STATE OF THE ECONOMY 2023 Q3

CENTRALE BANK VAN ARUBA

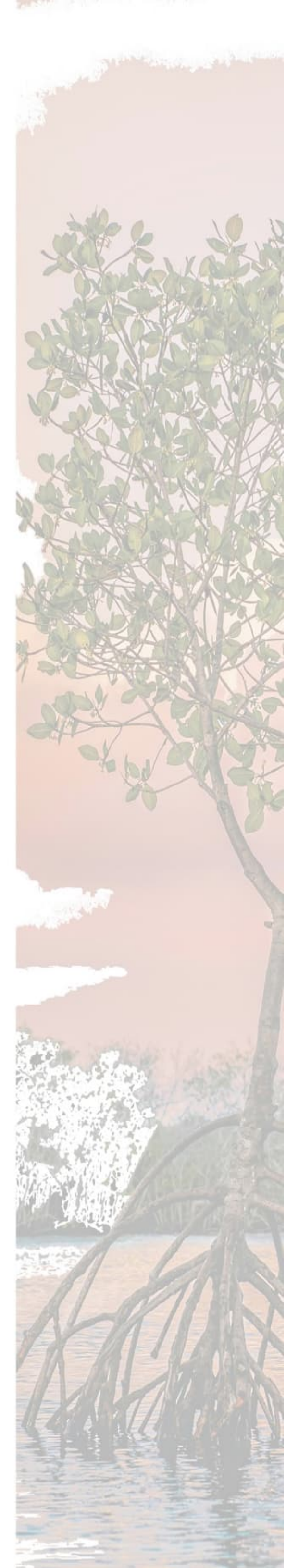
Cover design: Mangroves are hotspots of biodiversity, connecting life on land with life below the water. These ‘forests of the sea’ are essential to the health and vibrancy of our coastal ecosystems, including our community livelihoods. They provide a vital habitat for marine life, help to protect against coastal erosion and storm surges, as well as filter pollutants from the sea. Mangroves are one of nature’s most effective tools in the fight against climate change and are integral to nature.

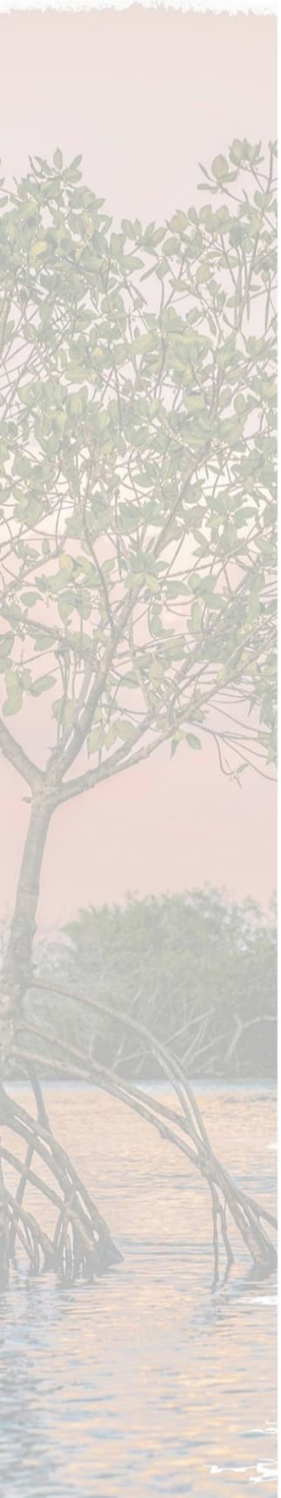
Abstract

Robust tourism performance and improved economic conditions spurred consumption and investment activities.

