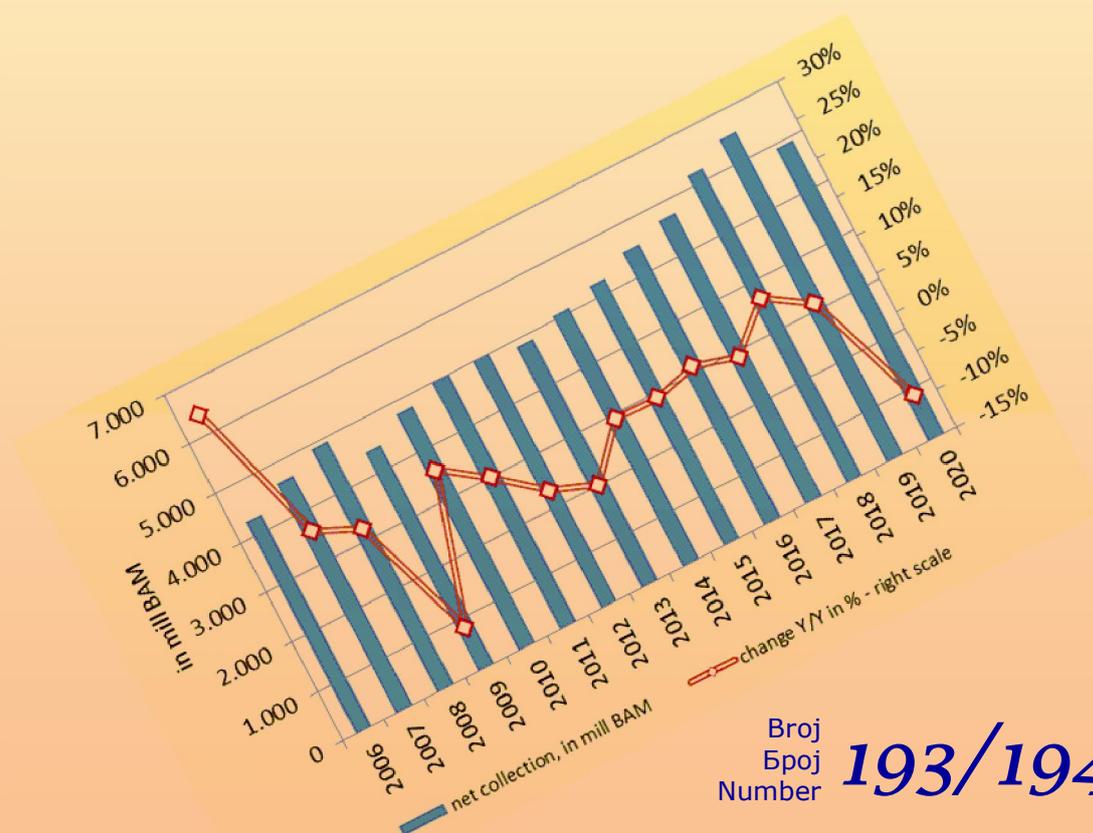




Macroeconomic Unit of the Governing Board of the Indirect Taxation Authority

OMA Bilten

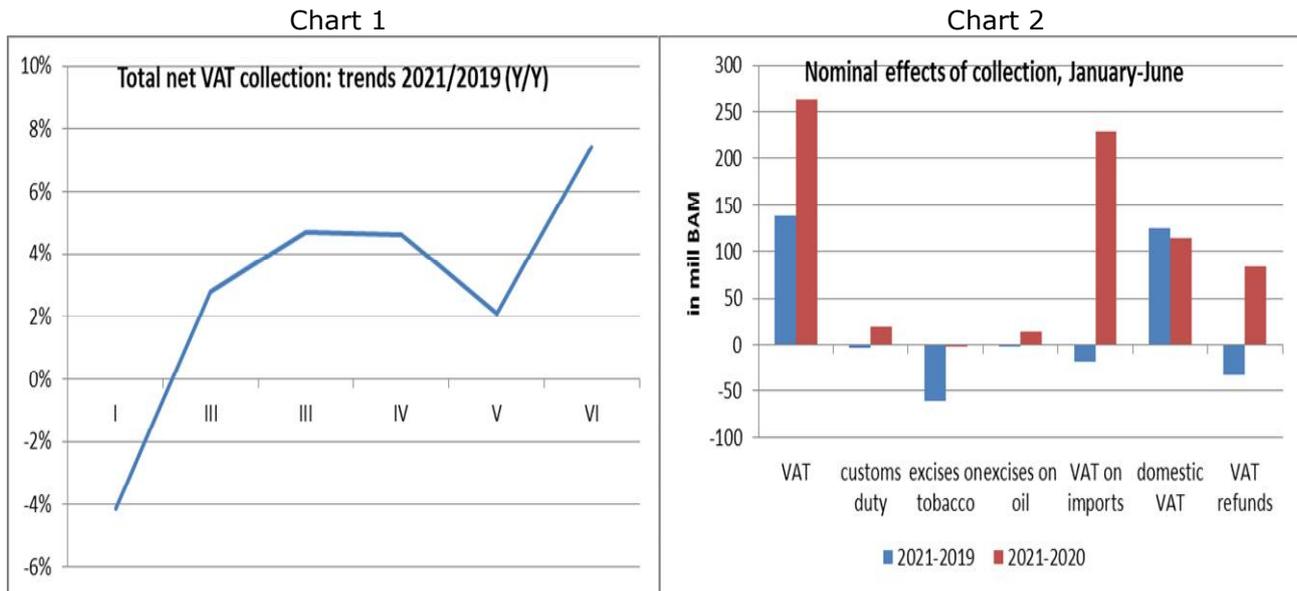


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With this issue

According to the preliminary cash flow report, the net collection of indirect taxes in June 2021 was 181.5 million BAM higher than in June 2020, which represents an increase of a very high 39.6%. The high growth of collection in June increased the cumulative surplus, and in the period January - June 2021, net collected revenues were higher by BAM 329.2 million or by 11.7% compared to the collection in the same period in 2020.



VAT was the main source of revenue growth in the first half of 2021. When comparing the cumulative collection of net VAT with the collection in 2019 (Chart 1), after an initial growth, there was a stagnation and decline in May, despite the high monthly growth rates. However, the high growth of net VAT collection in June produced a strong growth of cumulative collection of 7.4% in the first six months of 2021 compared to the collection of net VAT in the same period in 2019. Comparison of nominal effects of indirect tax collection in the first half 2021 compared to the same period in 2020 shows that 90% of the collection surplus came from VAT collection (Chart 2, "2021-2020"). However, the comparison with the year of historical maximum - 2019 shows a nominal increase in VAT collection, which was largely offset by lower collection of excise duties on tobacco products (Chart 2, "2021-2019"). The decomposition of the effects of gross VAT collection shows that the main factor in the growth of VAT collection compared to 2019 is domestic consumption, while the collection of VAT on imports in 2021 is still lower than the collection in 2019.

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Taxes on consumption as a share in GDP in B&H the period 2008-2020

(Prepared by: Aleksandra Regoje, Expert Advisor - Macroeconomist)

Introduction

Fiscal burden represents the share of public revenues in a country's gross domestic product (GDP). When calculating the fiscal burden, only duty-type public revenues are taken into account. The burden thus calculated represents the global or total fiscal burden. In addition to the global, partial fiscal burdens have also been defined, such as those measured by the ratio of certain type of revenue and GDP. Calculation of global and partial fiscal burdens enables international comparability of fiscal burden, as well as comparison of burden in certain country in different time periods. The following is an analysis of the fiscal burden of indirect taxes, i.e. consumption taxes, in Bosnia and Herzegovina. The article presents the continuation of the analysis of the fiscal burden in B&H (Bulletin No. 39), and the analysis of the tax burden on consumption published in October 2011 (Bulletin No. 75) and in September 2018 (Bulletin No. 158-159). This article explains relationship between the share of consumption taxes in GDP and the implicit tax rate on consumption (ITRC) and the movement of total GDP and its components. Variability of the share of consumption taxes in GDP was also analyzed, and it was explained what the amount of annual change in the share of consumption tax in GDP depends on. A special review is dedicated to the movement of this indicator in the crisis years: 2009 (global economic crisis) and 2020 (coronavirus pandemic).

1. Consumption tax-to-GDP ratio in B&H

It is mentioned in the introduction that in addition to the total, partial fiscal burdens can also be calculated. Here we will look at the consumption tax burden on GDP, i.e., in the case of B&H, the share of indirect taxes¹ in GDP.

1.1. Components of the share of consumption tax in GDP

The reasons for consumption tax and ITRC fluctuations in OECD member countries are analyzed in the OECD paper from 2020.² The share of consumption tax in GDP is broken down into the product of the share of consumption tax revenues in consumption expenditures (which is actually the implicit tax rate on consumption or ITRC) and the share of consumption expenditures (hereinafter C) in GDP (Equation 1).

Equation 1.

$$\frac{\text{consumption tax revenues}}{\text{GDP}} = \frac{\text{consumption tax revenues}}{C} \times \frac{C}{\text{GDP}} = \text{ITRC} \times \frac{C}{\text{GDP}}$$

Source: OECD (2020)

In the mentioned analysis, consumption expenditure in the calculation of ITRC includes private and total government final consumption (without deducting expenditures on compensation of government employees, as in the new EC methodology, see Box 1). The extent to which the treatment of government consumption (inclusion or exclusion from consumption in the Equation 2) affects the level of the ITRC and C/GDP components depends on its share in the total final

¹ It should be noted that the category of consumption tax in B&H differs from the coverage of this type of revenue in the European Union, which should be taken into account when comparing the data. In the tax system of Bosnia and Herzegovina, consumption taxes include all indirect taxes, i.e. VAT, excises, customs duties and road taxes.

² "What drives consumption tax revenues? Disentangling policy and macroeconomic drivers"; H. Simon, M. Harding, OECD, 2020.

consumption. Exclusion of government consumption from total consumption in Equation 2 would increase the ITRC and decrease C/GDP, **without affecting the consumption tax-to-GDP ratio**. The higher the share of government consumption in a country's total final consumption, the greater the impact of its different treatment on the decomposed components in Equation 1.

Text box 1. ITRC calculation methodology (European Commission)

According to the methodology of the European Commission (EC), the implicit tax rate on consumption is defined by the ratio of all consumption taxes and final consumption expenditures.

Taxes on consumption are defined as taxes levied on transactions between final consumers and producers and on the final consumption goods. In the ESA classification taxes on consumption include majority of indirect taxes, but not all categories. They also include some of the categories which belong to direct taxes, given that they relate to expenditure of households to obtain certain goods or services.

Definition of denominator has changed in the methodology of the European Commission. Until 2020, the European Commission included in the denominator the final consumption expenditure of households on the economic territory, the domestic concept (*P.31_S.14dom*). As of 2020, the European Commission, in addition to final consumption expenditure of households (*P.31_S.14dom*), in the denominator of ITRC also includes: final consumption expenditures of non-profit institutions serving households (*P.31_S.15*) and final consumption expenditures of general government (*P3_S13*) excluding expenditures on compensation of government employees (*P3_D1PAY*).

Source: Taxation Trends in the European Union, 2020 edition, Directorate-General for Taxation and Customs Union, European Commission, Publications Office of the European Union, Luxembourg, 2020, p. 272

Text box 2. Consumption tax-to-GDP ratio changes in the OECD countries

The OECD analysis covers the period from 1995 to 2017. This period is divided into four segments, based on different trends in ITRC and the share of consumption in GDP.

