Bosna i Hercegovina Odjeljenje za makroekonomsku analizu Upravnog odbora Uprave za indirektno neizravno oporezivanje



Босна и Херцеговина Одјељење за макроекономску анализу Управног одбора Управе за индиректно опорезивање

Macroeconomic Unit of the Governing Board of the Indirect Taxation Authority

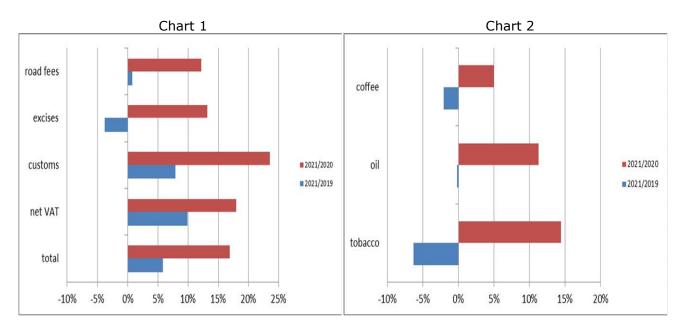
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mart/april 2022 – ožujak/travanj 2022 – март/април 2022 – March/April 2022

# With this issue

The year 2020 cannot be a reference base year to draw conclusions about the recovery of collection in 2021, because of the negative impact of the COVID-19 virus pandemic on the collection of indirect taxes. It is necessary to compare the collection with the year of historical maximum- 2019. The total net collection of revenues from indirect taxes in 2021 exceeds the 2019 collection by 5.8%. The main source of growth is VAT, and the decomposition of the VAT shows that a positive trend compared to 2019 was recorded in both the collection of VAT on imports and in the collection of domestic VAT. More modest positive growth rates compared to 2019 were achieved in the collection of customs and road fee revenues, while the collection of excises in 2021 was still lower than the collection in 2019 (Chart 1).



The decomposition of excise revenues by types of products shows that only the collection of excises on alcohol and alcoholic beverages had a positive growth rate compared to 2019, which was negligible. The collection of all other sub-types of excise duties was lower than in 2019, especially when it comes to excises on tobacco products, which, given the amount, largely determine trends (Chart 2).

Dinka Antić, PhD Head of Unit

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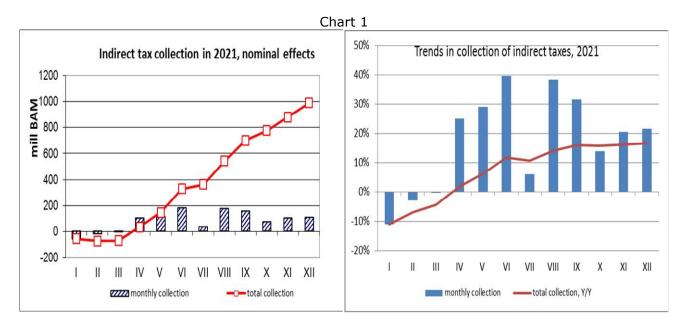
Technical design:Sulejman Hasanović, IT expertReader/translator:Darija Komlenović, professor

# Collection of revenues from indirect taxes in 2021

(prepared by: Dinka Antić, PhD)

# **Total collection**

According to the cash flow report, in December 2021, the ITA collected gross revenues from indirect taxes in the amount of 782.1 million BAM, which is 150.9 million BAM more than in the same month in 2020. At the same time, refund payments were higher by 41.7 million BAM, which reduced the net collection effects. In the end, the net collection was higher by 109.2 million BAM compared to December 2020, or by 21.5% (Chart 1, right side "monthly collection").



High growth in the collection of indirect taxes in December improved the cumulative collection, so that the total gross collection in 2021 was higher by 1.216 billion BAM compared to 2020, while the refunds were higher by 227 million BAM. Ultimately, the net collection of indirect taxes in 2021 was higher by 989.4 million BAM compared to 2020, representing an increase of 16.7% (Chart 1, left side, "cumulative").

A sharp recovery in revenue collection as of May 2021 can be seen on both sides of Chart 1, in nominal amounts and in relative proportions. The net effects of indirect tax revenue collection achieved in the first four months were de facto quadrupled in the rest of the year. Also, there was an accelerated growth of total (cumulative) net revenues, which in just three months from the negative growth zone reached a growth rate of 10%. In the second half of the year, the growth rate stabilized at around 16%.

Unexpectedly, in 2021, a historical maximum in nominal collection of revenues from indirect taxes was achieved since the establishment of the ITA. Only the growth rate in 2006 (the year of the introduction of VAT in B&H when very high revenue increase was achieved) was higher than the annual growth rate in 2021 (Chart 2).

Chart 3, left side, shows the nominal monthly collection of indirect taxes in the last three years. After oscillations for considerable duration of the year, in the fourth quarter, an almost identical collection pattern has been observed in the last three years.

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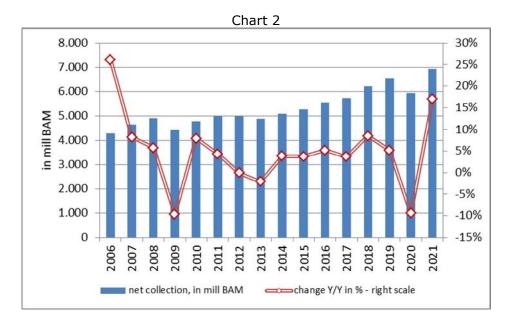
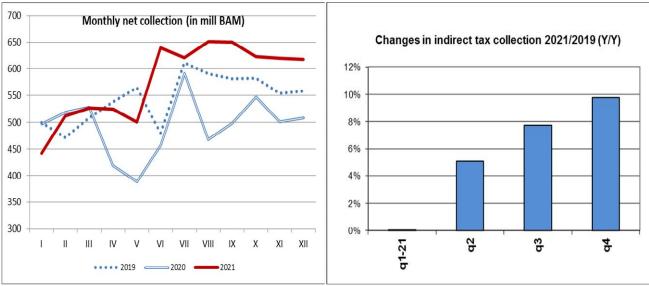


Chart 3

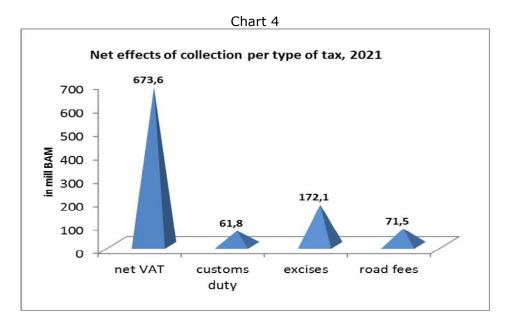


Due to the fact that the negative effects of the COVID-19 pandemic on the economy and the collection of revenues from indirect taxes were mostly manifested in the second quarter of 2020, and that the pandemic continued in 2021, negative growth of 4.2% in the first quarter 2021 was expected. The strong recovery in revenues in April and June 2021 brought growth in the second quarter of a high 31.5%. The lower statistical base for comparison in 2020, as well as more liberal measures for entering B&H in 2021 during the summer resulted in a strong increase in the collection of indirect taxes in the third quarter of 2021 of 23,4%. Neither the emergence of the fourth wave of the pandemic in the EU, nor the application of restrictive measures in the member states and the neighboring countries, significantly affected the consumption of non-residents in B&H, especially when it comes to non-residents from Croatia in the border areas of B&H, so in the fourth quarter, the collection of revenues from indirect taxes increased by 19.4%.

However, in order to conclude that the collection of indirect taxes is on the road to recovery, it is necessary to compare it with the collection in 2019, the year before the pandemic, which was also a year of historical maximum since the establishment of the ITA. A comparison with the quarters in 2019 also indicates trends that could be expected in 2022. Chart 3, right side, shows that collection in the first quarter of 2021 was at the level of collection in the first quarter of 2019, which is optimistic, given the negative effects of the pandemic in 2021. In the second, third and fourth quarters there were accelerated revenue growth. Very high growth rates were achieved compared to reference quarters in 2019 of 5.1%, 7.7% and 9.8%, respectively (Chart 3, right side).

# **Collection by type of revenue**

The high growth of collection in December also improved the picture of collection by type of revenue (Chart 4). The largest increase in 2021 was realized in the collection of VAT, as much as 673.6 million BAM, than in excises 172.1 million BAM, road fees 71.5 million BAM and in customs 61.8 million BAM. The analysis does not include unadjusted revenues by type in the amount of 13.2 million BAM.

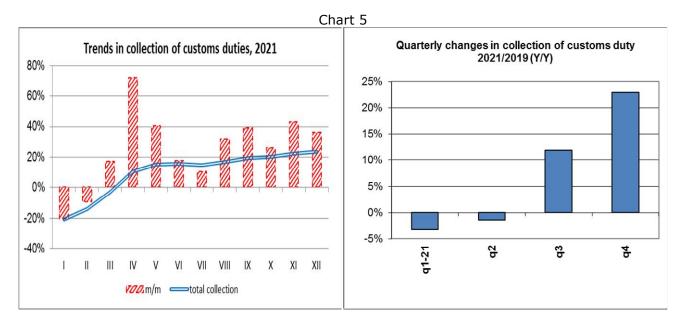


# Customs

The beginning of the year brought a decline in the collection of customs revenues, bearing in mind the higher base for comparison in 2020, which refers to the first quarter, i.e. the time before the emergence of pandemic (Chart 5, left side). Since March, there has been a continuous positive trend, with oscillations in monthly growth rates in a wide range from 15% to a maximum of 72%. The high monthly growth rates in the first half of 2021 are partly result of a low statistical base for comparison in the second quarter of 2020, due to the closing of the economy and the drastic decline in imports during the first wave of the pandemic. However, the continuation of positive growth trend, characterized by high and stable rates, in the second half of 2021 can be associated with rising prices of energy, raw materials, food and other goods in foreign markets.

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As customs revenues are strongly correlated with imports, the growth of imports<sup>1</sup> also brought an increase in customs revenues, and in 2021 a growth in customs revenues of 23.6% was recorded (Chart 5, left side, "total collection"). The improvement in the collection of customs revenues was a consequence of the cumulative positive effect of the growth of imports from the EU<sup>2</sup> in the part of goods under the customs regime, and the growth of imports of goods from China<sup>3</sup> and other Asian countries.



