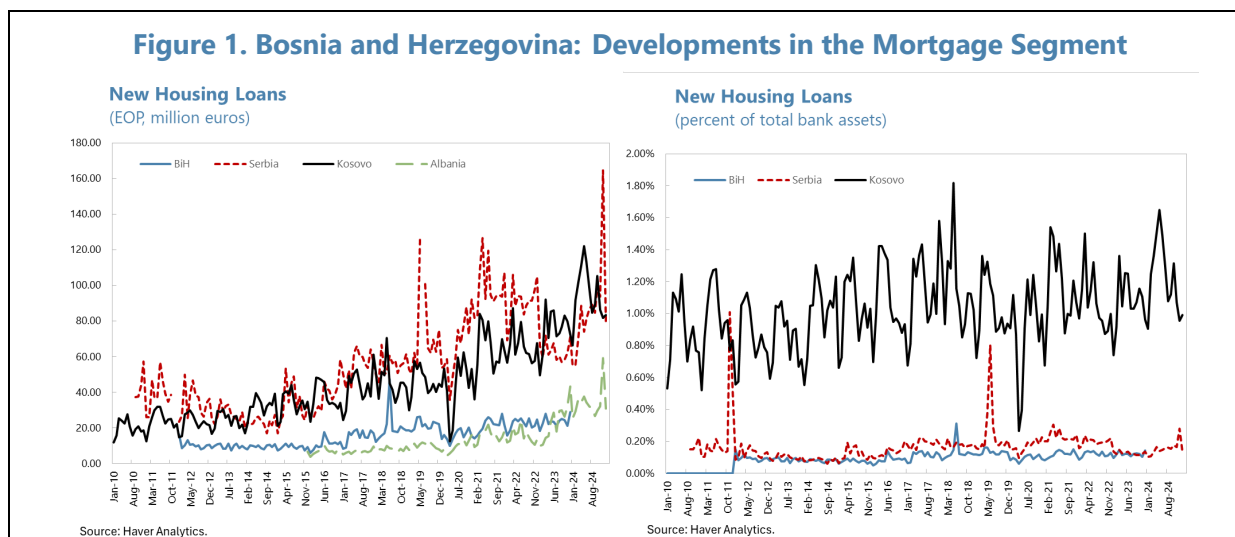
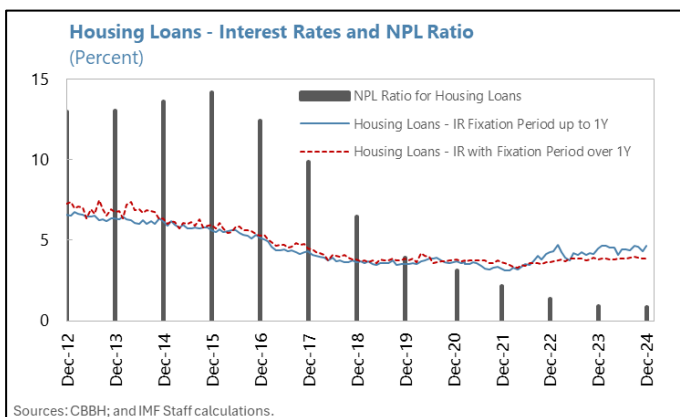
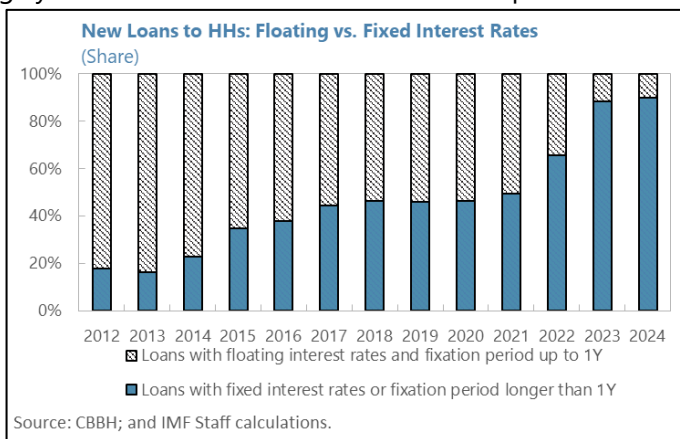
Altogether, this affects supply of new homes negatively, which puts upward pressure on prices.