- 1) In the period from 1995 to 2003, the average ITRC in the OECD countries was relatively stable, with small fluctuations in the average consumption expenditure relative to GDP (C/GDP), so the average consumption tax revenues in GDP were relatively stable, around 11% of GDP.
- 2) In the period from 2004 to 2007, the average C/GDP decreased from 64.6% to 62.2%. Due to a slight ITRC growth in that period, average consumption tax revenues in GDP remained relatively stable again.
- 3) Between 2007 and 2009, the average ITRC fell sharply from 17.5% to 16%. The decline was partially offset by strong growth in the average C/GDP, which, in 2009 reached its maximum level in the observed period. Nevertheless, average consumption tax revenues in GDP fell by 3.5%, reaching in 2009 their lowest level in the observed period.
- 4) Since then, the share of consumption taxes in GDP, on average, returned to their 1995 level. In 2017, the average C/GDP was 2.3 p.p. lower than in 1995, while the average ITRC was 0.7 p.p. higher.

It is concluded in the analysis that in the period 1995-2017 in OECD countries, the main factor of the change of consumption tax-to-GDP ratios was the change in the ITRC, much more than the dynamics of C/GDP. However, it was mentioned that these two components cannot be analyzed completely independently, as countries can adjust tax policies and rates in response to economic changes.

Source: "What drives consumption tax revenues? Disentangling policy and macroeconomic drivers"; H. Simon, M. Harding, OECD, 2020.

The ITRC component shows the effects of changes in consumption, or the tax base, as well as the effects of changes in tax rates and the degree of compliance. The second component of the equation - the share of consumption in GDP, refers to the effects of changes in GDP and its components.

1.2. Dynamics of consumption tax-to-GDP ratio in Bosnia and Herzegovina

The share of consumption tax in GDP (consumption tax-to-GDP ratio) in Bosnia and Herzegovina in the period 2008-2020 ranged from 17% to 18.7%. It can be concluded that this indicator in B&H is much higher than in OECD countries (the level of unweighted average is about 11%). It is also higher than in EU member states where the weighted average is also around 11%.³

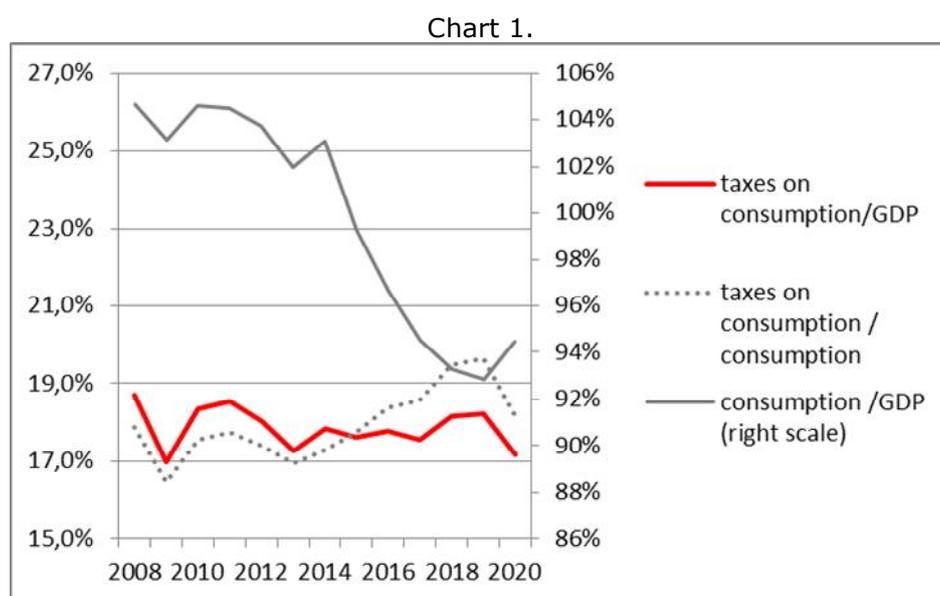


Chart 1 shows the dynamics of consumption tax-to-GDP ratio in B&H in the period 2008-2020 broken down into components, in accordance with the methodology from the OECD analysis (2020) according to Equation 1. As in the case of the mentioned analysis, the denominator of the ITRC component includes the total final consumption, including government consumption. If only private consumption (excluding government) was taken into account in the calculation of these two components, the ITRC would be on average 4.8 percentage points higher in the observed period, while the share of consumption in GDP would be lower on average by 21.1 percentage points,⁴ without affecting the dynamics of the consumption tax-to-GDP ratio.

Chart 2 shows the annual change in the consumption tax-to-GDP ratio and its components, while Chart 3 shows the annual change in the share of final consumption in GDP, broken down into private and government consumption.

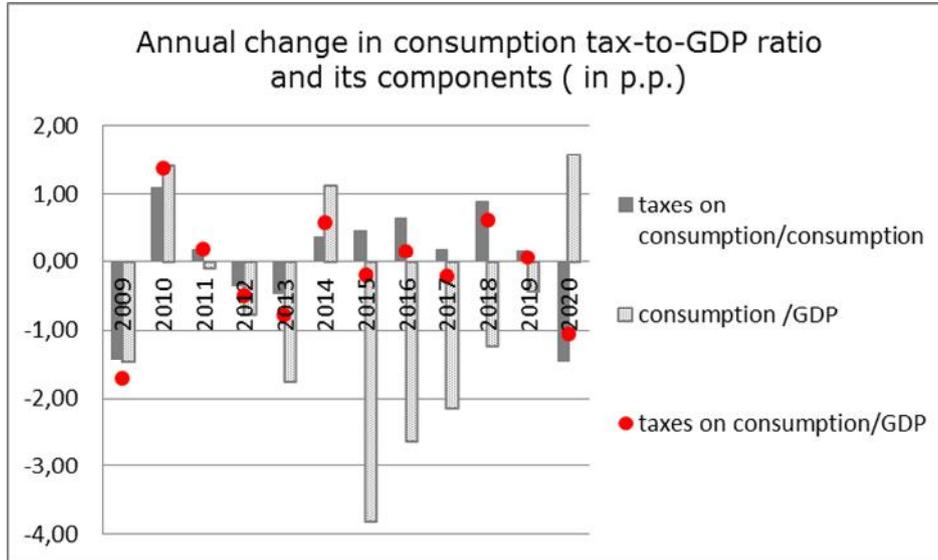
The calculation of indicators in Chart 1-3 was performed on the basis of data on collection of indirect taxes at the Single Account of the Indirect Taxation Authority (ITA), and trends in final

³ Taxation Trends in the European Union, 2020 edition, Directorate-General for Taxation and Customs Union, European Commission, Publications Office of the European Union, Luxembourg, 2020.

⁴ Unweighted averages of the differences in the period 2008-2020.

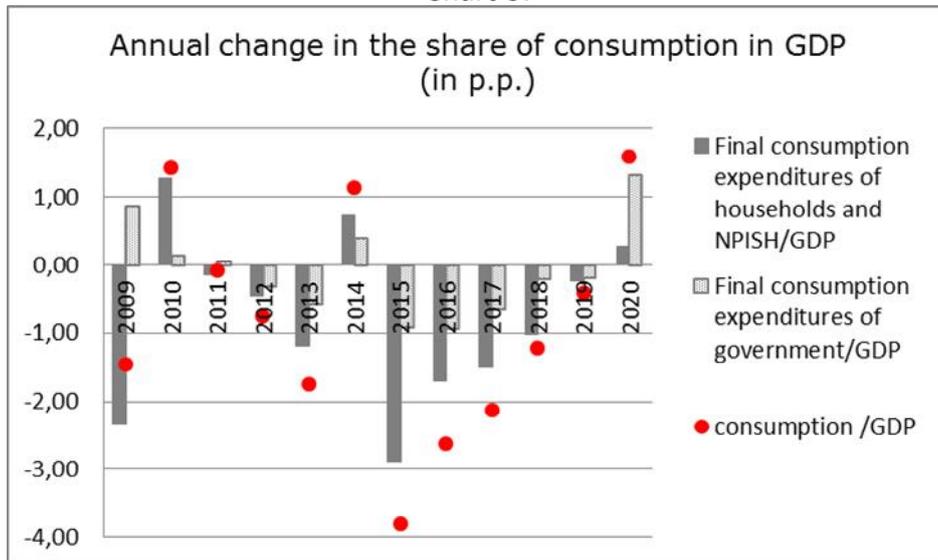
consumption and GDP based on data from the Agency for Statistics of B&H (BHAS),⁵ as well as projections of the Directorate for Economic Planning of B&H (DEP) for 2020.⁶

Chart 2.



Source: Author's calculation based on ITA and BHAS data and projections of DEP

Chart 3.



Source: Author's calculation based on BHAS data and projections of DEP

In the following, it is analyzed to what extent all these components influenced the dynamics of the consumption tax-to-GDP ratio in B&H.

In the first year of the observed period - 2008, the consumption tax-to-GDP ratio⁷ in B&H amounted 18.7%.

⁵ BHAS, February 2021.

⁶ DEP, March 2021.

⁷ Consumption taxes in all years of the observed period refer to the collected indirect taxes on the SA ITA, without collection of old debts paid on entity accounts according to regulations before 2006.

In the crisis year - 2009, there was a sharp drop in this indicator to 17%. It can be seen from Chart 1 that the both components of this indicator decreased in the mentioned year. The ITRC component fell by 1.42 percentage points, while the share of consumption in GDP fell by 1.46 percentage points. Insight into the dynamics of final consumption categories (Chart 3) shows that the category of private consumption was "responsible" for such a decline in the share of consumption in GDP. The share of private consumption in GDP fell by as much as 2.34 percentage points, while the share of government consumption increased by 0.88 percentage points. This is the only year in the observed period 2008-2020 with a decline in total consumption in absolute terms. According to BHAS data, the annual rate of decline in total consumption amounted 2.2%. This year, there was a strong drop in exports of 9.5%, as well as in investments of as much as 28.4%. A sharp drop in imports of 20.2% mitigated the rate of GDP decline to only 0.8%. The decline in consumption tax revenues was strongly pronounced in 2009, since the collection in that year included, in addition to the effects of the second phase of reduction of customs rates under the SAA as of January 1, 2009, the postponed effects of reduction of customs duties from the first phase (due to the implementation of the Agreement as of mid-2008). In 2009, net customs revenues almost halved compared to their 2008 level. Despite the entry into force of the new Law on Excise Duties on July 1, 2009, which brought an increase in revenues from excises on tobacco and road taxes, this growth was nowhere near enough to offset the negative effects of trade liberalization with the EU and other revenue losses caused by unfavorable trends in imports and consumption due to the effects of the global economic crisis.

With the recovery of the economy, in 2010 the consumption tax-to-GDP ratio increased by 1.37 percentage points, compared to the previous year. Both components of this indicator increased, the ITRC by 1.09 p.p., and the share of consumption in GDP by 1.42 p.p. Due to the effects of the new Law on Excise Duties from 2009 and the economic recovery of B&H, in 2010 there was an increase in all categories of indirect taxes except customs. The 2009 Law on Excise Duties implied the continuous harmonization of the rates of excises on tobacco in B&H with EU minimum standards, so at the beginning of 2010, the rate of special excise duty on tobacco was increased. Given that in 2009 there was a change in legislation in the middle of the year, the largest annual effects of revenue growth were expressed in 2010. This primarily referred to revenues from excises on tobacco and road tax. On the other hand, the main factor in the growth of the share of consumption in GDP was private consumption, whose share in GDP increased by 1.27 percentage points, while the share of government consumption increased by 0.15 p.p. (Chart 3).

In 2011, the growth trend of the consumption tax-to-GDP ratio has continued (+0.18 percentage points compared to the previous year). This year, the trend of declining customs revenues has continued due to further implementation of SAA provisions, as well as due to the abolition of customs registration on all imports in the fourth quarter of 2011. The continuation of the positive trends in excise collection was again influenced by the change in the tobacco taxation policy, i.e. the re-increase of the special excise tax on tobacco at the beginning of the year. Total indirect tax revenues grew above the consumption growth rate, leading to a slight increase in the ITRC of +0.19 p.p. On the other hand, the share of consumption in GDP decreased by 0.1 percentage points, with the share of private consumption in GDP falling by 0.15 p.p. with an increase in the share of government consumption of 0.05 p.p.