In the first quarter of 2021, a decrease in customs revenues of -3% was recorded compared to the same quarter in 2020, while in the second quarter there was a growth of 40.1%. Due to the slowdown in growth in July, in the third quarter of 2021 the growth rate of customs revenues was 26.1%. The fourth quarter brought a strong recovery in imports with growth rates of over 40%, which ultimately brought growth of 34.7% at the quarterly level. Although the monthly data on the customs collection in 2021 shows that the recovery of the collection has started in March (Chart 5, left), a comparison with 2019 indicates a different conclusion. Negative trends lasted for the first two quarters, with positive growth rates of 11.8% and 23% being achieved only in the third and fourth quarters, respectively (Chart 5, right view). Overall, in 2021, a maximum nominal collection of customs revenues has been achieved since 2013, when the five-year reduction / abolition of customs duties under the Stabilization and Association Agreement with the EU was completed (Chart 6).

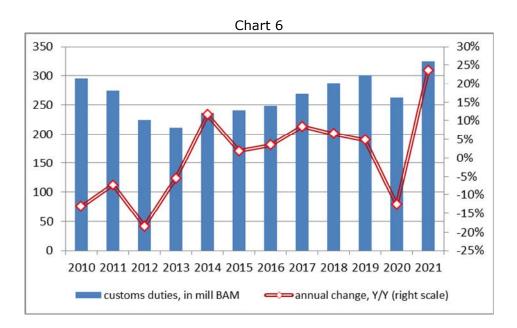
<sup>3</sup> According to data of the Agency for Statistics of B&H, imports from China in 2021 increased by 25.6%. Banja Luka: Bana Lazarevića, 78 000 Banja Luka, Tel/fax: +387 51 335 350, E-mail: oma@uino.gov.ba

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<sup>&</sup>lt;sup>1</sup> According to data of the Agency for Statistics of B&H, imports in B&H in 2021 were higher by 27.9% compared to 2020.

<sup>&</sup>lt;sup>2</sup> According to data of the Agency for Statistics of B&H, imports from the EU in 2021 increased by 24%.

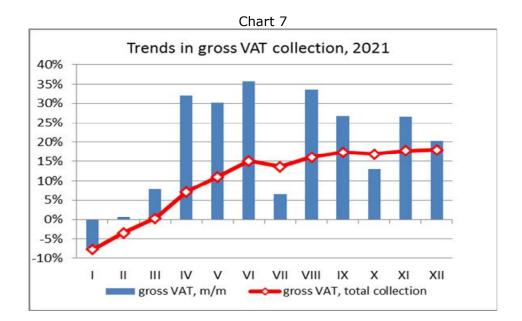
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# VAT

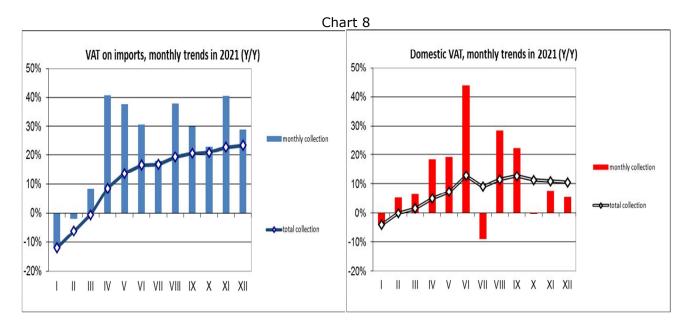
# Gross VAT

In December, the growing trend in the collection of VAT revenues has continued. It was characterized by very high growth rates, keeping the cumulative growth of gross VAT at the level of the rate of 18% (Chart 7).

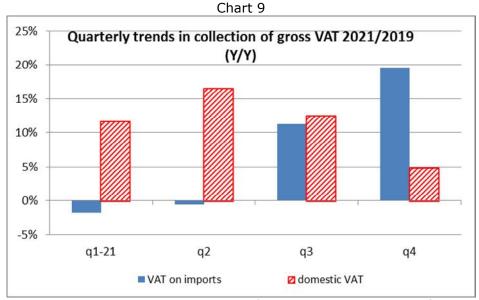


The analysis of the dynamics of the structure of gross VAT collection shows a continuation of positive trends in both components. At the annual level, VAT on imports grew at a rate of 23.4% (Chart 8, "VAT on imports- total collection "), and domestic VAT at a rate of 10.8% (Chart 8, "domestic VAT- total collection").

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Quarterly comparisons of gross VAT collection by components indicate a recovery of VAT on imports from the second quarter of 2021. In the first quarter, VAT collection on imports was realized at the level of collection from the same quarter of 2020. In the second, third and fourth quarters, there was a stable growth of VAT collection on imports with high rates of 36%, 28.1% and 30,4%, respectively. On the other hand, the quarterly growth of domestic VAT collection was constantly in the positive growth zone. In the first quarter, growth was only 1.6%, but in the second and third quarters it was 27.6% and 12.6%. Since the growth of domestic VAT collection of 5.5% was achieved in the fourth quarter, it can be concluded that the slowdown in growth to more normal limits, which are close to the projections of consumption growth, is evident. However, a more realistic picture is given by the comparison with 2019. An overview of quarterly trends in 2021 compared to 2019 (Chart 9) shows a strong recovery of collection and growing trend of VAT on imports in the second half of 2021, and the trend of slowing down of domestic VAT collection as of the third quarter. However, domestic VAT growth rates are far above consumption projections in 2021.

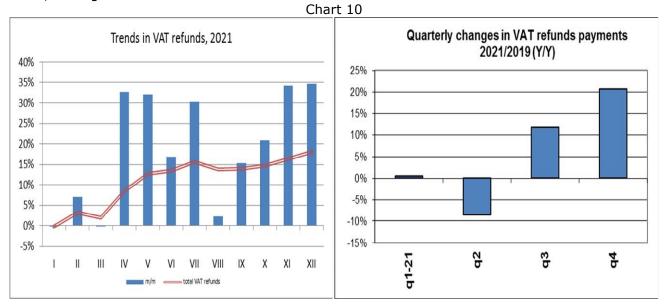


# VAT refunds

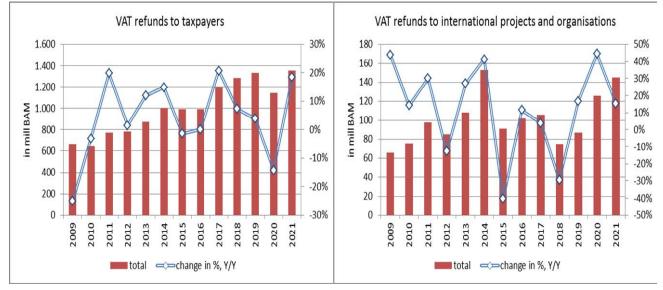
In 2021, a strong increase in VAT refunds of 18.1% was recorded, as a result of the growth of exports and imports in 2021 (Chart 10, left side).

It can be concluded from quarterly comparisons of 2021 with 2019 that growth in refunds in 2021 was achieved in the second half of 2021 (Chart 10, right side).

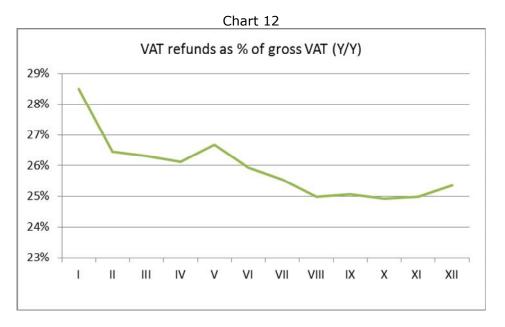
The analysis of the structure of refunds showed an increase in refunds to taxpayers of 18.4% or nominally 210,8 million BAM, compared to 2020. At the same time, these are maximal payments since the introduction of VAT (Chart 11, left side). Refunds to international organizations and projects increased by 15.6%, or nominally by 19.6 million BAM. There is a noticeable growing trend, the highest since 2014.







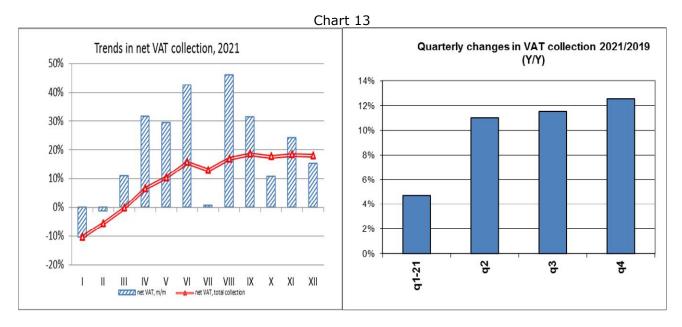
Along with the growth of refunds, the collection of gross VAT has also been growing, but the faster growth of gross collection in 2021 has been somewhat mitigated by the growth of refunds, which resulted in a decline in the share of refunds in gross collection. However, the faster growth of refund payments in the last two months of 2021 compared to the growth of gross collection increased the share of total (cumulative) refunds in total gross VAT to 25.3% (Chart 12).



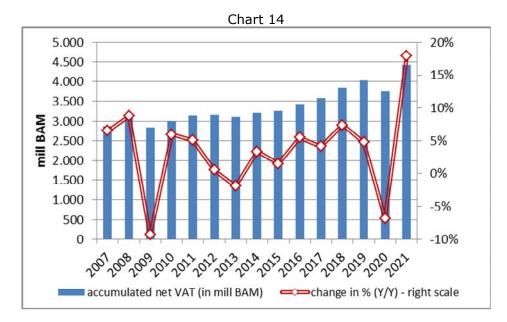
# Net VAT

Despite an increase in refunds in December, the cumulative growth rate of net VAT in 2021 remained high at 18% (Chart 13, left side). In the first quarter of 2021, the collection was lower by 0.3% due to the high statistical base in 2020. In the second quarter, growth of 35% was recorded, in the third 23.6%, and in the fourth 17.3%. However, in contrast to the slowdown in collection shown by quarterly comparisons with 2020, quarterly comparisons of 2021 with 2019 show an uniform quarterly growth in the last three quarters, amounting 11% -12%, which indicates that a stable trend of the VAT collection can be expected in 2022 as well (Chart 13, right side).

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A comparison of the nominal net VAT collection in 2021 with previous years indicates that in 2021 the maximum since the introduction of VAT was achieved (Chart 14).