**12. On the demand side, credit growth in the mortgage segment has increased in recent years, but it is still a small part of the total loan portfolio of banks, so risks appear to be contained.** Rapid credit growth in this segment can lead to upward pressure on prices and pose financial stability risks if households are too leveraged and financing conditions are too loose. This could eventually lead to a deterioration of asset quality for banks and subsequent financial stability issues. At the moment, however, the lion's share of BiH's banks' loan portfolio is consumer general purpose loans, so risks from the housing market specifically appear limited (Figure 1). However, a share of general-purpose loans may also be linked to housing, as it is not uncommon to "top up" mortgage loans with additional consumer loans to cover renovation costs or to increase the effective LTV amount. To limit risks from this practice, the banking agencies in both entities established a limit of KM 50,000 and 10 year maturity for general purpose consumer loans, while introducing higher risk weights for general purpose loans with remaining maturity above 5 years. The banking agencies have started an initiative to make reporting of LTV and DSTI ratios mandatory. Although the share of total home purchase transaction volumes financed by mortgages decreased after 2018, they picked up from 36.5 percent in 2022 to 53.8 percent in 2024 (Figure 1). The drop in the share of volumes purchased with mortgages in 2021 and 2022 can be partly attributed to increased interest from the diaspora in using savings to invest in BiH's housing market outright. Banks generally finance around 80 percent of the home value when granting mortgages, so a share of volumes financed with mortgages below 60 percent suggests that a significant proportion of transactions were conducted in cash. The authorities should continue to monitor developments in this segment insofar as it affects household finances and can have effects on consumption, savings, and investment.