In 2012, the share of consumption tax-to-GDP ratio fell by 0.49 percentage points, compared to the previous year. It can be seen from Charts 2 and 3 that all components of this indicator have fallen. The ITRC decreased by 0.34 percentage points while the share of consumption in GDP fell by 0.76 percentage points (with a decline in the share of private consumption in GDP of 0.46 p.p. and the share of government consumption of 0.31 p.p.). The decline in ITRC is explained by the stagnation of indirect tax revenues⁸ and by an increase in total consumption compared to the previous year (1.81%). Although there was an increase in total consumption compared to the

⁸ A small drop of 0.15% was recorded.

previous year, its share in GDP did not increase, as consumption growth did not reach GDP growth of 2.48%.

In 2013, there was a sharp decline in the consumption tax-to-GDP ratio by 0.78 percentage points, compared to the previous year, bringing this indicator to a level of 17.3%, only 0.3 p.p. more than in the "crisis" year - 2009. The collection of indirect taxes was influenced by the regular annual increase of specific excise duty on tobacco and a further decline in taxable tobacco consumption, negative import dynamics, and the last phase of customs liberalization on goods originating in the EU. There was a decline in revenues from indirect taxes at the annual level, and a further decline in the ITRC by 0.47 p.p. Consumption growth again did not reach GDP growth, in this case due to the strong investment growth, and its share in GDP fell by 1.76 p.p., with a decline in the share of both categories of consumption (Chart 3).

In 2014, the downward trend in the consumption tax-to-GDP ratio was interrupted. There was an increase in this indicator by 0.56 p.p., compared to 2013. An insight into the dynamics of the components of the consumption tax-to-GDP ratio shows that all the components recorded growth. The ITRC increased by 0.36 p.p. The share of total consumption in GDP increased by 1.12 p.p., with growth in both of its categories (Chart 3). The growth of the ITRC in 2014 was influenced by the new excise tax policy on tobacco in force as of August 1, which brought an increase in the fiscal burden of cut tobacco, and a recovery in the tobacco market and revenue growth. The dynamics of the collection of excises on tobacco was also influenced by the regular annual change of specific excise duty. After a long period, an increase in customs revenues was recorded, given that the last phase of trade liberalization with the EU under the provisions of the SAA was implemented in the previous year. Despite natural disasters (floods), all categories of indirect tax revenues grew above the consumption growth rate, on an annual basis.

In the next three years (2015-2017) there were no significant changes in the consumption tax-to-GDP ratio (Charts 1 and 2). There was a slight decline in 2015 and 2017 (about -0.2 p.p. each), and a small increase in 2016 (+0.15). On the other hand, the components to which this indicator is broken down in Equation 1 recorded larger changes. ITRC grew by 0.46 p.p., 0.63 p.p. and 0.49 p.p., respectively, in 2015, 2016 and 2017. In contrast, the share of consumption in GDP in the given years decreased by 3.81 p.p., 2.63 p.p. and 2.13 p.p., respectively, with a decline in the share of both consumption categories in all years (Chart 3). The decline in the share of consumption in GDP was the result of high export growth rates in all three years (9.2%, 7.0% and 18% in 2015, 2016 and 2017, respectively) and high investment growth rates in 2016 and 2017 (10.6% and 14.3%). The growth of the ITRC in these years was the result of stronger growth of indirect taxes than the growth of consumption. Revenue collection in 2015 was characterized by a strong increase in excises on oil derivatives and road tax, and a strong increase in revenues from excises on tobacco. Revenues from excises on oil derivatives and road tax have continued the positive trends in 2016, while the positive effects of the policy change in the tobacco market were exhausted. The main generators of revenue growth in 2017 were VAT on imports, and, to a lesser extent, revenues from customs, road taxes, excises on oil derivatives and tobacco products.

In 2018, there was a strong increase consumption tax-to-GDP ratio by 0.6 p.p., compared to the previous year, bringing this indicator at a level of 18.2%. Looking at the components from Equation 1, it can be seen that the growth of this indicator was solely effect of the increase in the ITRC (+0.89 p.p.), while the share of consumption in GDP even recorded a decline of -1.22 p.p. An overview of the collection of indirect taxes shows that in 2018, the growth rate reached as much as 8.6%. The high growth rate had been expected having in mind the effects of the changes in the Law on Excise Duties.⁹ The implementation of the legislation changes started on February 1,

⁹ "Official Gazette B&H" No. 91/17

2018¹⁰ and, according to MAU estimates, brought 4.6 p.p. of the annual growth rate of the total indirect taxes.¹¹ The decline in the share of consumption in GDP was again the result of relatively high growth rates of investment (5.1%) and exports (10.95).

In 2019, the consumption tax-to-GDP ratio stagnated (+0.06 percentage points). The ITRC increased by 0.15 percentage points, while the share of consumption in GDP decreased by 0.42 percentage points (with a decrease in both categories - Chart 3). In 2019, a maximum amount of revenues from indirect taxes was collected from the establishment of the ITA in the amount of 6,541.8 million BAM, with the growth rate amounting 5.2%. There was also a strong increase in total consumption of 4.3%, and hence the modest growth of the ITRC. According to BHAS data, GDP growth (4.8%) was higher than total consumption growth, resulting in a decline in the share of consumption in GDP, which annulled the effects of ITRC growth and affected the stagnation of the consumption tax-to-GDP ratio.

In 2020, there was a strong decline in the consumption tax-to-GDP ratio by 1.06 p.p. compared to the previous year, which reached a level of 17.2%, only 0.2 percentage points more than in the "crisis" year of 2009. The annual decline in the consumption tax-to-GDP ratio was smaller than in 2009, but the decline in the ITRC was approximately the same (1.45 p.p. in 2020 vs 1.42 p.p. in 2009). The smaller annual decline in the consumption tax-to-GDP ratio in 2020 compared to 2009 was due to the movement of the share of consumption in GDP. In 2009, the share of consumption fell by 1.46 percentage points, while in 2020 that share increased by 1.58 percentage points. It should be noted that the data for 2020 are partly estimates, given that at the time of preparing this article, data on collected taxes were available, while data on national accounts were not available, so DEP projections were used.

2. Variability of the consumption tax-to-GDP ratio and its components

In this section it is compared the variability of the consumption tax-to-GDP ratio and its components in the period 2008-2020. Table 1 shows the minimum and maximum values of these indicators in the mentioned period, unweighted averages and coefficients of variation (CV).¹²

Table 1.

	min	max	avg	CV
consumption taxes / GDP	17,0%	18,7%	17,9%	2,88%
consumption taxes / consumption	16,5%	19,6%	17,9%	4,88%
consumption / GDP	92,9%	104,6%	99,7%	4,55%
private consumption / GDP	73,8%	83,2%	78,7%	4,35%
government consumption / GDP	19,1%	22,5%	21,1%	5,63%

Source: Author's calculation based on ITA and BHAS data and projections of DEP

The highest value of the consumption tax-to-GDP ratio in the observed period was in the first year of the observed period (2008) amounting 18.7%. In the following, "crisis" year 2009, the lowest value of this indicator was achieved, at the level of 17%. The unweighted average in the mentioned period is 17.9%, while the coefficient of variation is 2.88%.

¹⁰ Changes in the excise policy on oil derivatives and road tax from 2017 refer to: increase in the excise rate on heating oil from 0,30 to 0,45 BAM/l; introduction of excise tax on biofuels and bio-liquids (0,30 BAM/l); increase in the rate of earmarked road tax from 0,10 to 0,25 BAM/l (with separation of rates and funds by purpose for highways and other roads); and change in the road tax base in terms of inclusion biofuels and bio-liquids, and liquid petroleum gas for motor vehicles.

¹¹ MAU Bulletin 162-163 (2019), www.oma.uino.gov.ba

¹² The coefficient of variation represents the ratio of the standard deviation and the arithmetic average.

The unweighted average of the share of consumption taxes in consumption in the mentioned period is also 17.9%, but the range between the minimum (16.5% in 2009) and the maximum value (19.6% in 2019) is higher, as well as coefficient of variation of data (4.88%). The share of total final consumption in GDP is quite high (unweighted average 99.7%). In the period 2008-2014, total private consumption even exceeded the amount of GDP. From Chart 1 it can be seen that this share recorded a strong downward trend, from 104.6% in 2008 to 92.9% in 2019.¹³ In 2020, it rose to 94.5%.

From all the above it can be concluded that the **variability of the consumption tax-to-GDP ratio in the period 2008-2020 was lower than the variability of its two components: ITRC and the share of consumption in GDP, due to their movement in opposite directions** in 2011 and in all years in the period from 2015 to 2020. In the period 2015-2019 ITRC was increasing, while the share of consumption in GDP was decreasing, with reverse trends in 2020.

Table 2.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
consumption tax-to-GDP ratio	↓	↑	↑	↓	↓	↑	↓	↑	↓	↑	↑	↓
ITRC	↓	↑	↑	↓	↓	↑	↑	↑	↑	↑	↑	↓
consumption/ GDP	↓	↑	↓	↓	↓	↑	↓	↓	↓	↓	↓	↑

Source: Author's calculation based on ITA and BHAS data and projections of DEP

3. The amount of annual change in the consumption tax-to-GDP ratio

In the period 2008-2020, the annual change in the consumption tax-to-GDP ratio ranged from -1.72 percentage points (2009) to +1.37 p.p. (2010). The largest turbulences of this indicator (over 1 percentage point change) were realized in 2009, 2010 and 2020.

3.1. Calculation of the amount of annual change in the consumption tax-to-GDP ratio

The formula (Equation 2) for the amount of annual change in the consumption tax-to-GDP ratio is derived below. Equation 2 shows that the annual change in the consumption tax-to-GDP ratio equals the product of the share of consumption tax in GDP in the previous year ($y-1$) and the share of the difference between the growth rate of consumption tax revenues (p) and the GDP growth rate (g) in the GDP growth rate increased by 1. From the equation one can draw a logical conclusion that for a positive change in the consumption tax-to-GDP ratio it is necessary the higher growth rate of consumption tax revenues (p) than the GDP growth rate (g). Higher the difference and the share of consumption tax in the previous year cause a higher amount of annual change.

¹³ Of this amount, the decline in final consumption expenditure of households and NPISH was 9.5 pp, while final consumption expenditure of government was 2.5 pp.

Equation 2.

$$\frac{\text{taxes on consumption (y)}}{\text{GDP (y)}} - \frac{\text{taxes on consumption (y-1)}}{\text{GDP (y-1)}} =$$

$$\frac{\text{taxes on consumption (y)} - (1+g) \times \text{taxes on consumption (y-1)}}{\text{GDP (y-1)} \times (1+g)} =$$

$$\frac{\text{taxes on consumption (y-1)}}{\text{GDP (y-1)}} \times \frac{(1+p) - (1+g)}{1+g} = \frac{\text{taxes on consumption (y-1)}}{\text{GDP (y-1)}} \times \frac{p-g}{1+g}$$

Legend: Consumption tax revenue growth rate (p), GDP growth rate (g)

Source: Author's calculation

3.2. Annual change in the consumption tax-to-GDP ratio in the crisis years: 2009 and 2020

It was mentioned that the largest annual change in the consumption tax-to-GDP ratio in the observed period 2008-2020 was recorded in 2009, in the amount of -1.72 percentage points. The difference between the consumption tax growth rate (-9.9%) and GDP growth rate (-0.8%) was as high as 9.1 percentage points. The high annual change the consumption tax-to-GDP ratio was to a lesser extent contributed by the high share of the same indicator from the previous year, 2008 (18.7%), which is included in the calculation of the annual change in the consumption tax-to-GDP ratio, according to Equality 2. In the previous text, it was noted that the sharp decline in consumption tax revenues was the result of trade liberalization with the EU, and the effects of the global economic crisis on the B&H economy.