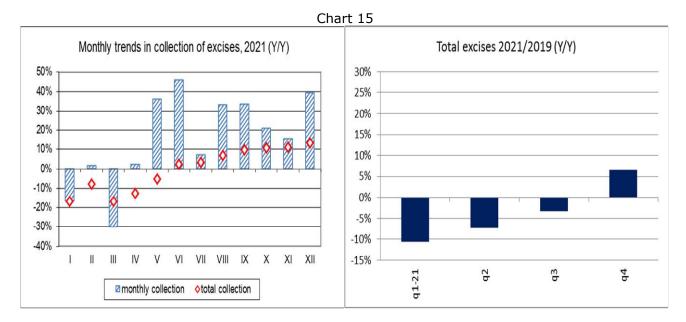


#### Excises

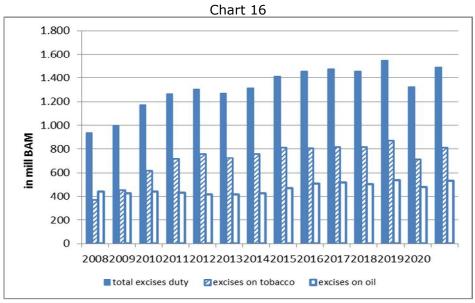
# Total excises

Positive trends in the collection of excise revenues have been ongoing since April, with very high monthly growth rates (Chart 15, left). In December, the collection of excises was as much as 39.1% higher, increasing the cumulative growth rate to a high 13.2% (Chart 15, left side "total collection"). High growth rates and the oscillating trend of excise collection in 2021 were largely consequence of the lower statistical base from the same period in 2020, which varied depending on the oscillations in the collection of excises on oil derivatives and excises on tobacco products.

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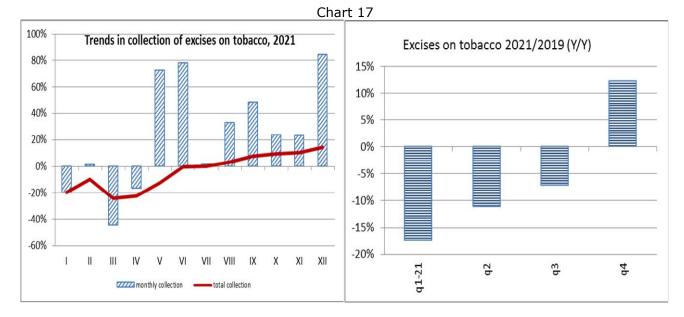
Although the presentation of the monthly collection of excise revenues (Chart 15, left side) indicates positive trends in the last three guarters of 2021, a comparison of the collection of excises in 2021 with the collection in 2019 shows a different picture. The recovery in the collection of excise revenues occurred only in the fourth quarter of 2021, when it grew by 6.1% compared to the same quarter in 2019 (Chart 15, right side). However, the positive growth in one quarter was insufficient for the total collection of excises in 2021 to exceed the year of historical maximum collection in 2019. Total collected excise revenues in 2021 were 3.8% lower than in 2019 (Chart 16).



# Excises on tobacco products

Since the collection of revenues of excises on oil derivatives in 2021 has reached the 2019 collection, the main reason for the lower total collection of excises were excises on tobacco products, which in 2021 were collected by 6.3% less than in 2019 (Chart 17)

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Even the enormous growth of excise revenues on tobacco products in December 2021 of 84% could not compensate for the lack of excise revenues (Chart 17, left side). Also, the significant spillover of cigarette consumption from Croatia to B&H in the summer season due to restrictive measures applied by Croatia in catering facilities and the entertainment industry could not reverse the trends. However, quarterly comparisons of the collection of excises on tobacco products in 2021 with 2019 are encouraging, given that the collection in the fourth quarter of 2021 exceeded the collection in the same quarter of 2019 by 12.3% (Chart 17, right side).

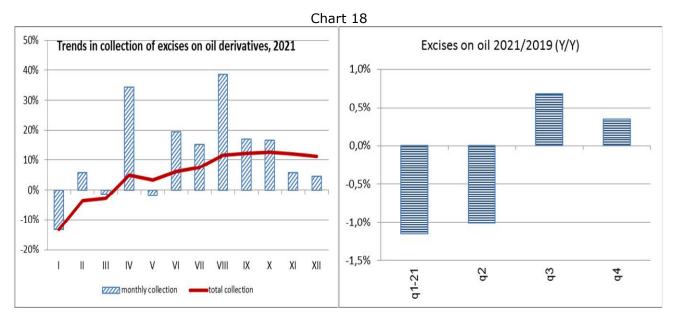
However, it should be borne in mind that the enormous payment of excise duties in December was related to the expectations of tobacco companies regarding consumption of cigarettes during the Christmas and New Year holidays and the ski season in B&H (January / February). The optimistic expectations of tobacco companies regarding higher cigarette consumption at the beginning of 2022 are also related to mild anti-COVID measures in B&H, as opposed to stricter measures in the EU member states, which made B&H a competitor in winter tourism. However, a greater recovery in consumption of non-residents (diaspora, tourists, B&H citizens temporarily working abroad) could not be achieved. Therefore, revenues from 2019 could not be reached, not only because of restrictive measures in the return of EU citizens (quarantine, etc.), but also due to other factors that negatively affected consumption of tobacco products in B&H, such as restrictions on the amount of cigarettes that can be imported into the EU and restrictions on border traffic with Croatia. Finally, it was obvious that a certain part of cigarette consumption has been permanently lost due to the departure of a large number of B&H citizens in the last two years. This is indicated by the fact that the quantity of cigarettes, measured by the number of packs, on which excise duty was paid in 2021, was lower by 9.5% compared to the quantity of cigarettes in 2019.

# Excises on oil derivatives

In December, the growth rate of revenues from excises on oil derivatives has continued to slow down, slightly reducing the cumulative growth rate to 11.2% (Chart 18, left side). Such a high increase in excise collection, and consequently in the consumption of oil derivatives, is a surprise, given the rise in world oil prices, which generates rising oil prices and as an input in the production of many goods or services. One possible cause of the high consumption of derivatives, despite the rise in prices, is the increased consumption of non-residents due to mild epidemiological measures in B&H. Another reason is increased cross-border consumption in the area with Croatia due to

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higher retail prices of oil derivatives in Croatia (due to higher excise taxes and higher VAT rates) and liberal measures for catering and other activities in the entertainment industry in B&H compared to restrictions in Croatia at the time of pandemic.

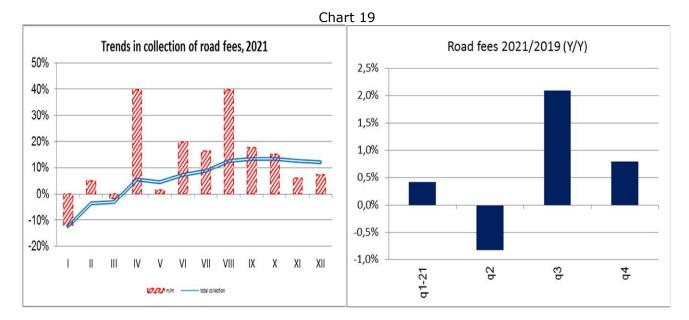


Although monthly trends in the collection of excise duties on oil derivatives show positive trends ongoing as of April 2021, quarterly comparisons of the collection of excise duties with collection in 2019 indicate growth only in the third quarter, with very modest rates, around 0.5% (Chart 18, right side).

# Road fee

Similarly to the collection of excises on oil derivatives, road fee revenues recorded slower growth rates in the last two months of 2021, so that the annual growth rate amounted 11.9% (Chart 19, left side). Quarterly comparisons with collection in 2019 show positive trends in the third and fourth quarters of 2021 (Chart 19, right side), with higher growth rates than in excises on oil derivatives. The gap can be explained by the differentiated treatment of certain types of derivative when it comes to excises and road fees, and exemptions from road fees in certain cases. However, despite positive growth in the second part of the year, the total road fee collection in 2021 exceeded the collection in 2019 by 0.8% (Chart 20).

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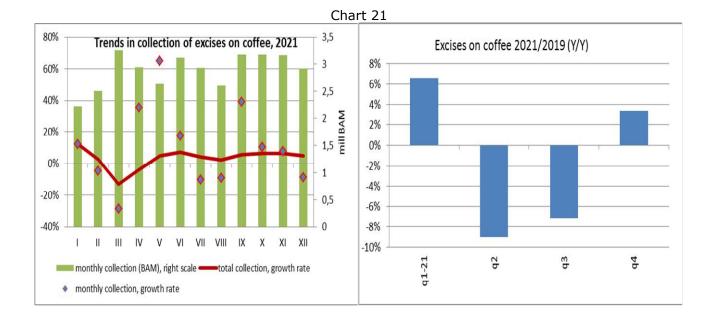
# Chart 20



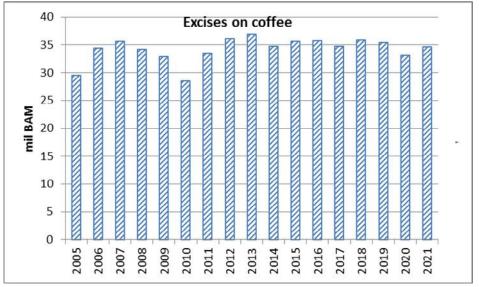
## Excises on coffee

The collection of excise duties on coffee in 2021 has been strongly oscillating, and monthly rates ranged from -30% to + 65% (Chart 21, left). Given that these revenues are collected only on imports, and that the collection reflects the anticipated consumption of coffee, the reasons for fluctuations in collection, in addition to the statistical base from 2020, may also be problems on the supply side of the world market, and consequent price increases. Interestingly, the lowest revenues were collected in the summer season, beyond expectations, while in the last four months the nominal collection was stable. A comparison with 2019 shows that positive growth was achieved in the first and fourth quarters (Chart 21, right side), while the total collection of excises on coffee was lower by 2.1% compared to 2019 and was at the level of collection in 2006 (Chart 22).