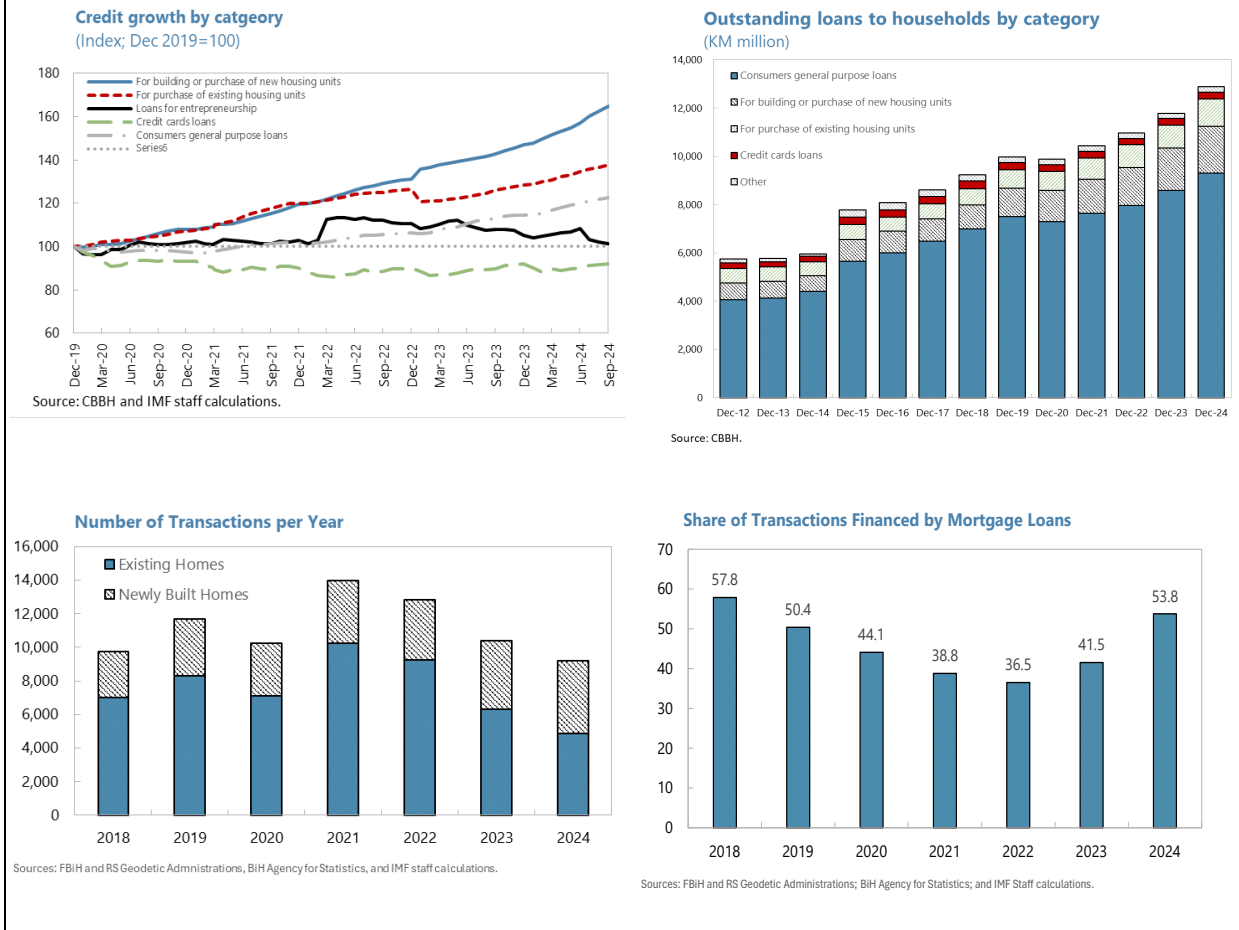


**13. Interest rates in BiH have not co-moved with those in the euro area, even under a currency board arrangement (CBA) pegged to the euro, and the share of fixed-rate loans has been increasing.** While the recent tightening cycle of the ECB has led to increased deposit and lending rates in the euro area, this has not passed through to BiH (Figure 1). Deposit rates close to zero, together with limited financial markets, leave housing as the main option for investment. This, paired with historically low mortgage borrowing costs, could incentivize investment in this sector and leverage. In addition, fixed-rate loans are becoming more predominant, increasing from less than 20 percent of loans in 2012 to over 90 percent in 2024 for overall household loans. Specifically, for housing loans, the share increased from 35 percent to 87 percent.

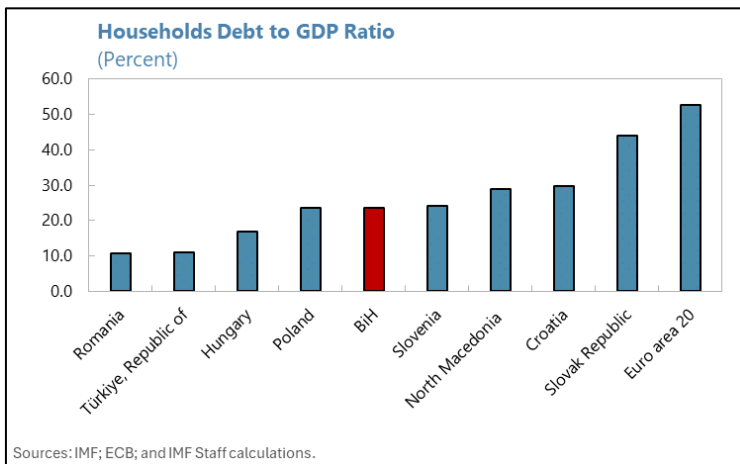
Although fixed-rate mortgages are not uncommon in many countries, the fact that interest rate fixing is happening in BiH at close to historically low rates may pose future risk for lenders. Moreover, interest rates on loans with a longer period of interest rate fixation have been lower than those on loans with an interest rate fixation of less than one year.