The analyzed period includes one more year in which a strong decline in revenue was achieved. This is the year 2020, which was characterized by the negative effects of the corona virus pandemic. As BHAS data on national accounts were not available at the time of preparing this article, the DEP projections were used, according to which the estimated GDP decline rate was 3.7%. If we compare the annual rates of decline in revenues from indirect taxes in 2020 and 2009, we will see that they are at approximately the same level (9.3% in 2020 vs. 9.9% in 2009). It can be concluded that the lower annual rate of decline in the consumption tax-to-GDP ratio in 2020 compared to 2009 (1.06 pp vs 1.72 pp) was due to the higher estimated rate of decline in GDP in 2020 (3.7%).

4. Conclusion

The consumption tax-to-GDP ratio in Bosnia and Herzegovina in the period 2008-2020 ranged from 17% to 18.7%. Dynamics of the consumption tax-to-GDP ratio depended on a number of factors: trends in tax rates and tax base, efficiency of tax collection, trends in total consumption, but also trends in other categories of GDP (investments, imports and exports) which, in addition to consumption influence the level of denominator of this indicator.

In the analysis, the consumption tax-to-GDP ratio is decomposed into the implicit tax rate on consumption (ITRC) multiplied by consumption as a share in GDP. The dynamics of the ITRC indicate the effects of changes in consumption, i.e. the tax base, as well as changes in tax rates and the efficiency of tax collection. On the other hand, the share of consumption in GDP indicates other changes in the economy, i.e. changes in the structure of GDP. The results of the analysis show that the variability of the consumption tax-to-GDP ratio in the observed period was lower than the variability of its two components: ITRC and the share of consumption in GDP, due to their

movement in opposite directions in 2011 and in the period from 2015 to 2020. In 2015-2019, the ITRC was increasing, while the share of consumption in GDP was decreasing. Reverse trends were recorded in 2020.

The decline in the share of consumption in GDP does not mean that there was a decline in consumption in absolute terms, but that the GDP growth rate was higher than the growth rate of the consumption component. Total consumption grew in absolute terms in all years of the observed period 2008-2020, with the exception of 2009. According to BHAS data, in 2019 the total final consumption was 21% higher than in 2008. The share of total consumption in GDP decreased by 11.8 percentage points in the same period. According to DEP projections, in 2020 the expected decline in total consumption is 2.1% compared to 2019, and the growth of the share of total consumption in GDP is 1.6 p.p., due to a larger projected decline in GDP than the decline in consumption. Therefore, the projected decline in the share of consumption in GDP in 2020 compared to the base year of 2008 is 10.2 percentage points.

Compared to the base year 2008, the ITRC was higher by 1.7 percentage points in 2019, while the projected ITRC for 2020 was higher by only 0.3 percentage points compared to the base year 2008. This ITRC growth partially mitigated, but did not eliminate, the decline in the consumption tax-to-GDP ratio. The consumption tax-to-GDP was lower by 0.5 p.p. in 2019 compared to the base year 2008, while the projected level of the same indicator for 2020 is lower by 1.5 p.p. compared to the base year 2008. It should be noted that the two components of this indicator (ITRC and the share of consumption in GDP) cannot be observed completely separately, given that tax policy is created depending on economic developments in the country.

When comparing the annual decline in the consumption tax-to-GDP ratio in the "crisis" years 2009 and 2020, it can be concluded that it was smaller in 2020 than in 2009, while the annual decline in the ITRC was at approximately the same level. Based on the calculation according to Equation 1, it was concluded that the smaller annual decline in the consumption tax-to-GDP ratio in 2020 compared to 2009 was due to the movement of the share of consumption in GDP, which decreased in 2009, and increased in 2020, according to DEP estimates (year over year comparison). Based on the calculation according to Equation 2, it was concluded that the lower annual rate of decline in the consumption tax-to-GDP ratio in 2020 compared to 2009 was influenced by the higher estimated rate of GDP decline in 2020. These two conclusions are compatible, given that the estimated annual declines in consumption in 2020 and 2009 are at about the same level of about 2%, but the higher estimated annual decline in GDP for 2020 (-3.7%, more than the rate decline in consumption) compared to 2009 (-0.8%, below the rate of decline in consumption), affected the increase in the share of consumption in GDP in 2020 and the decline in this indicator in 2009.

Analysis of collection of excise tax revenues on alcohol, non-alcoholic beverages, beer, wine and coffee

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1. Introduction

Excise products and the policy of their taxation are defined by the Law on Excise Taxes in Bosnia and Herzegovina¹⁴ (hereinafter: B&H) ("Official Gazette of B&H" No. 49/09) from 2009 (hereinafter: The Law). This Law has been amended three times since 2009, twice in 2014 and once in 2017. Amendments to the Law from 2014 referred to the taxation of tobacco products¹⁵ and non-alcoholic beverages, beer and wine¹⁶, while amendments to the Law from 2017 referred to the taxation of petroleum products¹⁷.

Revenues based on excises are paid to the Single Account of the Indirect Taxation Authority, and their allocation is made in accordance with the Law on Payments to the Single Account and Allocation of Revenues¹⁸.

The main purpose of the analysis is to indicate the direction and dynamics of movement of excise tax revenues on alcohol, alcoholic beverages and natural fruit brandy (hereinafter: alcohol), excise tax revenues on wine, non-alcoholic beverages, beer and coffee, over a period of ten years, 2010 -2020 (annual data). Also, the analysis shows the direction and dynamics of movement of excise tax revenues on these products on a monthly basis for the period January 2019 - April 2021 (Jan-19 - Apr-21), as well as on a quarterly basis for the period first quarter 2019 - first quarter 2021 (Q1 2019 - Q1 2021).

Special attention is paid to each of the above categories of excise products individually. The total excise tax revenues for each category are presented, as well as excise tax revenues divided by components - import and domestic excise.

The movement of collected revenues presented in the analysis on an annual basis gives a clear picture of the movement of consumer preferences, as well as a picture of the effects of the 2014 amendment, while the movement of collected revenues on a monthly and quarterly basis gives a clear picture of trends and factors which affect excise products. Given the outbreak of the coronavirus pandemic, the aim of analyzing monthly and quarterly data is to understand the segments most affected by the pandemic, the impact of measures taken to combat the spread of the virus, current situation, recovery and future expectations while maintaining existing policies.

2. Total excise tax revenues

Trend of movement of total excise tax revenues on alcohol, non-alcoholic beverages, beer and coffee on an annual, monthly and quarterly basis is presented graphically. It is important to note that in the annual data, the excise tax revenues on wine are shown within the excise tax revenues on alcohol, and considering that these revenues are recorded separately from 2018. Due to the length of the time series of annual data used in the analysis, it is not possible to separately show the collection of excise tax revenues on wine in the observed period. In monthly and quarterly data, excise tax revenues on wine are shown separately.

¹⁴ "Official Gazette of B&H" No. 49/09

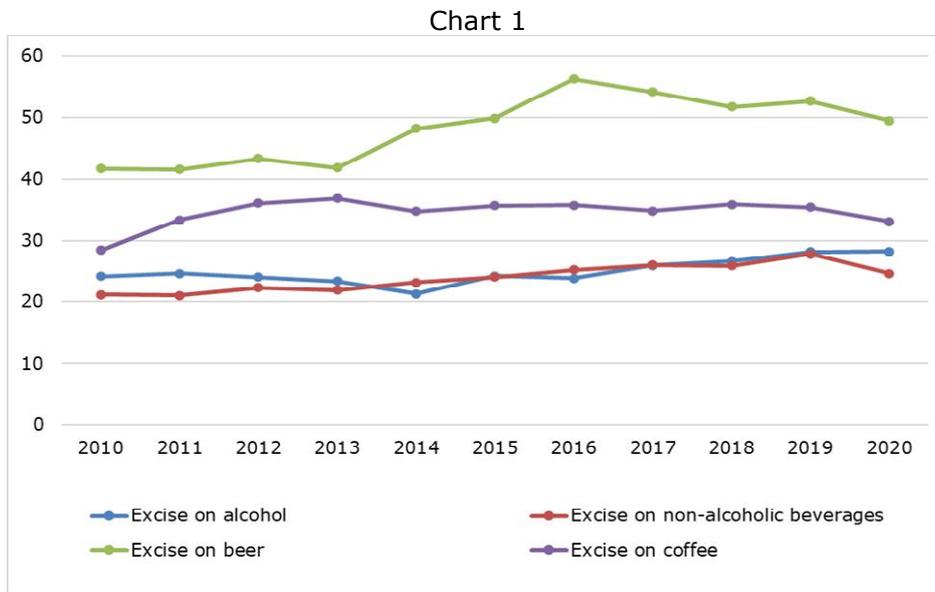
¹⁵ "Official Gazette of B&H" No. 49/14

¹⁶ "Official Gazette of B&H" No. 60/14

¹⁷ "Official Gazette of B&H" No. 91/17

¹⁸ "Official Gazette of B&H", No. 55/04 and 34/07

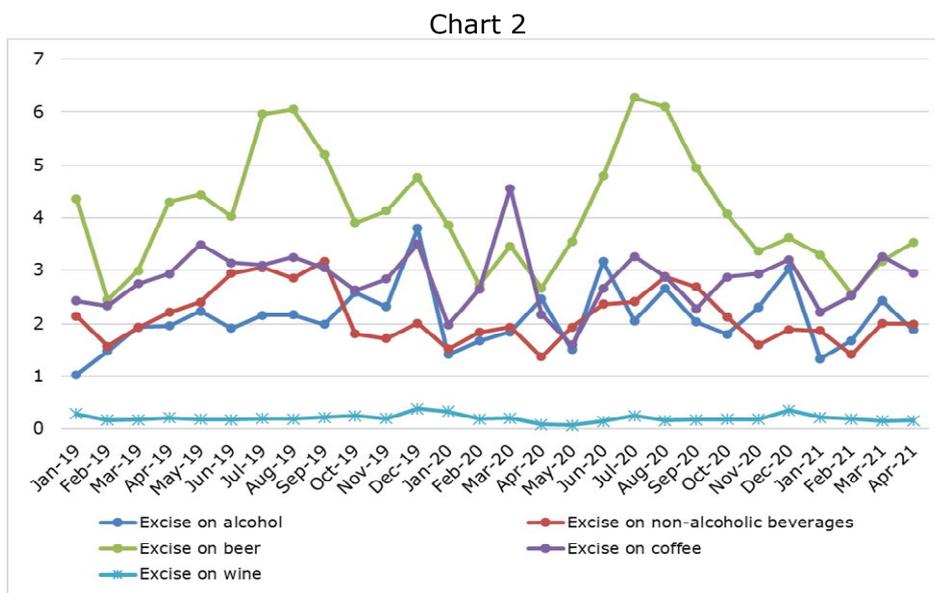
Chart 1 shows the trend of movement of total excise tax revenues for these categories on an annual basis for the period 2010-2020, in millions of BAM (left vertical scale).



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

The data show that the total excise tax revenues on beer are the highest, as well as that in 2016, the collection of these revenues was twice as high in relation to the total excise tax revenues on alcohol and non-alcoholic beverages. In the continuation of the analysis, special attention is paid to each of the mentioned categories of excises, and the effects that influenced the increase or decrease of excise tax revenues on an annual basis are explained in detail.