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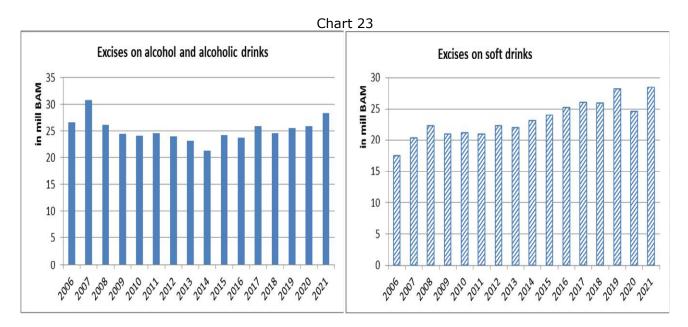




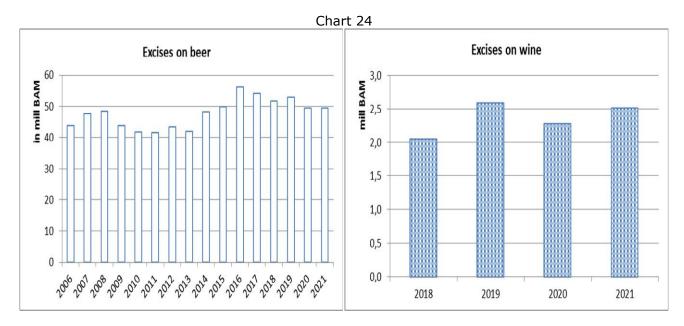
#### Excise duties on beer, wine, alcohol, alcoholic and non-alcoholic beverages

Collection of excises on alcohol and alcoholic beverages in 2021 was 9.5% higher than in 2020, but also 11.2% higher than in 2019 (Chart 23). At the same time, excises on this group of drinks have a maximum collection as of 2006.

On the other hand, the collection of excises on non-alcoholic beverages has continued its growing trend. In 2021, the collection was 15.9% higher than in 2020, but still only 1% higher than in 2019.

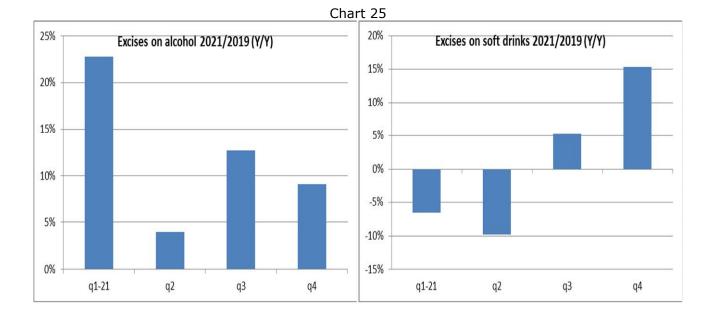


The worst situation is with excises on beer, where a downward trend is noticeable. Collection of excises on beer in 2021 was at the level of collection in 2020, and 6.5% below collection in 2019 (Chart 24). In fact, the nominal collection of excises on beer is at the level of collection in 2014, which is the year when excise rates were increased, i.e. when a differentiated excise tax was introduced depending on the annual beer production.

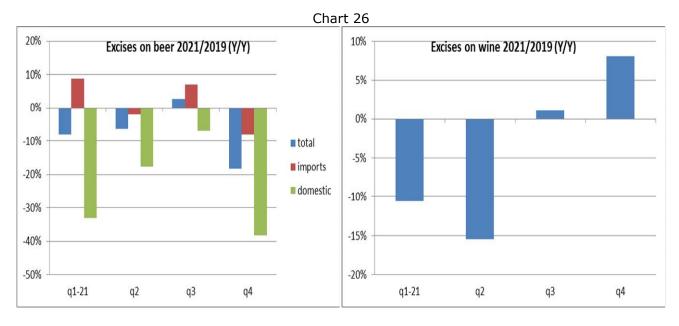


Quarterly comparisons of collection with 2019 indicate the trends that can be expected in 2022. A slowdown in growth rates in the collection of excises on alcohol is noticeable, and the high growth rate in 2021 *de facto* resulted from the high collection in the first quarter (Chart 25).

Excises on non-alcoholic beverages (Chart 25) and excises on wine (Chart 26) increased in the last two quarters with high rates.



However, negative trends characterize the collection of excises on beer. The high drop in collection



in the fourth quarter of 2021 does not promise a recovery in 2022, especially when it comes to domestic beer (Chart 26).

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# The impact of the coronavirus pandemic on the dynamics of collection of revenues from indirect taxes in 2020 and 2021

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

# Introduction

The crisis caused by the coronavirus has brought huge turbulences to indirect tax revenues and completely ruined the seasonal revenue collection pattern that existed before 2020 (the so-called pre-COVID-19 seasonal pattern). The analysis presented in Bulletin no. 174-175 in January 2020 showed that monthly oscillations of indirect taxes depend a lot on seasonal factors, but that the collection depends on other factors as well. The monthly dynamics of indirect taxes sometimes deviate significantly from their seasonal pattern, and this can be caused by numerous factors, such as: economic flows, administrative factors, business policies of large companies, other calendar factors (except seasonal) and changes in regulations. The crisis caused by the coronavirus in early 2020 is one such factor, and the following analyzes the extent to which it has shaken the pre-COVID-19 seasonal indirect tax collection pattern, and whether collection in 2021 has returned to the old pattern or indicates the emergence of some new scheme.

Monthly dynamics of indirect tax revenue collection is of great importance for the dynamics of budget revenue inflows of the government levels in B&H, since the dynamics of distribution of revenues from the ITA Single Account depends on it, especially given the high share of indirect taxes in financing budget users.

#### 1. Seasonal component of indirect tax revenues in the period 2010-2019

Bulletin No. 174-175 analyzes the importance of the seasonal component for total fluctuations in indirect tax revenues. In the absence of complex methods of official correction procedures, we will present a simple procedure for extraction the seasonal component by using the methods of seasonal indices. The method is based on the calculation of the seasonal indices using the corrected median of the ratios of the original data and centered moving averages.<sup>4</sup> Although more complex than this procedure, the official correction procedures are generally based on the moving averages. The period 2010 – 2017 was observed in the analysis, in order to avoid the significant effects of changes in tax rates that did not coincide with the beginning of the fiscal year (2008/customs; 2009/road tax; 2018/road tax). After calculating seasonal indices, regression models were estimated and the coefficients of determination<sup>5</sup> of seasonal indices and actual shares of monthly amounts of individual types of revenue in the corresponding period were calculated, in order to show how well the seasonal indices "fit" into the real shares in the observed period. Relationship is considered to be negligible for the value of the coefficient of determination of 0-25%. Values between 25% and 50% are considered to have a relationship to be reckoned with. For the values between 50% and 75%, the strength of the relationship is considered to be significant, while for the values above this interval the relationship is considered to be very high, obtaining the form of the functional relationship at 100%.<sup>6</sup>

Revenues for which, according to the classification, the strength of the relationship between seasonal indices and the actual share of monthly collection (expressed by the coefficient of determination) was high in the period 2010-2017 are the following: excises on non-alcoholic drinks (85.2%), road fees (85.0%), revenues from VAT on imports (84.8%), revenues from

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<sup>&</sup>lt;sup>4</sup>Newbold, P. et al. "Statistika za poslovanje i ekonomiju", Mate, Zagreb (2010), p. 732; Original name: "Statistics for Business and Economics"

<sup>&</sup>lt;sup>5</sup>The coefficient of determination R<sup>2</sup> shows the percentage of variance in the dependent variable that can be explained by the independent variable.

<sup>&</sup>lt;sup>6</sup>Blažić M. and Dragović V., "Opšta statistika" (General statistics), Belgrade 1991.

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domestic VAT (84.3%), customs (78.6%) and excises on alcohol (77.0%). Revenues with the significant relationship between seasonal indices and real shares of monthly collection were: excise duties on beer (62.1%), excise duties on oil derivatives (60.7%). On the other hand, revenues from excises on tobacco and excises on coffee do not show a seasonal pattern at all, as indicated by the low coefficients of determination of their real monthly shares and seasonal indices.

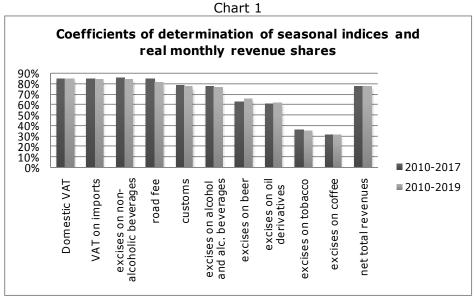
# Text box 1.

# **Components of time series data**

Time series of data can be broken down into the following components: trend-cycle component  $(T_t)$ , seasonal component  $(S_t)$ , calendar component  $(C_t)$  and irregular component  $(I_t)$ . Trendcyclical component is the basic component of a time series, which shows whether the economy is in expansion or recession, and to what extent. The seasonal component refers to recurrent fluctuations within a year, which have more or less the same intensity and the period of fluctuation. Seasonal component applies not only to the effects of usual weather conditions and changes in season. It includes the effects of other recurring factors on the time series such as the administrative organization, the tradition, but also of the calendar factors which are stable over a longer period of time. The calendar component contains the following effects: a different number of working days in the month / quarter, the effects of moving holidays and the effects of a leap year. Irregular component consists of all the effects that are not contained in the other components. It is caused by many factors that are not predictable and are random variations in data series. It also includes the effects of legislative changes.

Source: IMF. Update of the Quarterly National Accounts Manual, Chapter 7. Seasonal Adjustment, http://www.imf.org/external/pubs/ft/qna/pdf/chapter7.pdf, DRAFT VERSION (Draft posted for comments in October 2014, Closing date for comments 15 December 2014)

Chart 1 shows the results of the analysis with an identical calculation procedure for the period extended by two years, i.e. for the period from 2010 to 2019.



Source: Author's calculation based on the ITA data

It can be concluded from Chart 1 that the results of the strength of the relationship between seasonal indices and the actual shares of monthly collection are quite equal when the observation period 2010-2017 is extended by two years. The coefficient of determination decreased the most

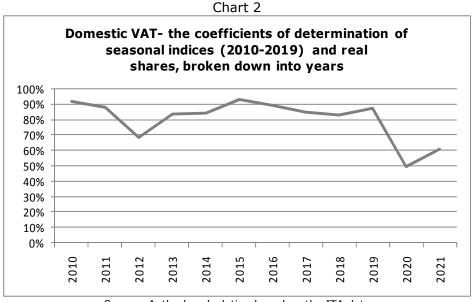
in the case of road fee revenues (-3.7 percentage points), which is logical, given a change in the level of taxation in February 2018. In the case of total net revenues, it increased from 77.3% to 77.5%, and is again at the lower limit of the "high relationship" category.

#### 2. The strength of the seasonal revenue component in 2020 and 2021

The following shows how much the collection of revenues from indirect taxes in 2020 "fell out" of the seasonal pattern, and the extent to which the collection in 2021 returned to the old pattern typical for the period 2010-2019. Coefficients of determination of seasonal indices (2010-2019) and actual revenue shares by years for five revenue types with the most pronounced seasonal component were analyzed. These are: domestic VAT, VAT on imports, excises on non-alcoholic drinks, road fees and customs duties.