**Figure 1. Bosnia and Herzegovina: Developments in the Mortgage Segment (Concluded)**



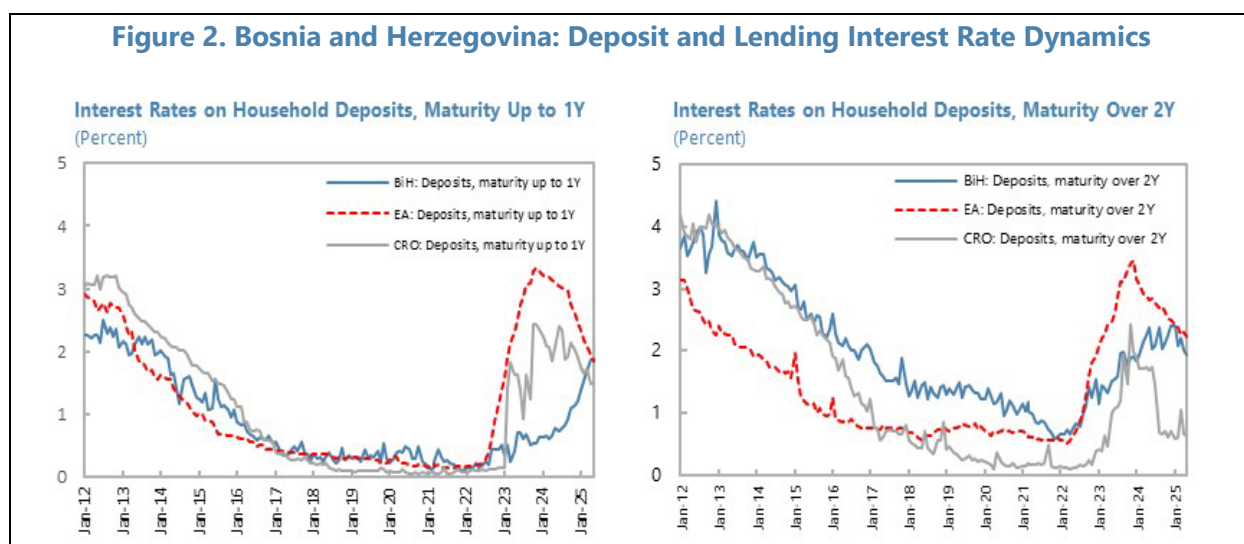
**14. Households in BiH do not appear to be overindebted, and NPLs in the mortgage segment are low.** The household-debt-to-GDP ratio in BiH stood at 23.7 percent in 2023, among