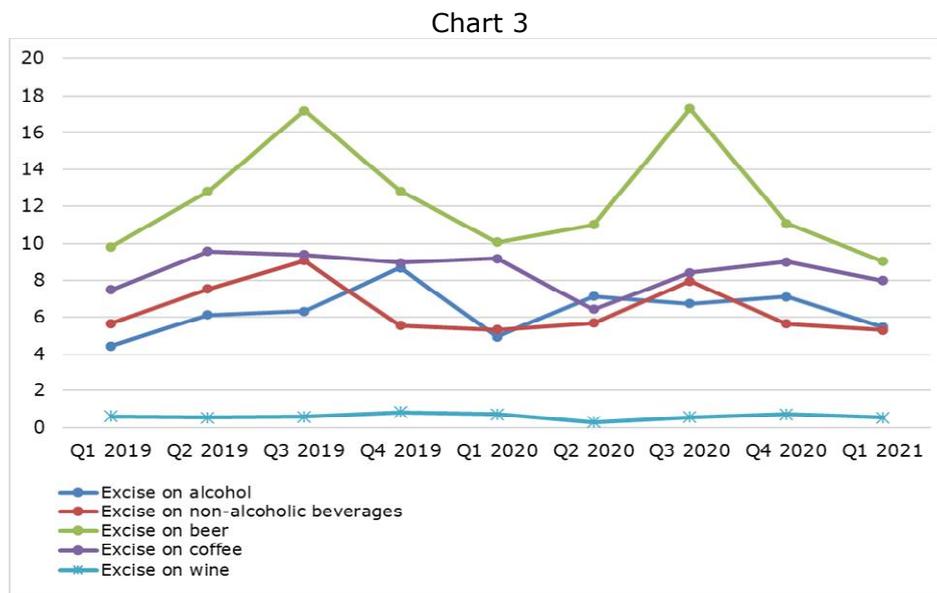
Chart 2 shows the trend of movement of total excise tax revenues for these categories on a monthly basis for the period Jan-19 - Apr-21, in millions of BAM (left vertical scale).



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Although the total excise tax revenues on beer are the most significant on an annual basis, it is interesting to observe data on the movement of total excise tax revenues on these categories on a monthly basis, from which we notice a significant increase in total excise tax revenues on coffee in March 2020, which are in relation to the total excise tax revenues on beer significantly higher. Also, in the observed period of collection of total revenues on a monthly basis, the total excise tax revenues on coffee in February for the last three years are at the same level as the total excise tax revenues on beer. In the continuation of the analysis, special attention is paid to each of the mentioned categories of excises, and the effects that influenced the increase or decrease of excise tax revenues on a monthly basis are explained in detail.

Chart 3 shows the trend of movement of total excise tax revenues for the mentioned categories on a quarterly basis for the period Q1 2019 - Q1 2021, in millions of BAM (left vertical scale).



A comparison of the nominal quarterly collection of total excise tax revenues for each category indicates positive trends, and a significant increase in total excise tax revenues on beer and non-alcoholic beverages in the third quarters. Also, the data indicate negative trends in the collection of total excise tax revenues in the quarters marked by the beginning of the coronavirus pandemic. In the continuation of the analysis, special attention is paid to each of the mentioned categories of excises, and the effects that influenced the increase or decrease of excise tax revenues on a quarterly basis are explained in detail.

3. Excise tax revenues on alcohol

On the trade of alcohol¹⁹, alcoholic beverages²⁰ and natural fruit brandy²¹, excise is paid per liter of absolute alcohol, i.e. in proportion to the amount of absolute alcohol in the package:

- alcohol 15.00 BAM
- alcoholic beverages 15.00 BAM

¹⁹ In terms of the Law, alcohol is considered to be all types of alcohol, regardless of the raw material from which the alcohol is obtained and regardless of the process of obtaining.

²⁰ Alcoholic beverages are considered to be beverages that contain more than 2% of alcohol.

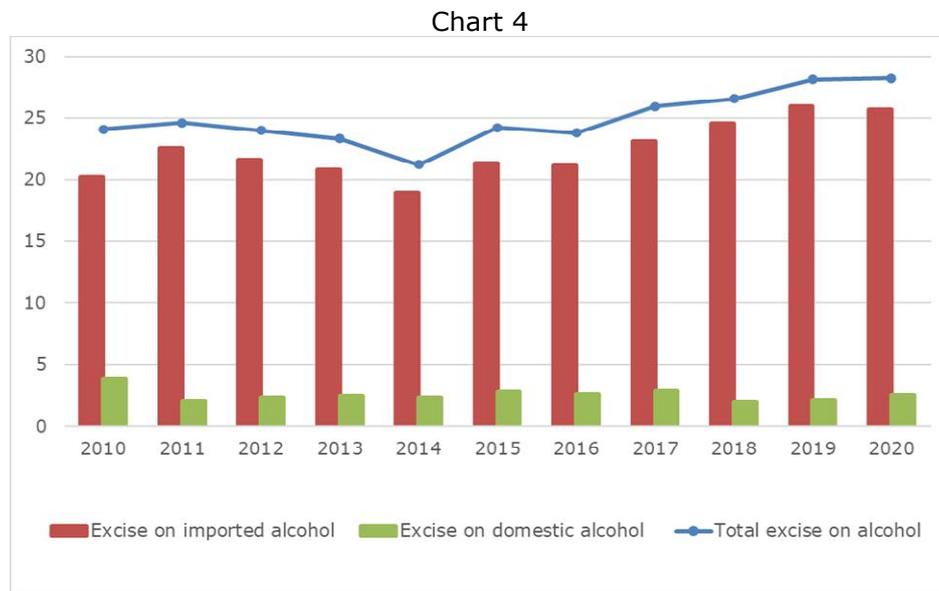
²¹ Natural fruit brandy is considered to be a product obtained by distillation of boiled juice, mash or fruit to less than 86% vol. alcohol, in which no odor and taste different from that used from the raw materials must be felt, to which no flavorings or ethyl alcohol of agricultural origin, sugar or other carbohydrates may be added.

- natural fruit brandy 8.00 BAM

Wine²² is an excise product that is subject to taxation and whose trade is subject to excise tax of 0.25 BAM per liter.

Trend of movement of excise tax revenues on alcohol on an annual, monthly and quarterly basis is presented graphically. In the annual data, excise tax revenues on wine are shown within the excise tax revenues on alcohol, while in the data on a monthly and quarterly basis, excise tax revenues on wine are shown separately.

Chart 4 shows the trend of movement of excise tax revenues on alcohol²³ on an annual basis for the period 2010-2020, in millions of BAM (left vertical scale). As mentioned above, the annual data on the collection of excise tax revenues on alcohol also include excise tax revenues on wine. The chart presents the annual movement of total excise tax revenues on alcohol, as well as the movement of excise tax revenues on alcohol by components - import and domestic excise.



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Excise tax revenues on imported alcohol participate significantly more in total excise tax revenues on alcohol, than excise tax revenues on domestic alcohol.

In 2011, total excise tax revenues on alcohol tended to increase compared to 2010, after which the collection of these revenues began to decline, and in 2014 the lowest total excise tax revenues on alcohol in the observed period were recorded. In the period 2015-2020, these revenues recorded a constant growth on an annual basis.

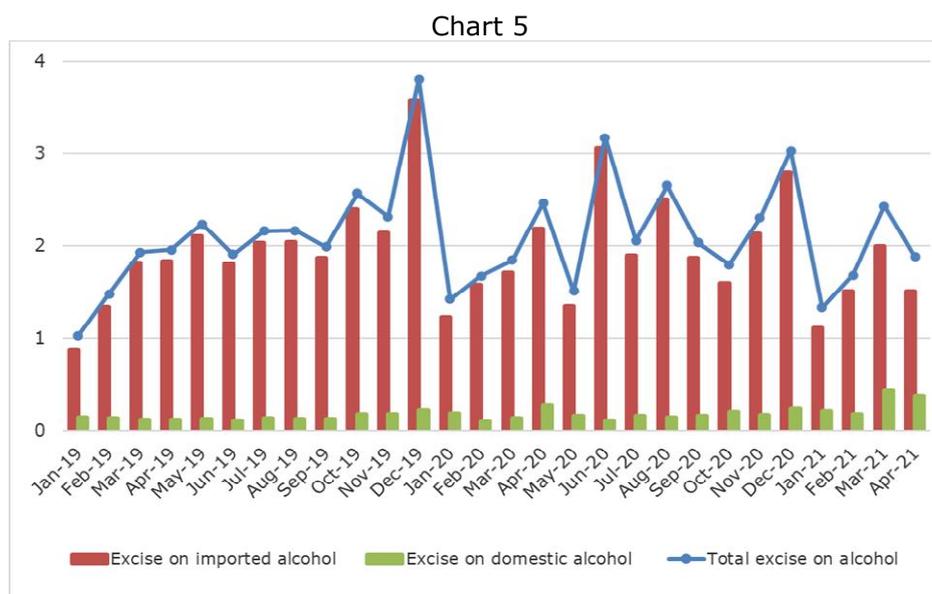
Although 2020 is characterized by the emergence of a coronavirus pandemic, and the introduction of a series of measures to combat the pandemic, there was a slight increase in total excise tax revenues on alcohol by 0.3% compared to the previous year. Looking by the components, the increase refers to excise tax revenues on domestic alcohol, which are higher by 17.4% compared to 2019, while excise tax revenues on imported alcohol are lower by 1.1%.

²² The wine is considered to be grape wine (including fortified wines), vermouth and other grape wines flavored with herbs or aromatic substances.

²³ Alcohol, alcoholic beverages and natural fruit brandy.

Also, in 2020, there was an increase in total excise tax revenues on alcohol by 32.9% compared to 2014, when the lowest total excise tax revenues on alcohol were recorded, and an increase of 17.2% compared to the initial observed period, i.e. 2010.

Chart 5 shows the trend of movement of excise tax revenues on alcohol²⁴ on a monthly basis for the period Jan-19 - Apr-21, in millions of BAM (left vertical scale). Excise tax revenues on alcohol shown on a monthly basis do not include excise tax revenues on wine. The chart presents the monthly movement of total excise tax revenues on alcohol, as well as the movement of excise tax revenues on alcohol by components - import and domestic excise.



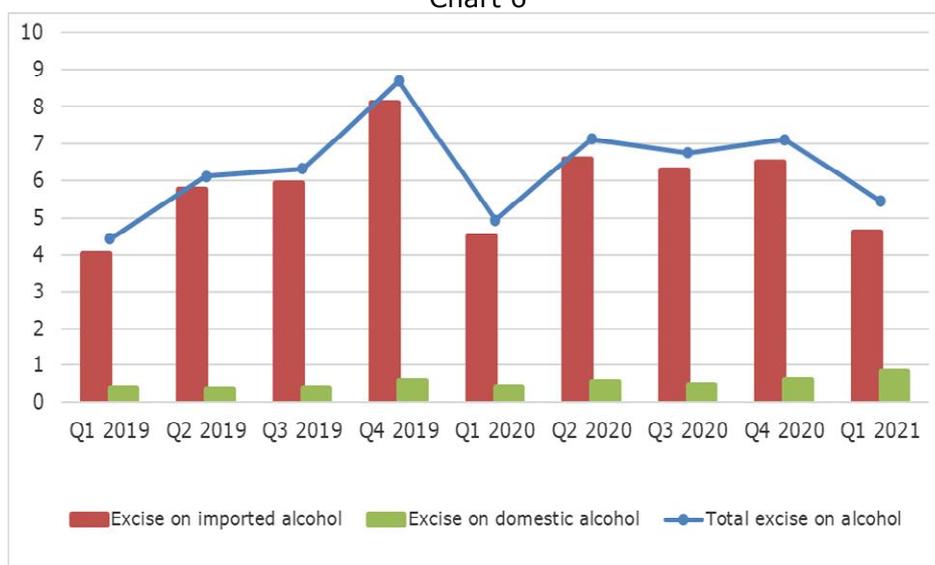
Comparisons of nominal monthly collection indicate positive trends in the collection of total excise tax revenues on alcohol in December 2019 and 2020, and the lowest collection in January 2019 and 2020. It corresponds to the traditional scheme of collection of revenues from indirect taxes due to holidays, while "lockdown" and measures such as closure and limited operation of catering facilities caused a decline in excise tax revenues on alcohol in May 2020 by 32.6% compared to the same month last year. With the easing of measures introduced in the fight against the coronavirus pandemic, and the reopening of catering facilities at the end of May 2020, in June of the same year, an increase in excise tax revenues on alcohol was recorded.