#### Revenues with a pronounced seasonal component in the pre-COVID-19 period 2.1.

In the period 2010-2019, domestic VAT had the most pronounced seasonal component (the coefficient of determination of seasonal indices and real shares for the period 2010-2019 is 84.4%). In 2020, this coefficient was only 49.4% (Chart 2), indicating a significant deviation of the collection from the pre-COVID-19 seasonal pattern. After strong growth in domestic VAT revenues in the first quarter of 2020, high decline rates were recorded in April and May, as a result of the introduction of restrictive measures in the economy and restrictions on population movements. In the continuation of the year, strong oscillations of these revenues were recorded, and the range of growth rates at the level of the year ranged from as much as -19.6% to + 20.9%. In 2021, the coefficient of determination of seasonal indices and real shares increased to 60.5%, which is still below the relationship that can be characterized as "high". From all the above, it can be concluded that the collection of domestic VAT in 2020 fell out of the pre-COVID-19 seasonal pattern, and returned to the "significant" but not "high" share of the seasonal component in 2021. Chart 2 also shows a deviation from the seasonal pattern in 2012 (coefficient of determination is 68.1%), although to a much lesser extent than in 2021. The reason was natural disasters (snowfall) in February 2012, which led to a large drop in domestic VAT revenues in April.



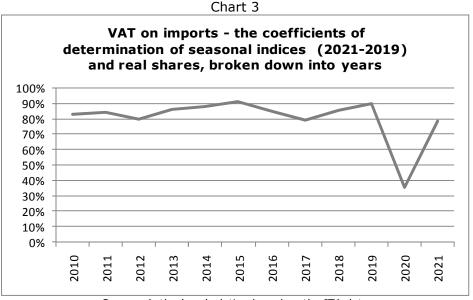
Source: Author's calculation based on the ITA data

**VAT on imports** also had a pronounced seasonal component in the period 2010-2019 (the coefficient of determination of seasonal indices and real shares for the period 2010-2019 is Bania Luka: Bana Lazarevića, 78 000 Bania Luka, Tel/fax: +387 51 335 350, E-mail: oma@uino.gov.ba

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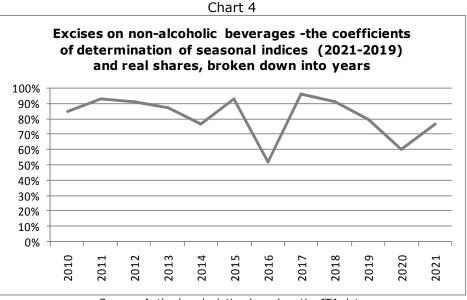
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83.8%). In 2020, strong variations in monthly growth rates of VAT on imports were recorded, ranging from -36.1% to + 2.1%. The coefficient of determination of seasonal indices and real monthly shares fell drastically to 35.6% in 2020, and rose to 78.9% in 2021 (Chart 3), re-entering the range of the relationship called "high". From the above, it can be concluded that the collection of VAT on imports in 2020 "fell out" of the seasonal pattern, and returned to a high share of the seasonal component in 2021, but slightly below the pre-COVID-19 level. It should be noted that the years with a slightly weaker seasonal component in the observed period are the following: 2012 (severe decline in imports in February due to heavy snowfall) and 2017 (decline in imports and revenues in December, which occurred after high growth rates). However, based on the level of calculated coefficient of determination (79.6% in both years), it can be concluded that the importance of the seasonal component was high in those two years as well.



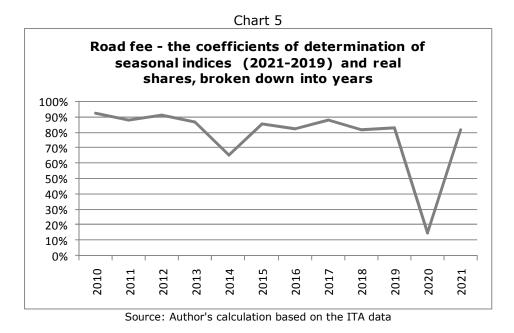
Source: Author's calculation based on the ITA data

**Excise duties on non-alcoholic beverages** also had a pronounced seasonal component in the period 2010-2019 (the coefficient of determination of seasonal indices and real shares for the period 2010-2019 is 83.3%). In 2020, the growth rates of these revenues varied in a huge range from -38.1% to + 17.9%. The coefficient of determination of seasonal indices and real monthly shares in 2020 dropped to 59.9%, while in 2021 it rose to 76.5%. From the above, it can be concluded that the collection of excise duties on non-alcoholic beverages in 2020 deviated from the seasonal pattern, with a return to a high share of the seasonal component in 2021, but below the level of importance in the period before the crisis caused by the coronavirus. Chart 4 shows that, in addition to 2020, 2016 also deviated even more from the seasonal pattern, which resulted from the collection of old debts in the fourth quarter of 2016.



Source: Author's calculation based on the ITA data

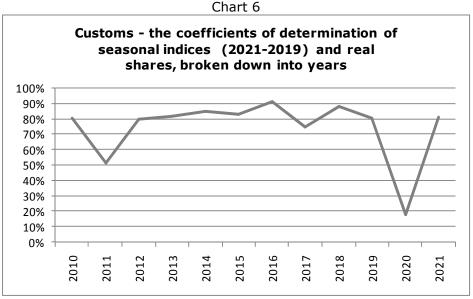
**Road fee revenues** had a pronounced seasonal component in the period 2010-2019 (the coefficient of determination of seasonal indices and real shares for the period 2010-2019 is 81.4%). In 2020, road fee revenue growth rates ranged from -33.4% to + 6.1%, and the coefficient of determination of seasonal indices and real monthly shares fell to only 15.0%. The coefficient increased to 81.4% in 2021. From the above, it can be concluded that road fee collection in 2020 completely deviated from the seasonal pattern, and returned to a high share of the seasonal component in 2021, exactly at the average level of importance as in the period before the crisis caused by the coronavirus. It can be concluded from Chart 5 that, in addition to 2020, the year 2014 also deviated somewhat from the seasonal pattern, which was the result of natural disasters in that year (floods), and the overhaul of Oil Refinery Brod.



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In the period 2010-2019, **customs revenues** had a seasonal component that is close to the lower limit of the "high relationship" category (the coefficient of determination of seasonal indices and real shares for the period 2010-2019 is 77.3%). In 2020, this ratio fell to only 18.2%, as a result of strong variations in monthly growth rates of customs revenues ranging from -43.3% to + 9.0%. In 2021, the coefficient of determination of seasonal indices and real monthly shares increased to 81.1%. From the above, it can be concluded that customs collection in 2020 completely deviated from the seasonal pattern, with a return to a high share of the seasonal component in 2021, even above the average level of importance in the period before the crisis caused by the coronavirus. It can be concluded from Chart 6 that, in addition to 2020, 2011 also deviated from the seasonal pattern. It was result of the abolition of 1% customs records for imports from CEFTA countries and third countries in the fourth quarter of 2011.



Source: Author's calculation based on the ITA data

# 2.2. Total net revenues from indirect taxes

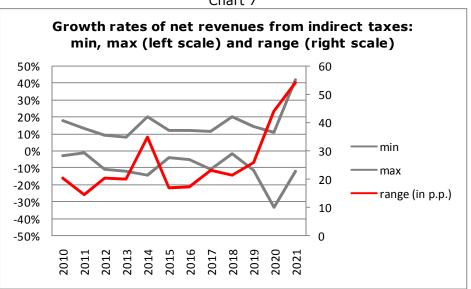
Restrictive measures in the fight against coronavirus were introduced at the end of March 2020 and completely undermined the seasonal pattern of collected revenues from indirect taxes. In April and May 2020, the highest monthly rates of decline in revenues from indirect taxes since the establishment of the ITA were recorded. In the rest of the year, negative rates of monthly net revenue growth were also recorded, with the largest declines in August and September.<sup>7</sup>The range of monthly net revenue growth rates (difference between maximum and minimum value) amounted 44.2 percentage points, which is the highest range of monthly growth rates in the period 2010-2020 (Chart 7).<sup>8</sup>

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<sup>&</sup>lt;sup>7</sup>More on collection in 2020 in Antić D. "Analysis of collection of revenues from indirect taxes, 2020", OMA Bulletin no. 187-188, February 2021.

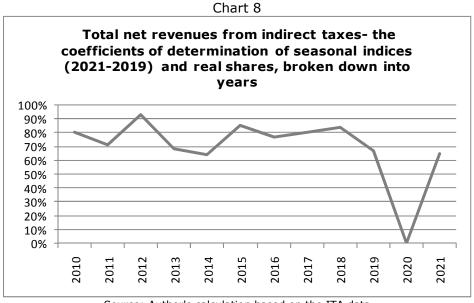
<sup>&</sup>lt;sup>8</sup>Total net revenues in the analysis **do not include unadjusted revenues** at the ITA Single Account. Banja Luka: Bana Lazarevića, 78 000 Banja Luka, Tel/fax: +387 51 335 350, E-mail: oma@uino.gov.ba

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Source: Author's calculation based on the ITA data

The seasonal pattern was undermined for all revenues with a pronounced seasonal component (Charts 2-6), and for total net revenues for which the seasonal component is not so significant (Chart 8).



Source: Author's calculation based on the ITA data

The range of monthly growth rates of net indirect tax revenues (Chart 7) was even higher in 2021 than in 2020 (54.1 percentage points), which was the result of:

- Disorders of the seasonal pattern in the base year 2020,
- 2. Characteristics of the seasonal pattern in 2021.

The disruption of the seasonal pattern in 2020 is a significant reason for the high range of monthly net revenue growth rates in 2021. The coefficient of determination of seasonal indices and real shares of monthly amounts of total net revenues from indirect taxes fell to 0.6%! Even if

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Chart 7

revenues in 2021 completely had returned to the old seasonal pattern, the range of monthly growth rates would be high again, due to the complete deviation of the collection in the base year 2020 from the pre-COVID-19 seasonal pattern. In addition, the seasonal pattern in 2021 is far from the pre-COVID-19 seasonal pattern, which is another reason for the high range of monthly growth rates. Although it has increased significantly compared to 2020, the coefficient of determination of seasonal indices and real shares of monthly amounts of total net revenues from indirect taxes in 2021 amounted only 65.3%, which is below the "high" strength of the relationship.