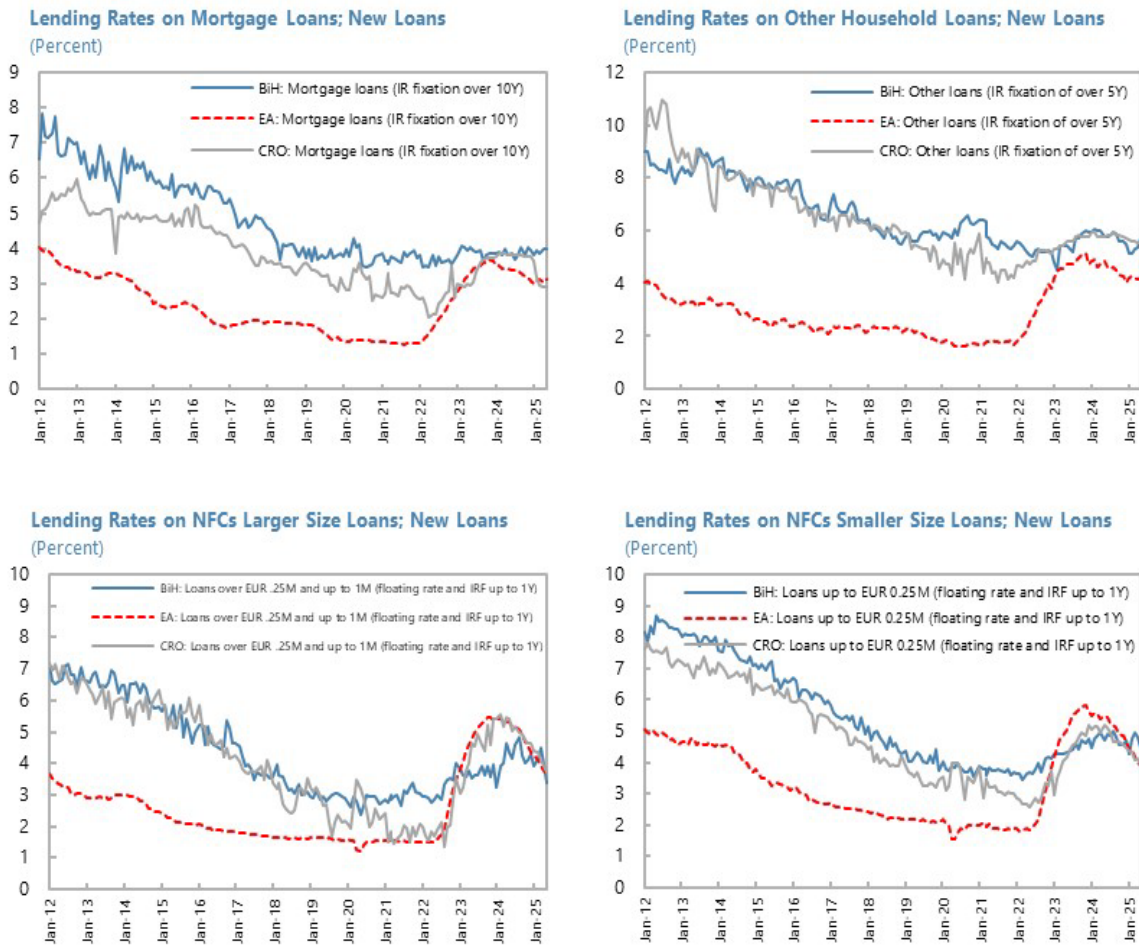


the lowest in Europe. For comparison, euro area household debt represented 52.8 percent of its GDP. As shown earlier, it appears that many households in BiH purchase their home without a mortgage, explaining the low indebtedness. NPLs in the mortgage segment are the lowest among all household segments and are at a historical low of 0.7 percent as of end 2024.

**15. Low interest rates, together with limited alternative investment options, make real estate an attractive investment.** BiH capital markets are underdeveloped, leaving real estate and savings deposits as the only investment options for households. In addition, there are regulatory limits on residents' placements of deposits abroad which restrict the available options to invest. Only recently, the RS issued retail government bonds with a yield of 4.38 percent at issuance. However, the total amount issued was small (KM 5 million). Deposit rates at banks are very low, below 1 percent. At the same time, interest rates on mortgages are low, at around 4 percent on average as of December 2024. If the population expects continued increases in housing prices, this makes real estate an attractive option for investments, whether using existing savings or financing through loans. The rental market is relatively small, and the price to rent ratio is 15 percent - usually a price to rent ratio at or below 15 indicates that buying is more favorable than renting - which suggests most real estate investments are buy-to-live rather than buy-to-let. However, there is insufficient data to assert what fraction of transactions is for primary residence or secondary residence, which would bring more light to the investment side of the market.

**16. Overall, even though supply has increased, it has not been enough to catch up to strong demand, resulting in price pressures.** High demand from locals, diaspora and investors - likely the result of low mortgage rates and limited alternative investment options- have contributed to buoyant demand, while high construction costs and market saturation have likely held back supply. As a result, prices have increased significantly.



**Figure 2. Bosnia and Herzegovina: Deposit and Lending Interest Rate Dynamics (Concluded)**

Source: European Central Bank, Central Bank of Bosnia and Herzegovina

## D. Conclusion

**17. Housing prices have been rising rapidly in BiH, but so far risks remain contained.** The HPI has picked up significantly in recent years, with house prices increasing by 55 percent between 2019 and 2023. Private credit growth has also been high, 9.3 percent yoy at end 2024, and credit for home purchase grew by 7.6 percent in the same period. However, mortgage lending represented only 24 percent of bank loans to households as of end-2024. In addition, household indebtedness is low.

**18. Nevertheless, the authorities should remain vigilant and systematically collect and analyze housing market indicators.** Key indicators include the HPI, the price-to-income ratio, the price-to-rent ratio, household debt as a share of GDP, loan-to-value and debt-service-to-income

ratios. Tracking mortgage growth, lending rates, and applying filtering and other tools can help identify cyclical risks. Data on purchase purpose (e.g., primary residence vs. investment) and bank real estate exposures—through mortgage shares, NPLs, and direct holdings—are also critical. Lastly, market activity indicators—such as the number of transactions, building permits, housing starts, and vacancy rates—can help flag signs of overheating, especially when current prices start to drift away from underlying fundamentals. Further work can shed light on data gaps.

**19. The authorities should speed up the implementation of borrower- and capital- based measures and enhance coordination among the Central Bank and financial stability agencies.**

The authorities have plans to collect data on LTV and DSTI for monitoring, although there are no plans yet to impose limits on these ratios. The authorities are also considering implementing CCyB, but challenges remain related to the coordination among the different agencies. For a well-functioning macroprudential framework, coordination and cooperation among the different agencies in charge of financial stability are essential.

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