Chart 6 shows the trend of movement of excise tax revenues on alcohol²⁵ on a quarterly basis for the period Q1-2019 - Q1 2021, in millions of BAM (left vertical scale). Excise tax revenues on alcohol shown on a quarterly basis do not include excise tax revenues on wine. The chart presents the quarterly movement of total excise tax revenues on alcohol, as well as the movement of excise tax revenues on alcohol by components - import and domestic excise.

²⁴ Alcohol, alcoholic beverages and natural fruit brandy.

²⁵ Alcohol, alcoholic beverages and natural fruit brandy.

Chart 6



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

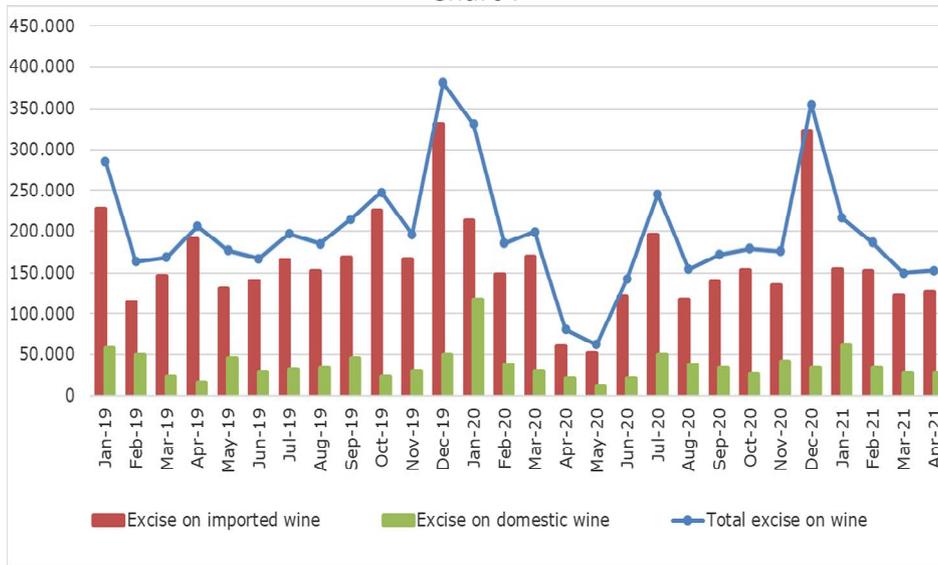
A comparison of the nominal quarterly collection of total excise tax revenues on alcohol in the observed period of time indicates negative trends in the collection of these revenues in the first quarters. In the fourth quarter of 2020, a negative trend was recorded in the collection of total excise tax revenues on alcohol by 18.0% compared to the fourth quarter of 2019. This trend is a consequence of measures to combat the coronavirus pandemic, such as limited working hours of catering facilities and a limited number of people at private and public gatherings, which has the effect of reducing alcohol consumption.

3.1. Excise tax revenues on wine

Considering that wine is a special category of excise products, and that excise tax revenues on wine from February 2018 are recorded separately, the trend of movement of excise tax revenues on wine on a monthly and quarterly basis is shown separately.

Chart 7 shows the trend of movement of excise tax revenues on wine on a monthly basis for the period Jan-19 - Apr-21, in BAM (left vertical scale). The chart presents the monthly movement of total excise tax revenues on wine, as well as the movement of excise tax revenues on wine by components - import and domestic excise.

Chart 7

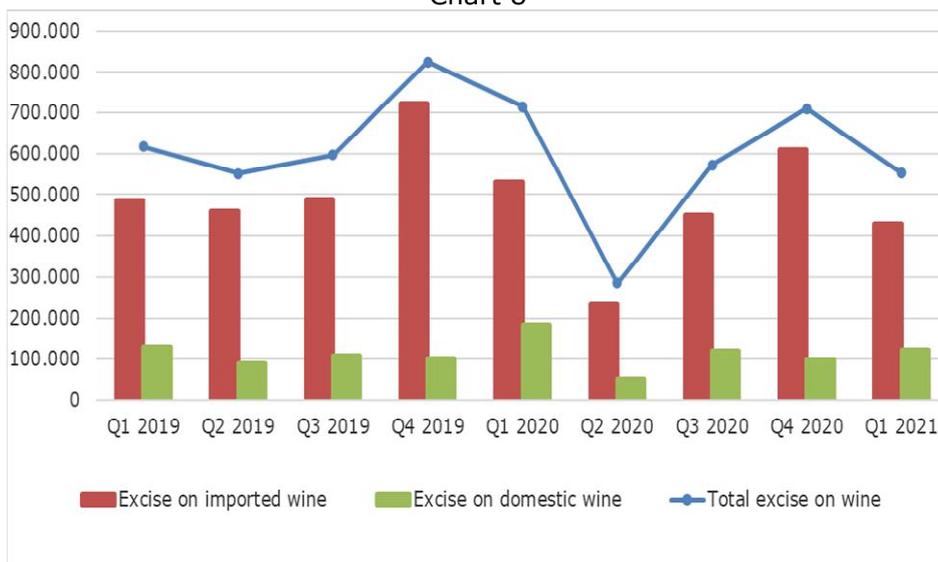


Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Comparisons of the nominal monthly collection of excise tax revenues on alcohol indicate positive trends in the collection of total excise tax revenues on wine in December 2019 and 2020. A negative trend in the collection of excise tax revenues on wine was recorded in the months after the introduction of the most rigorous measures in the fight against the coronavirus pandemic, i.e. in April and May 2020. "Lockdown", as well as restrictions and bans on the operation of catering facilities, caused a decrease in total excise tax revenues on wine in April 2020 by 60.8%, and in May 2020 by 64.9%, compared to the same period last year.

Chart 8 shows the trend of movement of excise tax revenues on wine on a quarterly basis for the period Q1-2019 - Q1 2021, in BAM (left vertical scale). The chart presents the quarterly movement of total excise tax revenues on wine, as well as the movement of excise tax revenues on wine by components - import and domestic excise.

Chart 8



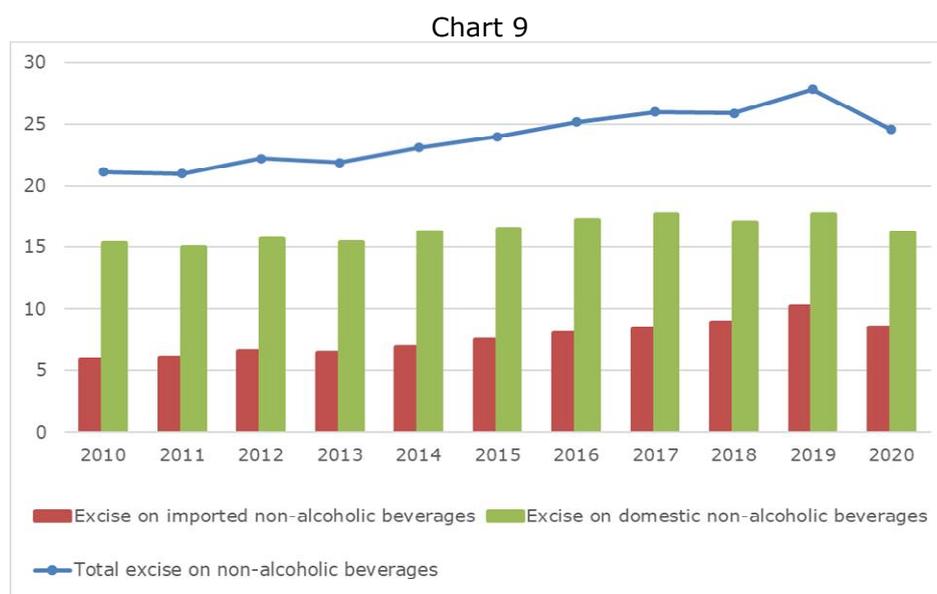
Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Comparisons of the nominal quarterly collection of excise tax revenues on wine indicate a positive trend in the fourth quarter of 2019 and 2020. However, due to measures in the fight against the pandemic, such as limiting the working hours of catering facilities and limiting the number of people at private and public gatherings, total excise tax revenues on wine in the fourth quarter of 2020 decreased by 13.8% compared to the same period of the previous year. As a result of these measures, the most significant decline in the collection of total excise tax revenues on wine was recorded in the second quarter of 2020, by 48.2% compared to the same period last year.

4. Excise tax revenues on non-alcoholic beverages

Non-alcoholic beverages²⁶ are excise products that are subject to taxation and on whose turnover excise tax of 0.10 BAM per liter is paid.

Trend of movement of excise tax revenues on non-alcoholic beverages on an annual, monthly and quarterly bases is presented graphically. Chart 9 shows the movement of excise tax revenues on non-alcoholic beverages in the period 2010-2020, in millions of BAM (left vertical scale). The chart presents the annual movement of total excise tax revenues on non-alcoholic beverages, as well as the movement of excise tax revenues on non-alcoholic beverages by components - import and domestic excise.



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

In total excise tax revenues on non-alcoholic beverages, excise tax revenues on domestic non-alcoholic beverages participate twice as much, compared to excise tax revenues on imported non-alcoholic beverages.

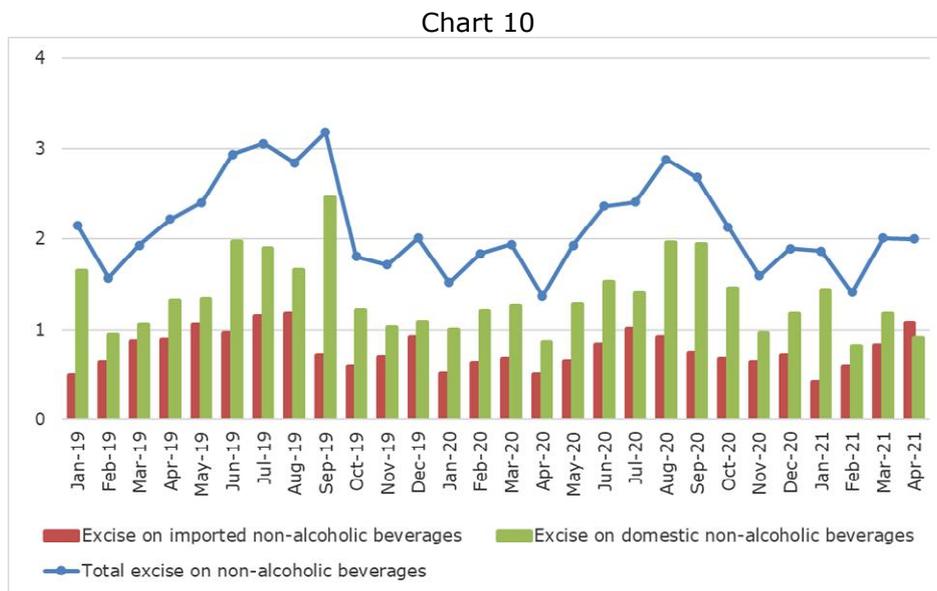
²⁶ For the purposes of the Law, non-alcoholic beverages are considered to be refreshing non-alcoholic beverages made from fruit juice, fruit base, plant extracts, cereals and whey, artificial refreshing non-alcoholic beverages and low-energy refreshing non-alcoholic beverages. Non-alcoholic beverages are not considered to be natural mineral, carbonated and non-carbonated waters, 100% natural fruit and vegetable juices or juices with a fruit and vegetable content of 50% and more, without artificial flavors and additives. Also, syrups, powders and lozenges intended for the preparation of non-alcoholic beverages by dilution in water are not considered non-alcoholic beverages.

Total excise tax revenues on non-alcoholic beverages in the observed ten-year period have a tendency to increase until 2019. In 2020, there was a decrease in excise tax revenues on non-alcoholic beverages by 11.7% compared to the previous year, when these revenues were the highest in the observed period. Also, in 2020, an increase of 16.5% was recorded compared to the initial period, i.e. 2010.

Total excise tax revenues on non-alcoholic beverages in the observed ten-year period have a tendency to increase until 2019. In 2020, there was a decrease in excise tax revenues on non-alcoholic beverages by 11.7% compared to the previous year, when these revenues were the highest in the observed period. Also, in 2020, an increase of 16.5% was recorded compared to the initial period, i.e. 2010.