The following facts show the contribution to the range of monthly net revenue growth rates in 2021 (54.1 percentage points):

- In the event that revenues in 2021 had fully corresponded to the old seasonal collection pattern (according to the calculated indices for the period 2010-2019), with the actual monthly collection in 2020, the range of monthly growth rates would amount 53.0 percentage points;
- In the event that revenues in 2020 had fully matched the mentioned seasonal pattern, with the actual monthly collection in 2021, the range of monthly growth rates would amount 30.6 percentage points.

# 3. Conclusion

Monthly oscillations of indirect taxes in a significant number of types of revenues from indirect taxes depend on seasonal factors (domestic VAT, VAT on imports, excises on non-alcoholic beverages, road fees and customs duties). On the other hand, revenues from excises on tobacco and excises on coffee do not show a seasonal pattern at all, as indicated by low coefficients of determination of their real monthly shares and seasonal indices (Chart 1). The annual collection of excises on tobacco depends on the level of consumption and the level of tax rates, while the monthly dynamics of the collection of excise duties on tobacco is conditioned by the policy of tobacco companies.

Total net revenues from indirect taxes in the period 2010-2019 had a seasonal component that is close to lower limit of the "high relationship" category (coefficient of determination of seasonal indices and real shares for the period 2010-2019 is 77.5%). Although it could be concluded that there is a high share of the seasonal component in the series of monthly data on indirect tax revenues, relying only on these indices when making monthly revenue projections could lead to significant errors of estimated monthly amounts, even if the annual projection would prove to be completely correct. The level of the irregular component (that can hardly be predicted) is very high, so the indirect tax revenue planning is only possible on an annual basis, in accordance with the basis of projections of macroeconomic indicators (DEP).

We have seen that, even with revenues that have a pronounced seasonal component, the monthly dynamics of indirect taxes sometimes deviate significantly from their usual pattern. In the analyzed pre-COVID-19 period 2010-2019, the following factors had the greatest impact on the deviation from the seasonal pattern for the revenues that have a pronounced seasonal component:

- administrative factors, and among them the greatest influence are those related to the dynamics of refund payments, and the policies of large companies (oil industry),
- extreme climatic conditions, i.e. weather disasters (huge snowfalls in 2012, floods in 2014),
- changes in regulations which did not enter into force at the very beginning of the year (customs records in 2011, road fee in 2018),
- suspension of production in the Oil Refinery Brod after the disaster in October 2018,
- collection of old debts.

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Economic flows are mostly manifested in long-term trends, but can sometimes affect the deviation of monthly revenue from their seasonal pattern. This was most evident in 2020 and 2021, when the emergence of the coronavirus strongly disrupted economic flows and revenue collection. The monthly revenue dynamics in 2020 completely deviated from the pre-COVID-19 seasonal pattern. Although it has partly returned to the old pattern, the collection of net revenues from indirect taxes in 2021 was quite different from the old seasonal pattern. The coefficient of determination of seasonal indices and real shares of monthly net revenues from indirect taxes is only 65.3%, which is below the "high" strength of the relationship. Compared to the seasonal pattern from the pre-COVID-19 period (2010-2019), the coefficient of determination of seasonal indices and real shares of monthly amounts of total net revenues from indirect taxes fell by 11.2 percentage points. Monthly shares are far from the pre-COVID-19 pattern, even with the revenues that had a significant share of the seasonal component before the emergence of the coronavirus. The coefficient of determination of seasonal indices (period 2010-2019) and real shares of monthly amounts of revenues fell by as much as 23.8 percentage points in the case of domestic VAT and 4.9 percentage points in the case of VAT on imports, which together make up the most important source of revenue from indirect taxes.

In the coming period, it remains to be seen whether the collection of revenues from indirect taxes will return to its pre-COVID-19 seasonal pattern, or a new pattern will emerge. It will certainly be the subject of some future analysis.

# Analysis of the allocation of revenues from indirect taxes for the 2021 – movement and structure

(Author: Mirjana Popović, Expert Advisor - Macroeconomist)

The analysis of the allocation of revenues from indirect taxes for 2021 is a continuation of the analyses published in previous issues of the Department's bulletin.<sup>9</sup>. The analysis presents trends in the allocation of revenues from indirect taxes in Bosnia and Herzegovina (hereinafter: B&H) for the period 2006-2021. The period of sixteen years is characterized by a constant growth of revenues from indirect taxes on an annual basis, except in the years affected by the occurrence of two shocks. The first shock occurred in 2009 as a result of the global economic and financial crisis, while the second shock in 2020 was due to the outbreak of the Covid-19 virus pandemic.

The focus of the analysis is the impact of the second shock on indirect taxes, because the appearance of the coronavirus pandemic significantly affected the B&H economy with the most significant consequences in recent history, leading the country into economic recession.

Due to the introduction of pandemic barriers in 2020, it is important to emphasize that the comparability of data from 2021 with data from 2020 does not provide a realistic picture of the movement of the allocation of revenues from indirect taxes. For this reason, the analysis shows the movement of the allocation of revenues from indirect taxes in 2021, compared to the movement of the allocation of revenues from indirect taxes from previous years, i.e. from the years before the second shock. In accordance with the above, the analysis shows the comparability of data from 2021 with following data:

• 2020 (previous year marked by the outbreak of the pandemic)

<sup>&</sup>lt;sup>9</sup> More about the system of allocation of indirect taxes in B&H in: Popović, M. (2019). "Analysis of the allocation of revenues from indirect taxes for the period 2006-2018 - trends and structure". OMA Bulletin no. 168/169.

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- 2019 (the year that is most relevant for comparison because it is the year before the pandemic, and a record year in the collection and allocation of indirect taxes before the second shock)
- 2006 (starting year, and the year before the first and second shock)

Given that in B&H the system of vertical and horizontal allocation of revenues from indirect taxes is complex, the focus of the analysis is the system of allocation by vertical structure, in accordance with the prescribed methodology and procedure for allocation of revenues from indirect taxes.

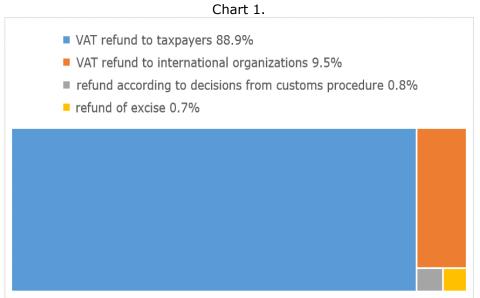
**1.** Trends in the *allocation* of revenues from indirect taxes in the period 2006-2021

# 1.1. Allocation of revenues from indirect taxes

# **1.1.1.** Allocation of gross revenues to users

Gross revenues from indirect taxes represent the total revenues collected in the single account<sup>10</sup> intended for allocation to refunds, minimum reserves, and the amount of funds intended for allocation to B&H Institutions, entities and Brcko District (including external debt). Refunds have priority when allocating total gross revenues from indirect taxes to a single account.

Chart 1 shows the share in the structure of refunds in 2021. The most significant allocation in 2021 of 88.9% relates to VAT refunds to taxpayers who are entitled to a refund according to their VAT returns.



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

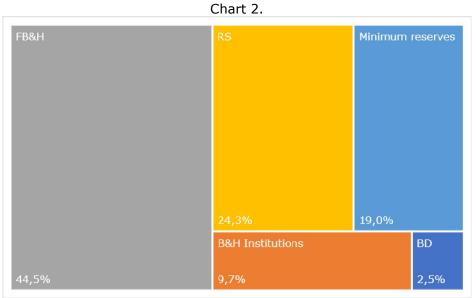
After the refunds are made, the remaining amount of total collected revenues is reduced by the amount of the minimum reserve. Charts 2 and 3 show the percentage of issuance for minimum reserves and the participation of users in the allocation of revenues from indirect taxes in 2021.

<sup>&</sup>lt;sup>10</sup> (VAT, customs, excise, toll 0.15 BAM)

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Chart 2 shows the share in the allocation of entities and Brcko District includes the amount for financing external debt, which is deducted from the amount allocated to the entities and Brcko District. Chart 3, in addition to the percentage set aside for minimum reserves and user participation in allocation, shows the percentage of allocation that was allocated in 2021 for the repayment of the external debt of each of the users in the allocation.



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

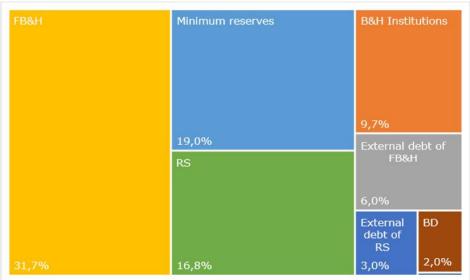


Chart 3.

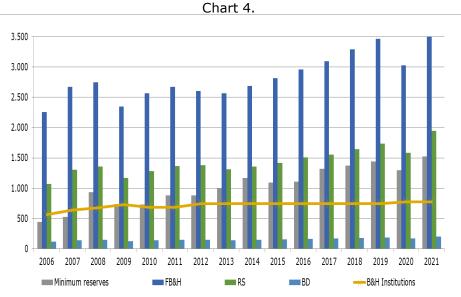
Note: 💻 External debt of BD 0.1%

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

19.0% of total revenues were allocated for minimum reserves in 2021, while to the budget of B&H Institutions was allocated a corresponding fixed amount, which includes 9.7% of the total share in revenues from indirect taxes. The remaining amount after deducting the amount for minimum reserves and the amount belonging to the budget of B&H Institutions is the amount to be allocated to the entities and Brcko District.

The allocation to the entities is done according to pre-determined allocation coefficients on a quarterly basis<sup>11</sup>, while the allocation coefficient for the Brcko District is fixed <sup>12</sup>. From the amount that belongs to the entities and Brcko District in the allocation, priority is given to funds for the repayment of external debt.

Chart 4 shows the movement of allocation of revenues from indirect taxes for the period 2006-2021, in millions of BAM  $^{13}$ .



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

Compared to the initial period, i.e. compared to the 2006, the highest growth in 2021 was the amount allocated for minimum reserves by 243.6%. In the same period, the amount allocated to the Republic of Srpska increased by 82.2%, Brcko District by 66.3%, the Federation of B&H by 58.8%, and the amount allocated for financing B&H Institutions increased by 37.8%. It is important to emphasize that the amount intended for financing B&H Institutions has been fixed since 2012. In the period 2012-2019, the amount of funds for allocation to the B&H Institutions was 750 million BAM at the annual level, while in the period 2020-2021 this amount is 780 million BAM per year.

Comparing the data from 2021 with the data from 2020, 22.8% more revenue from indirect taxes was allocated to the Republic of Srpska, 19.7% more to Brcko District, 18.2% more to the Federation of B&H, while 17.5% more was allocated to the minimum reserves. The amount intended for financing B&H Institutions is the same on an annual basis in the last two years.