Looking by the components - import and domestic excise, in 2020, excise tax revenues on imported non-alcoholic beverages decreased by 16.6%, while excise tax revenues on domestic non-alcoholic beverages decreased by 8.8% compared to the previous year, in which is the total excise tax revenues on non-alcoholic beverages, as well as excise tax revenues on non-alcoholic beverages for each component individually - import and domestic excise, the highest in the observed period. In the year of the outbreak of the coronavirus pandemic, in which the first reaction of the governments was the introduction of measures to combat the spread of the virus such as closing borders and difficult movement and transport of goods, the tendency of consumers was reoriented towards the domestic market of non-alcoholic beverages, which resulted in a significant drop in excise tax revenues on imported non-alcoholic beverages.

Chart 10 shows the trend of movement of excise tax revenues on non-alcoholic beverages on a monthly basis for the period Jan-19 - Apr-21, in millions of BAM (left vertical scale). The chart presents the monthly movement of total excise tax revenues on non-alcoholic beverages, as well as the movement of excise tax revenues on non-alcoholic beverages by components - import and domestic excise.

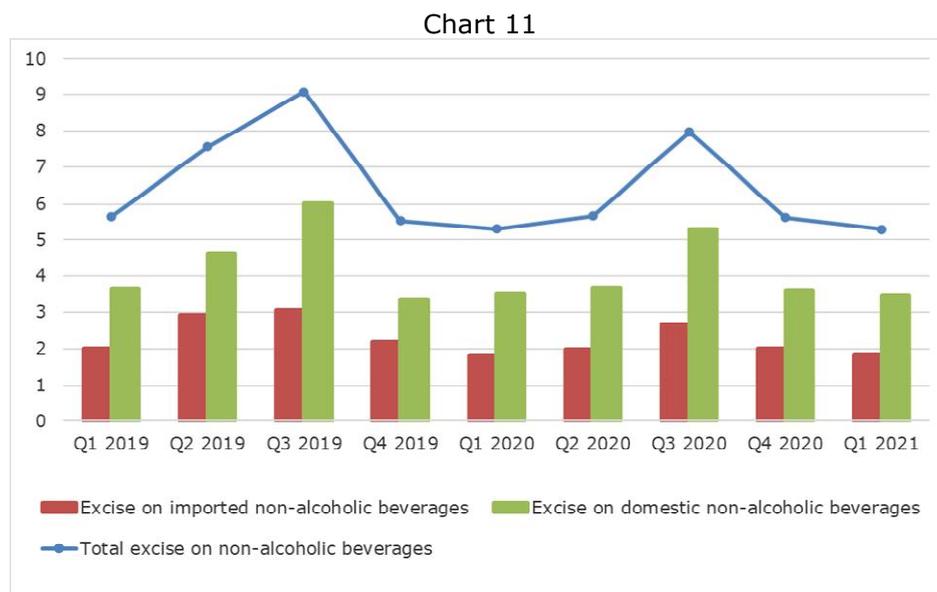


Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Comparisons of the nominal monthly collection of total excise tax revenues on non-alcoholic beverages reflect the trend and preferences of consumer behavior. Unlike alcohol and wine, the consumption of non-alcoholic beverages, is strongly influenced by the seasonal factor, and a positive trend in the collection of these revenues was recorded in the summer months. The

coronavirus pandemic, and the measures introduced to combat the pandemic, had a significantly smaller impact on the collection of excise tax revenues on non-alcoholic beverages than the impact on the collection of excise tax revenues on alcohol and wine.

Chart 11 shows the trend of movement of excise tax revenues on non-alcoholic beverages on a quarterly basis for the period Q1-2019 - Q1 2021, in millions of BAM (left vertical scale). The chart presents the quarterly movement of total excise tax revenues on non-alcoholic beverages, as well as the movement of excise tax revenues on non-alcoholic beverages by components - import and domestic excise.



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

As with monthly data, comparisons of quarterly collection of total excise tax revenues on non-alcoholic beverages indicate a positive trend of collection in the third quarter, and under the influence of summer months, i.e. weather conditions in which consumption or consumption of non-alcoholic beverages is at the highest level. Also, the year marked by the appearance of the coronavirus pandemic affected the collection of these revenues, and in the third quarter of 2020, the collection of total excise tax revenues on non-alcoholic beverages decreased by 12.1%, compared to the same period last year.

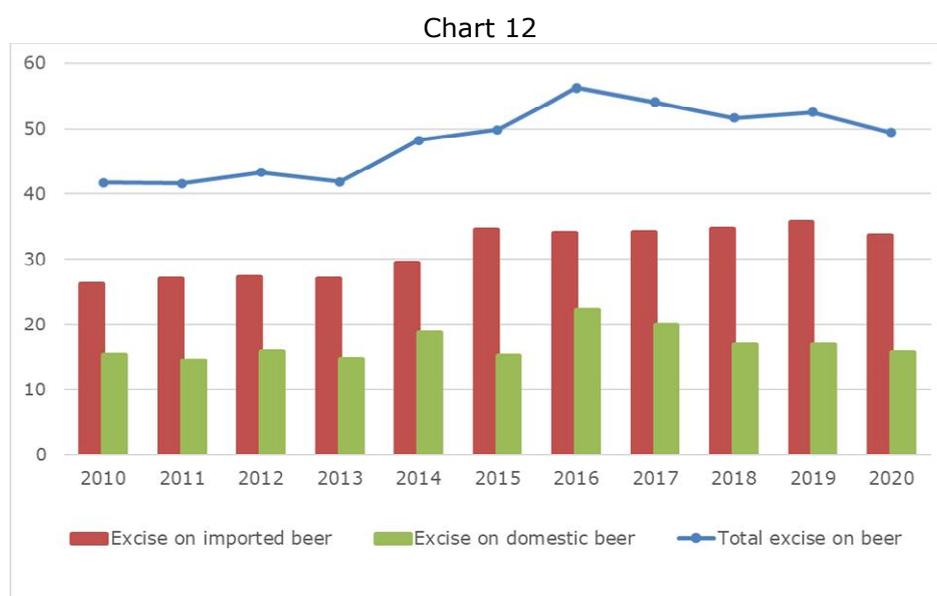
5. Excise tax revenues on beer

Until the amendments to the Law, a single rate of excise tax on beer²⁷ of 0.20 BAM per liter was applied. By amending the Law, as of September 1, 2014, B&H introduced differentiated rates of excise tax on beer. In accordance with the changes, the excise tax on beer is paid 0.25 BAM per liter. Exceptionally, a beer producer whose average production in the previous three years is less than 400,000 hl, pays excise tax 0.20 BAM per liter, as well as beer importers provided that the beer is procured from a producer whose average production in the previous three years is less than 400,000 hl. With the amendment of the Law, the previous uniform rate of excise tax of 0.20 BAM per liter, became a lower rate.

²⁷ For the purposes of the Law, beer is considered to be a refreshing sparkling drink obtained from water, barley malt, yeast, unsweetened cereals and hops, regardless of the concentration of the extract in the malt or the concentration of alcohol in the beer.

The main goal of the amendment to the Law was a more favorable position for domestic beer producers, in terms of applying a lower rate to domestic beers, and higher rates to imported beers. Having in mind the legal threshold of annual production, as well as other conditions for exercising the right to a lower rate of excise tax, some domestic breweries²⁸ by expanding production capacity, exceeded the threshold for taxation at a lower rate, which resulted in growth of domestic excise tax revenues.

Trend of movement of excise tax revenues on beer on an annual, monthly and quarterly bases is presented graphically. Chart 12 shows the movement of excise tax revenues on beer in the period 2010-2020, in millions of BAM (left vertical scale). The chart presents the annual movement of total excise tax revenues on beer, as well as the movement of excise tax revenues on beer by components - import and domestic excise.



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

The share of excise tax revenues on imported beer is significantly higher in total excise tax revenues on beer, than excise tax revenues on domestic beer, which indicates not only a greater consumer preference in consuming imported beer than consuming domestic beer, but also the impact of higher rates of excise tax on imported beers since 2015.

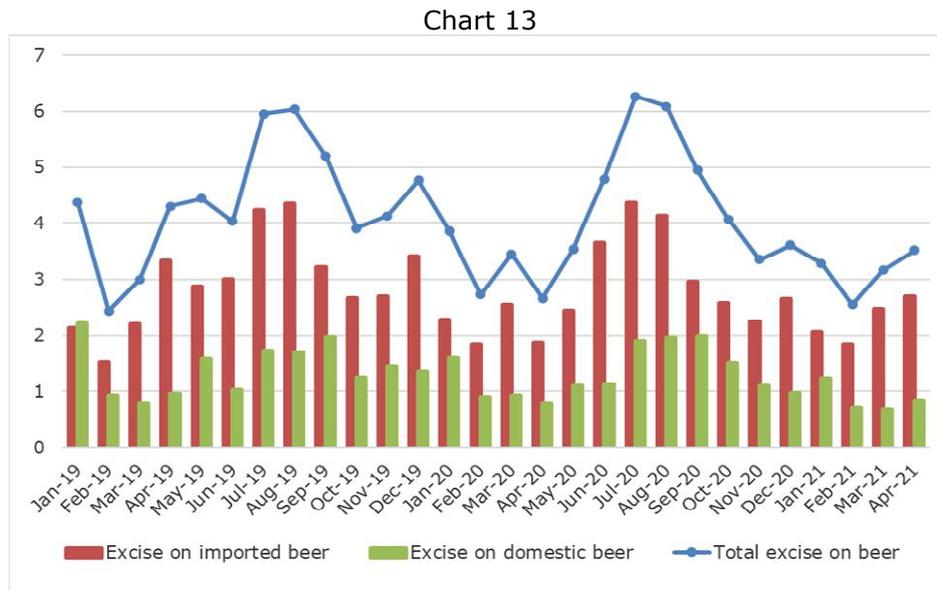
Total excise tax revenues on beer in the three-year period 2010-2013 have a trend of stagnation, after which in the period 2014-2016 there was a sharp increase in these revenues. In 2016, the most significant excise tax revenues on beer were recorded in the observed ten-year period. The largest contribution to the increase in total excise tax revenues on beer in 2016 is a significant increase in excise tax revenues on domestic beer, which is higher by 45.5% compared to 2015. In the period 2017-2020, there is a slight decline in excise tax revenues on domestic beer, which affects the decline in total excise tax revenues on beer, while excise tax revenues on imported beer did not change significantly in this period.

In 2020, there was a decrease in total excise tax revenues on beer by 6.0% compared to the previous year, a decrease by 12.1% compared to 2016 when these revenues were the most significant and an increase by 18.4% in relation to the initial period, i.e. 2010. Looking by the components - import and domestic excise, in 2020, excise tax revenues on imported beer are

²⁸ Banjaluka Brewery.

lower by 5.9%, while excise tax revenues on domestic beer are lower by 6.4% compared to the previous year.