Compared to the data before the shock caused by the pandemic, i.e. compared to 2019, in 2021 to the Republic of Srpska was allocated 12.4% more revenues from indirect taxes, Brcko District 6.4% more, the Federation of B&H 3.3% more, while the amount allocated to minimum reserves increased by 5.7%. Considering that the amount of allocation of revenues from indirect taxes

<sup>13</sup> The amount of gross revenues excludes the collection of a dedicated toll.

<sup>&</sup>lt;sup>11</sup> The ratio of the amount of final consumption stated in the VAT refunds of taxpayers in the territory of a given entity, or a given user of income, and the amount of final consumption stated in VAT refunds in the entire territory of B&H.

<sup>&</sup>lt;sup>12</sup> The representative of Brcko District has the status of an observer in the ITA Governing Board, and does not vote to participate in deciding on the allocation of revenues from indirect taxes from the single account. The High Representative, protecting fiscal autonomy established by the Final Arbitration Award, on June 01, 2007 imposed a fixed coefficient for Brcko District 3.55% or at least 124 million BAM per year in absolute terms.

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intended for financing B&H Institutions in 2019 amounted to 750 million BAM per year fixed, and in 2021 780 million BAM per year fixed, in 2021 the amount allocated to B&H Institutions is higher by 4.0 % compared to 2019.

Table 1 shows the share in the allocation of revenues from indirect taxes for the period 2006-2021, as well as the difference in percentage points. Compared to other participants in the allocation, the data indicate changes in the structure of the allocation.

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Index (2021 - 2006)	Index (2021 - 2020)	Index (2021 - 2019)
10,0	10,0	15,9	14,5	13,5	15,3	15,4	17,3	19,1	17,6	17,1	19,2	19,0	19,0	18,9	19,0	9,0	0,1	-0,1
12,7	12,1	11,5	14,3	12,7	12,0	13,0	13,0	12,3	12,0	11,6	10,9	10,4	9,9	11,4	9,7	-3,0	-1,7	-0,2
50,6	50,5	46,8	45,9	47,5	46,4	45,2	44,5	43,9	45,2	45,6	44,9	45,4	45,7	44,1	44,5	-6,1	0,4	-1,1
24,0	24,7	23,2	22,8	23,7	23,7	23,9	22,7	22,2	22,7	23,3	22,6	22,8	22,9	23,1	24,3	0,2	1,1	1,4
2,7	2,7	2,6	2,5	2,6	2,6	2,5	2,5	2,4	2,5	2,5	2,5	2,5	2,5	2,5	2,5	-0,2	0,1	0,0
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100			
	10,0 12,7 50,6 24,0 2,7	10,0     10,0       12,7     12,1       50,6     50,5       24,0     24,7       2,7     2,7	10,0     10,0     15,9       12,7     12,1     11,5       50,6     50,5     46,8       24,0     24,7     23,2       2,7     2,7     2,6	10,0     10,0     15,9     14,5       12,7     12,1     11,5     14,3       50,6     50,5     46,8     45,9       24,0     24,7     23,2     22,8       2,7     2,7     2,6     2,5	10,0     10,0     15,9     14,5     13,5       12,7     12,1     11,5     14,3     12,7       50,6     50,5     46,8     45,9     47,5       24,0     24,7     23,2     22,8     23,7       2,7     2,7     2,6     2,5     2,6	10,0     10,0     15,9     14,5     13,5     15,3       12,7     12,1     11,5     14,3     12,7     12,0       50,6     50,5     46,8     45,9     47,5     46,4       24,0     24,7     23,2     22,8     23,7     23,7       2,7     2,7     2,6     2,6     2,6	10,0     10,0     15,9     14,5     13,5     15,3     15,4       12,7     12,1     11,5     14,3     12,7     12,0     13,0       50,6     50,5     46,8     45,9     47,5     46,4     45,2       24,0     24,7     23,2     22,8     23,7     23,7     23,9       2,7     2,7     2,6     2,5     2,6     2,6     2,5	Image: Normal System     Image: No	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2       2,7     2,7     2,6     2,5     2,6     2,6     2,5     2,6     2,6     2,5     2,4	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7       2,7     2,7     2,6     2,5     2,6     2,6     2,5     2,5     2,4     2,5	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3       2,7     2,7     2,6     2,5     2,6     2,6     2,5     2,5     2,4     2,5     2,5	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6       2,7     2,7     2,6     2,5     2,6     2,6     2,5	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,4       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8       2,7     2,7     2,6     2,5     2,6     2,5     2,5     2,4     2,5 </td <td>10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,4     45,7       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     22,9       2,7     2,7     2,6     2,5     2,6     2,6     2,5     2,5     2,4     2,5     2,</td> <td>10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,7     44,1       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     23,1       2,7     2,7     2,6     2,5     2,6     2,5     2,5     2,4     2,5</td> <td>10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9     19,0       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4     9,7       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,7     44,1     44,5       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     23,1     24,3       2,7     2,7     2,6     2,5     2,6     2,5     &lt;</td> <td>2006     2007     2008     2009     2010     2011     2012     2013     2014     2015     2016     2017     2018     2019     2020     2021     2021-       10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9     19,0     9,0       12,7     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4     9,7     -3,0       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,4     45,7     44,1     44,5     -6,1       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,3     23,3     22,6     24,8     24,9     23,1     24,3     0,2       24,7     2,7     2,6     2,6     2,6     <td< td=""><td>2006     2007     2008     2009     2010     2011     2012     2013     2014     2015     2016     2017     2018     2019     2020     <th< td=""></th<></td></td<></td>	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,4     45,7       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     22,9       2,7     2,7     2,6     2,5     2,6     2,6     2,5     2,5     2,4     2,5     2,	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,7     44,1       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     23,1       2,7     2,7     2,6     2,5     2,6     2,5     2,5     2,4     2,5	10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9     19,0       12,7     12,1     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4     9,7       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,7     44,1     44,5       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,2     22,7     23,3     22,6     22,8     23,1     24,3       2,7     2,7     2,6     2,5     2,6     2,5     <	2006     2007     2008     2009     2010     2011     2012     2013     2014     2015     2016     2017     2018     2019     2020     2021     2021-       10,0     10,0     15,9     14,5     13,5     15,3     15,4     17,3     19,1     17,6     17,1     19,2     19,0     19,0     18,9     19,0     9,0       12,7     11,5     14,3     12,7     12,0     13,0     13,0     12,3     12,0     11,6     10,9     10,4     9,9     11,4     9,7     -3,0       50,6     50,5     46,8     45,9     47,5     46,4     45,2     44,5     43,9     45,2     45,6     44,9     45,4     45,7     44,1     44,5     -6,1       24,0     24,7     23,2     22,8     23,7     23,7     23,9     22,7     22,3     23,3     22,6     24,8     24,9     23,1     24,3     0,2       24,7     2,7     2,6     2,6     2,6 <td< td=""><td>2006     2007     2008     2009     2010     2011     2012     2013     2014     2015     2016     2017     2018     2019     2020     <th< td=""></th<></td></td<>	2006     2007     2008     2009     2010     2011     2012     2013     2014     2015     2016     2017     2018     2019     2020 <th< td=""></th<>

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

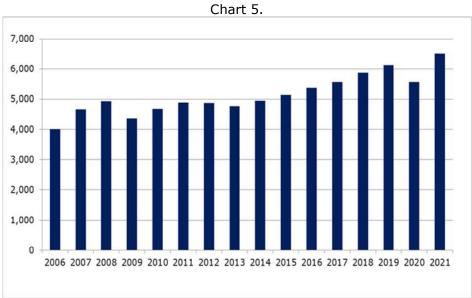
Based on the participation of users in the allocation of revenues from indirect taxes in 2021, compared to the initial period, i.e. 2006, there is a decrease in participation in the Federation of B&H (-6.1 percentage points), Brcko District (-0.2 percentage points), as well as participation in the allocation for financing B&H Institutions (-3.0 percentage points). Participation in the allocation of the Republic of Srpska is higher (0.2 percentage points), as well as participation in favor of minimum reserves (9.0 percentage points).

The participation of users in the allocation in 2021 compared to the previous year, i.e. 2020, provides information on the reduction of the participation of B&H Institutions (-1.7 percentage points) in favor of increasing the participation of other users in the allocation. The participation in allocation for minimum reserves is higher (0.1 percentage points), the participation of the Federation of B&H (0.4 percentage points), the participation of the Republic of Srpska (1.1 percentage points), as well as the participation of the Brcko District (0.1 percentage points).

The table also shows the difference in the allocation by users in 2021 compared to 2019, i.e. compared to the year before the second shock. The participation of the Republic of Srpska is higher (1.4 percentage points), while it is lower for the Federation of B&H (-1.1 percentage points), B&H Institutions (-0.2 percentage points), as well as the participation in the allocation intended for minimum reserves (-0.1 percentage points).

# **1.1.2.** Allocation of net revenues to users

Net revenues from indirect taxes are revenues intended for allocation to users after refunds, and after the allocated part of funds intended for minimum reserves. Chart 5 shows the total allocated net revenues from indirect taxes for the period 2006-2021, in millions of BAM. As stated in the analysis of the allocation of gross revenues from indirect taxes, these two shocks that had a significant impact on the economic activity of B&H in the observed period, also affected the allocation of net revenues. In 2009 and 2020, there was a sharp decline in the allocation of total net revenues from indirect taxes allocated to users in 2021 is the highest in the observed period. In 2021, the amount of total net revenues from indirect taxes allocated to users in 2021 is the highest in the observed period. In 2021, the amount of total net revenues from indirect taxes intended for allocation to users is 62.3% higher than in the beginning year 2006, 17.0% higher than in the previous year 2020, and is 6.1% higher than in the record year 2019.



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

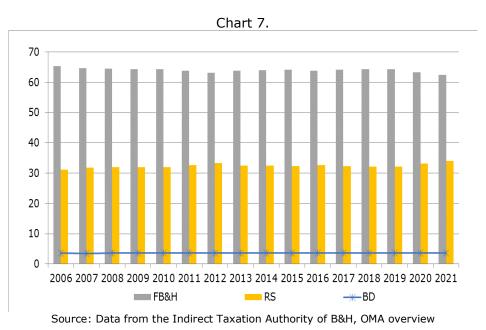
Chart 6 shows the participation in the allocation of net revenues from indirect taxes to users (B&H Institutions, Federation of B&H, the Republic of Srpska and Brcko District) in the period 2006-2021. The chart shows the fluctuating trend with the largest share of the Federation of B&H in the allocation, after which a significant percentage of participation is allocated to the Republic of Srpska, B&H Institutions and Brcko District.