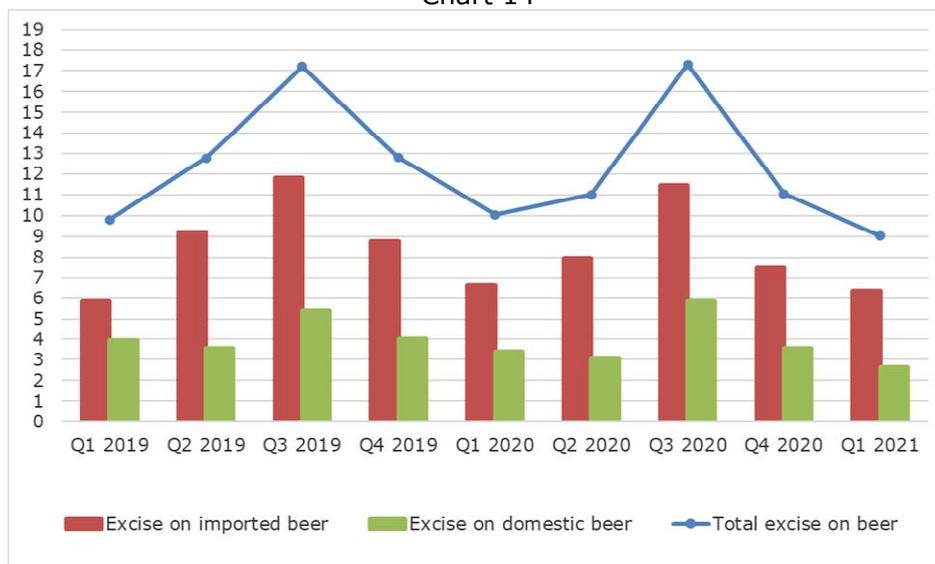
Chart 13 shows the trend of excise tax revenues on beer on a monthly basis for the period Jan-19 - Apr-21, in millions of BAM (left vertical scale). The chart presents the monthly movement of total excise tax revenues on beer, as well as the movement of excise tax revenues on beer by components - import and domestic excise.



As with the excise tax revenues on non-alcoholic beverages, the seasonal factor has a significant impact on the consumption of beer, and a positive trend in the collection of these revenues was recorded in the summer months. The coronavirus pandemic, and the measures introduced to combat the pandemic, had a lesser effect on the collection of excise tax revenues on beer. Analyzing the impact of the pandemic on the collection of total excise tax revenues on beer, a negative trend is noticeable. In April 2020, it was collected 38.2% less, and in May 2020, it was collected 20.1% less of total excise tax revenues on beer compared to the same period of the previous year.

Chart 14 shows the trend of movement of excise tax revenues on beer on a quarterly basis for the period Q1 2019 - Q1 2021, in millions of BAM (left vertical scale). The chart presents the quarterly movement of total excise tax revenues on beer, as well as the movement of excise tax revenues on beer by components - import and domestic excise.

Chart 14



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

As with the monthly data, comparisons of the nominal quarterly collection of total excise tax revenues on beer indicate a positive trend of collection in the third quarter, during the summer months when beer consumption is at its highest level. Due to the previously mentioned measures in the fight against the coronavirus pandemic, the total excise tax revenues on beer in the second quarter of 2020 decreased by 13.9% compared to the second quarter of the previous year, which was not marked by a pandemic. The decline was recorded in the quarter in which the mentioned measures were the most rigorous, and measures such as restriction and closure of catering facilities, prohibition and restriction of movement and gatherings, significantly affected the collection of these revenues.

6. Excise tax revenues on coffee

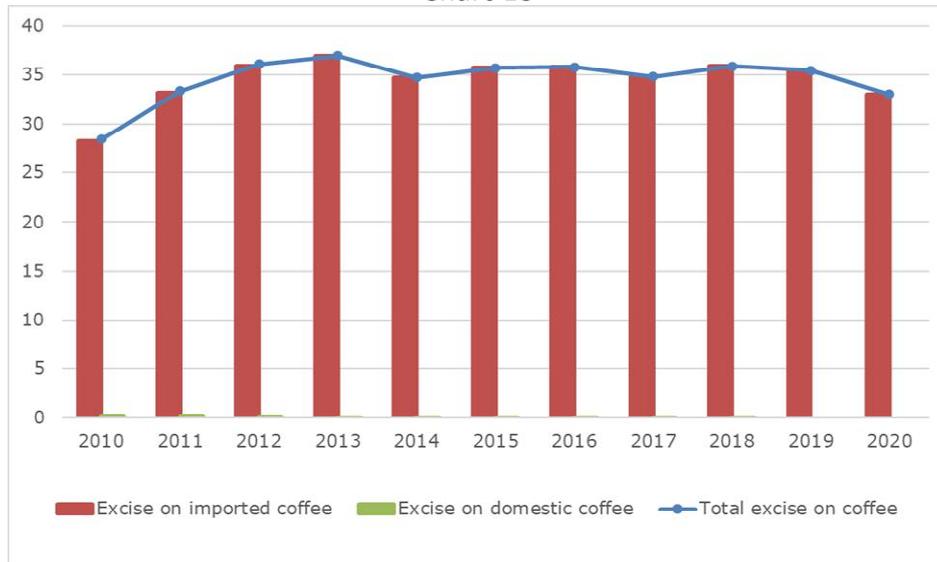
Excise on coffee²⁹ is paid upon import per kilogram, for:

- raw coffee 1.50 BAM
- roasted coffee (in beans or ground) 3.00 BAM
- husks and skins of roasted coffee and other coffee products 3.50 BAM

Trend of movement of excise tax revenues on coffee on an annual, monthly and quarterly basis is presented graphically. Chart 15 shows the movement of excise tax revenues on coffee in the period 2010-2020, in millions of BAM (left vertical scale). The chart presents the movement of total excise tax revenues on coffee, as well as the movement of excise tax revenues on coffee by components - import and domestic excise.

²⁹ In terms of the Law, coffee is an excise product that is subject to taxation. Coffee is considered to be raw coffee (with or without caffeine), roasted coffee (with or without caffeine) in beans or ground, roasted coffee husks and skins, other coffee products containing 50% or more of coffee. Excise tax on coffee is paid for one kilogram of net weight of coffee. If coffee is placed on the market in packages other than one kilogram, the excise tax is paid in proportion to the amount of coffee in the package.

Chart 15



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

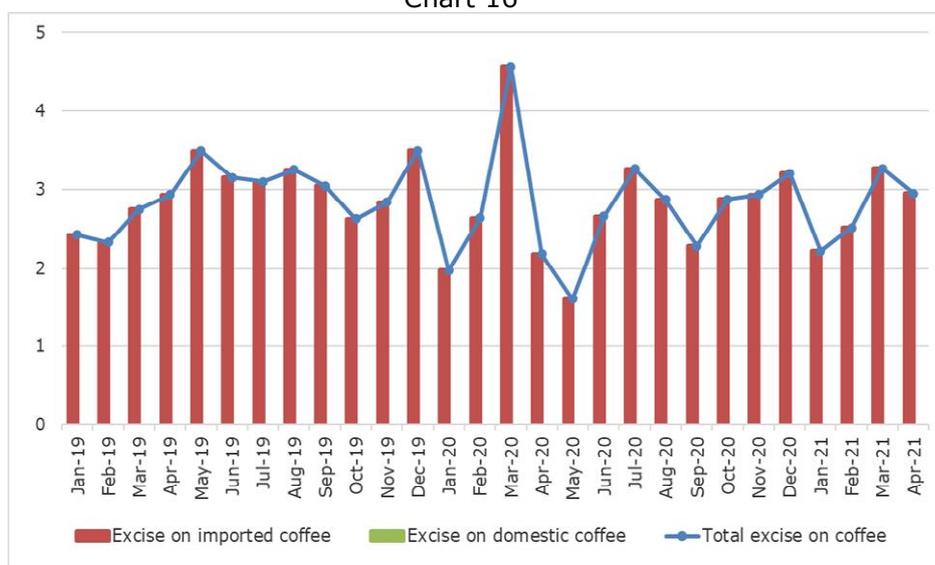
The presented data show that the total excise tax revenues on coffee are dominated by excise tax revenues on imported coffee, which in 2019 and 2020 participate in one hundred percent, while in the period 2010-2018, excise tax revenues on domestic coffee have a negligible share in total excise tax revenues on coffee.

The reason for the dominance of import excise tax in the structure of collected excise taxes on coffee is that, in accordance with the valid Law, excise tax is paid exclusively during cross-border traffic, i.e. during import, while excise tax on coffee in the country is not paid.

In 2020, there was a significant decline in total excise tax revenues on coffee compared to the previous year, by 6.7%. Observing the trend of movement of these revenues through the time series shown in Chart 15, the galloping growth of total excise tax revenues on coffee in the period 2010-2013 is evident, after which the collection of these revenues in 2014 decreases. In the period 2014-2019, the trend of movement of total excise tax revenues on coffee has not changed significantly, after which in 2020 it declined sharply. Compared to 2013, when the collection of these revenues was the most significant, in 2020 there was a decrease of 10.5%.

Chart 16 shows the trend of movement of excise tax revenues on coffee on a monthly basis for the period Jan-19 - Apr-21, in millions of BAM (left vertical scale). The chart presents the movement of total excise tax revenues on coffee, as well as the movement of excise tax revenues on coffee by components - import and domestic excise.

Chart 16



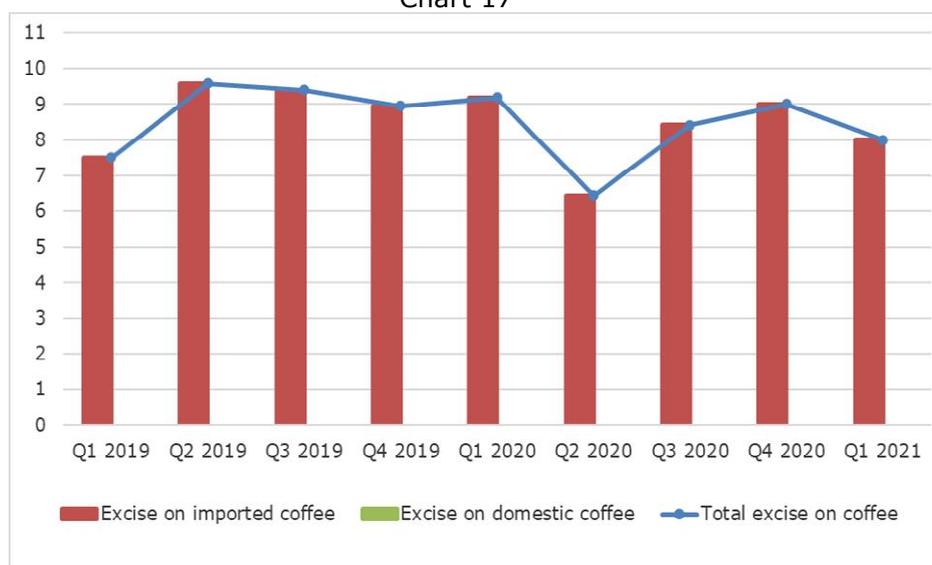
Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Trend of movement of monthly collection of total excise tax revenues on coffee in the period Jan-19 - Apr-21 is fluctuating with special oscillations in the period Mar-20 - May-20. From the data shown in Chart 16, it is known that the collection of these revenues in the observed period was highest in March 2020, which may be related to the fall in world coffee prices as a market reaction to the spread of the pandemic.

Throughout the duration of the most rigorous measures introduced in the country, the sale of coffee in catering facilities dropped significantly, which directly affected the reduction of excise tax revenues on coffee in April and May 2020. Thus, in March 2020, the collection of total excise tax revenues on coffee was higher by 66.2% compared to the same month last year, while the collection of these revenues in April 2020 was lower by 25.7%, and in May 2020 by 54.2% compared to the same period last year. At the same time, in May 2020, the lowest collection of total excise tax revenues on coffee was recorded on a monthly basis in the observed period of time.

Chart 17 shows the trend of movement of excise tax revenues on coffee on a quarterly basis for the period Q1 2019 - Q1 2021, in millions of BAM (left vertical scale). The chart presents the movement of total excise tax revenues on coffee, as well as the movement of excise tax revenues on coffee by components - import and domestic excise.

Chart 17



Source: Data from the Indirect Taxation Authority of B&H, MAU overview

Comparisons of the nominal quarterly collection of total excise tax revenues on coffee, providing data on the collection of total revenues from coffee on a quarterly basis, show the lowest collection in the first quarter of 2019 and 2021. The first quarter of 2020 is an exception, given the highest collection of these revenues in March of that year. The most significant decline in total excise tax revenues on coffee at the quarterly basis recorded in the second quarter of 2020 was 32.7% compared to the second quarter of the previous year. The reason for the decline in total excise tax revenues on coffee in this period is the introduction of measures to combat the pandemic.