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

Chart 7 shows the allocation of net revenues from indirect taxes to the entities and Brcko District in the period 2006-2021, in percent, after the allocation of the corresponding part of the B&H Institutions. Observing the dynamics of the movement, the data show the fluctuation trend of the allocation to the entities, based on the allocation coefficients based on the final consumption of the entities. The data also show a fixed allocation coefficient for Brcko District. In the observed period, the Federation of B&H achieved the highest allocation coefficient in 2006, and the lowest in 2021

in favor of the Republic of Srpska. Observing the allocation of net revenues from indirect taxes in 2021 compared to the beginning year 2006, the coefficient of allocation to the Federation of B&H is lower by 3.0 percentage points in favor of the Republic of Srpska. In 2021, the coefficient of allocation to the Federation of B&H is lower by 0.8 percentage points in favor of the Republic of Srpska in relation to the previous 2020 year, while in relation to 2019 the coefficient of allocation to the Federation of B&H is lower by 1.8 percentage points in favor of the Republic of Srpska.



# 2. External debt

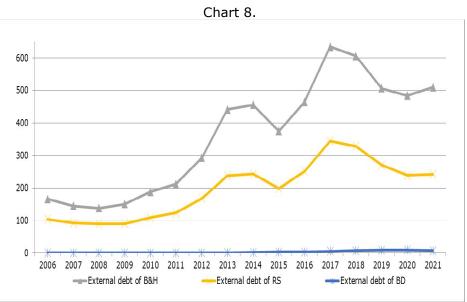
When allocating revenues from indirect taxes, after the return to users and the allocation of part of the funds for minimum reserves and financing of B&H Institutions, the priority in the allocation is external debt. According to the maturity dynamics, it is deducted from the funds intended for allocation to the entities and Brcko District. Although the external debt is an obligation of the entities and Brcko District, according to foreign creditors it is kept as an obligation of B&H, and the amount for financing the external debt is retained, i.e. not allocated to the entities and Brcko District<sup>14</sup>.

Chart 8 shows the movement of the allocation of revenues from indirect taxes intended for financing external debt in the period 2006-2021, in millions of BAM.

<sup>&</sup>lt;sup>14</sup> Repayment plan and payment dynamics are determined by the schedule of the Ministry of Finance and Treasury of B&H, while the payment procedure is performed by the Central Bank as a fiscal agent.

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

In the observed period, the amount of revenues from indirect taxes allocated for the repayment of the external debt of Brcko District has increased slightly in the past few years, while the amount allocated for the repayment of the external debt of the entity is variable. Changes in the allocation of revenues from indirect taxes intended for repayment of the entity's external debt are in line with previously assumed international obligations and the dynamics of external debt repayment. The most significant repayment of the entity's external debt was recorded in 2017 (Chart 8). During that period, the most significant part of the debt to international creditors was repaid, after which the amount of allocation of revenues from indirect taxes intended for the repayment of external debt decreased.

Table 2 shows the participation of the entities and Brcko District in the total allocations for external debt repayment. The share in the allocation for financing the external debt with revenues from indirect taxes belonging to the Federation of B&H has been growing in the last three years, while, on the other hand, the share in allocating for repaying the external debt of the Republic of Srpska has decreased in the same period.

Table 2.																
in %	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
External debt of B&H	61,6	61,1	60,7	62,6	63,4	63,1	63,4	64,9	65,2	65,0	64,7	64,5	64,3	64,5	66,2	67,2
External debt of RS	38,4	38,9	39,3	37,4	36,6	36,8	36,5	34,9	34,6	34,5	34,9	35,0	34,9	34,4	32,6	31,9
External debt of BD	0,0	0,0	0,1	0,1	0,0	0,0	0,0	0,1	0,2	0,5	0,4	0,5	0,8	1,1	1,2	0,9
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

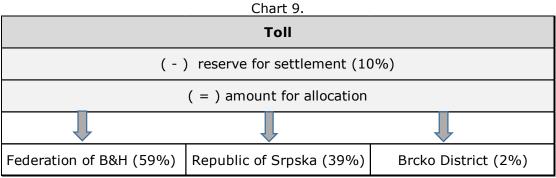
Source: Data from the Indirect Taxation Authority of B&H, OMA overview

# Bulletin No 201/202, March/April 2022, Year XVIII

# Macroeconomic Analysis Unit

# 3. Revenues from tolls for highways

After the beginning of the application of the Law on Excise Duties in B&H<sup>15</sup>, the Governing Board of the Indirect Taxation Authority of B&H made the Decision on the temporary allocation of revenues from tolls for highways<sup>16</sup> (hereinafter: the Decision). According to the Decision, revenues are collected on a special sub-account within the single account opened in the Central Bank of B&H, and their allocation is done in accordance with the Law on Payments to the Single Account and Allocation of Revenues<sup>17</sup>. Of the total revenues collected, 10% remains in the sub-account within the single account and serves to settle revenues after determining the final allocation methodology, while the remaining 90% is divided between the entities and Brcko District according to the established percentages<sup>18</sup>. Chart 9 shows the system of allocation of toll revenues for highways.



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

The decision was applied until the beginning of the application of the Law on Amendments to the Law on Excise Duties in B&H<sup>19</sup>, more precisely until January 31, 2018. With the amendments to the Law, the amount of toll per liter of derivatives sold on the B&H market was increased from 0.10 BAM to 0.25 BAM. After the beginning of the application of the Law on Amendments to the Law on Excise Duties in B&H, a new Decision was made on the temporary allocation of toll revenues for the construction of highways and the construction and reconstruction of other roads<sup>20</sup>. The new Decision prescribes the same methodology for allocation as was prescribed by the previous Decision.

Chart 10 shows the amount that was allocated in the period July 01, 2009 - December 31, 2021 according to the prescribed methodology and Decisions<sup>21</sup>, in millions of BAM. During this period, toll revenues for highways were allocated in proportion to the prescribed coefficients. The toll for highways in the period July 01, 2009 - January 31, 2018 was 0.10 BAM, while in the period February 01, 2018 - December 31, 2021 is 0.25 BAM.

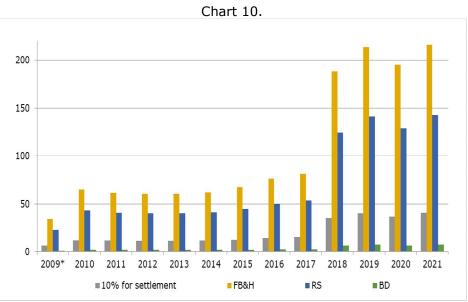
 <sup>&</sup>lt;sup>15</sup> "Official Gazette of B&H", No. 49/09
<sup>16</sup> "Official Gazette of B&H", No. 102/09
<sup>17</sup> "Official Gazette of B&H", No. 55/04, 34/07, 49/09 i 91/17

<sup>&</sup>lt;sup>18</sup> Federation of B&H 59%, the Republic of Srpska 39%, Brcko District 2%

<sup>&</sup>lt;sup>19</sup> "Official Gazette of B&H", No. 91/17 <sup>20</sup> "Official Gazette of B&H", No. 50/18

<sup>&</sup>lt;sup>21</sup> Decision on temporary allocation of toll revenues for construction of highways and construction and reconstruction of other roads

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Note: \* (period from July 1, 2009 to December 31, 2009) Source: Data from the Indirect Taxation Authority of B&H, OMA overview

According to the valid Decisions, the amount of 10% is left on the sub-account of the single account and serves for the settlement of revenues after determining the final allocation methodology. Until the adoption of the Decision of the Governing Board of the Indirect Taxation Authority of B&H on the temporary allocation of toll revenues for highways that remain on the sub-account of the single account, this amount is accumulated.

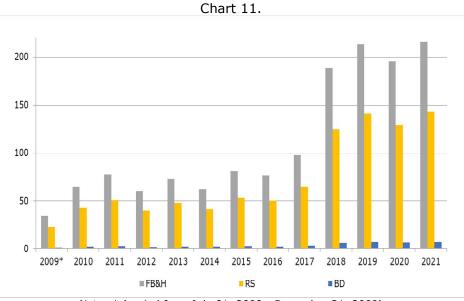
In accordance with the above, the Governing Board of the Indirect Taxation Authority of B&H in the period July 01, 2009 – December 31, 2021, adopted four Decisions on the temporary allocation of toll revenues for highways accumulated on the sub-account of the single account<sup>22</sup>. In accordance with those decisions in 2011, 2013, 2015 and 2017 from the sub-account of the single account was allocated part of the accumulated amount intended for alignment.

Chart 11 shows the amount that was allocated to the entities and Brcko District during the regular allocation, increased by the amount of allocation according to the Decisions that was previously accumulated on the sub-account of the single account, in millions of BAM. In the period July 01, 2009 – December 31, 2021, the most significant changes are legal changes in the amount of toll revenues for the construction of highways and the construction and reconstruction of other roads. Considering that the Law was not applied in all twelve months of year 2018<sup>23</sup>, the full effect of the amendment of the Law on an annual basis is visible in the last three years. Also, it is important to emphasize that the revenues from tolls collected in year 2009 refer to a period of six months.

<sup>&</sup>lt;sup>22</sup> "Official Gazette of B&H", No. 83/11, 62/13, 67/15, 45/17

<sup>&</sup>lt;sup>23</sup> Entry into force on February 1, 2018

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Note: \* (period from July 01, 2009 - December 31, 2009) Source: Data from the Indirect Taxation Authority of B&H, OMA overview

In the period July 01, 2009 - December 31, 2017, oscillations in the allocation of toll revenues on an annual basis appear in the period of additional allocation in accordance with the Decisions. In the same period, the most significant amount for the allocation of toll revenues for highways on an annual basis was recorded in 2017.

Since the beginning of the application of legal changes<sup>24</sup>, the amount of allocated revenues from tolls for highways on an annual basis is significantly higher compared to previous years, i.e. compared to the years before the change of the law, and is the highest in 2021. Thus, the total amount of toll revenues in 2021 is 10.6% higher than in the previous year 2020, 1.2% higher compared to the year before the pandemic 2019, and 124.9% higher compared to the year before the indicates that the changes in legislation significantly affected the increase in toll revenues intended for allocation to users.

<sup>&</sup>lt;sup>24</sup> from February 01, 2018 (to December 31, 2021)

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