In the first nine months of 2023, tourism continued its upward trend, spurring economic growth. Conversely, tourism growth slowed down in Q2 2023, showing initial signs of performance normalization. Increased demand from the United States, Canada, and Colombia, along with higher tourism spending, boosted the number of stay-over visitors and tourism revenue. Strong global services demand has helped push tourism demand in service-oriented economies like Aruba's, although global services activities are showing signs of weakening. Expanded tourism demand and the subsequent rise in domestic demand led to improved consumption despite inflationary constraints. Furthermore, private investment advanced notwithstanding continued elevated international prices, tighter global financial conditions, and the implementation of the B.B.O. at the border in August 2023. Meanwhile, the upsurge in consumption and investment lifted import levels. International transactions settled through the banking sector resulted in a net foreign exchange outflow of Afl. 298.4 million in the first three quarters of 2023. The domestic refinancing of a foreign loan by the private sector largely drove the aforementioned net outflow, as tighter global financial conditions favored domestic credit. Nonetheless, the level of international reserves stayed adequate and well above the benchmarks monitored by the CBA. At the end of September 2023, reduced gasoline prices were the primary factors pushing down the 12-month average inflation to 4.5 percent, down from 5.5 percent at the end of 2022. The 12-month average core inflation amounted to 2.0 percent, falling slightly from 2.2 percent at the end of December 2022. With regard to government tax performance, in the period under review, total tax revenues exceeded the level registered in the same period of 2019, largely due to enhanced turnover tax and hotel room tax collections. The development in turnover tax and hotel room tax reflected, aside from improved consumption, higher rates of the B.B.O. and hotel room tax, and the larger share of the total hotel room tax collections that the government receives as of the first of January 2023. Compared to the same period of 2022, tax revenues surged by 28.1 percent, propelled by improved labor market conditions, economic activities, and the 2023 tax reform. Meanwhile, expenditures edged up by 3.7 percent. Consequently, total government debt shrank by Afl. 226.7 million to Afl. 5,490.9 million in September 2023 compared to December 2022. Due to the combination of nominal GDP growth with the debt contraction, the debt-to-GDP ratio fell to 84.9 percent by the end of-September 2023, lower by 12.2 percentage points compared to the end of-December 2022.

Contents



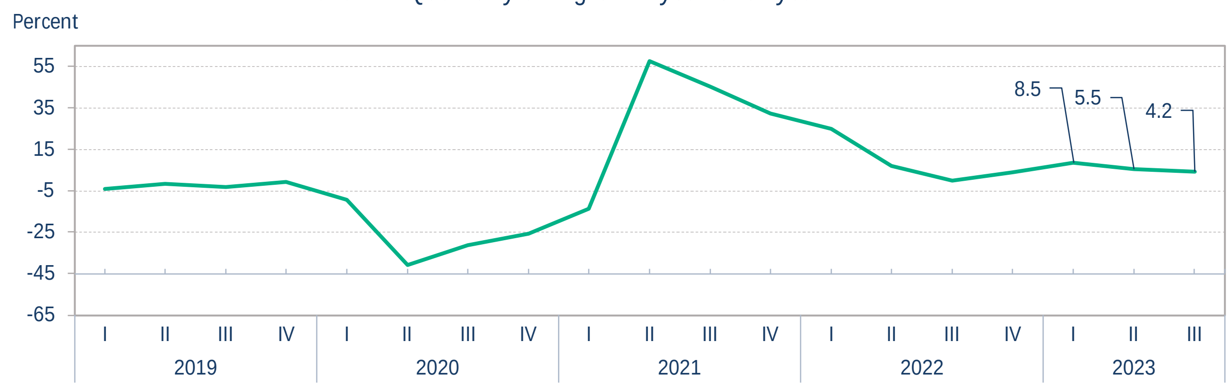


I. DOMESTIC ECONOMY

Economic growth

During the first three quarters of 2023, tourism remained the main engine of economic growth, although the former showed initial signs of pre-pandemic normalization in the second quarter of 2023. Growth in stay-over visitors and higher tourist spending were the principal contributors to the average real GDP growth of 6.1 percent up to September 2023 (Chart 1). Additionally, consumption helped boost real GDP. The jump in consumption represented improved labor market conditions, with estimated employment expanding by 5.1 percent in the third quarter of 2023 relative to the same quarter of 2022. Income from the turnover tax and taxes on commodities also grew, illustrating heightened consumption. The uptick in tax income was partially due to the BBO tax rate hike of 1.0 percentage point (as of January 1, 2023) and the introduction of BBO at the border (effective August 1, 2023). Meanwhile, for the most part, investment indicators pointed to robust investment activities in comparison to the first three quarters of 2022. Broader tourism revenues, private consumption, and investment spending led to a widening of imports.

Chart 1: Quarterly GDP growth year-over-year



Calculations: CBA

Tourism

During the first nine months of 2023, nearly all tourism-related indicators improved compared to the corresponding period of 2022 (Table 1), albeit performance began normalizing as of Q2 2023. The number of stay-over visitors continued on its upward trend since the third quarter of 2021 (quarterly growth year-on-year [YoY]), with growth moderating significantly in the second quarter of 2023 before accelerating somewhat again in the third quarter (Chart 2). The total number of stay-over visitors grew by 12.4 percent in the first three quarters of 2023 compared to the same period of 2022. Nonetheless, the strong jump recorded in the first quarter of 2023 (+31.1 percent YoY) was not emulated in the second and third quarters of 2023 (+3.3 percent YoY and +6.6 percent YoY, respectively). The towering growth recorded in Q1 2023 was in part related to the pandemic in early 2022. The resurgence of the pandemic due to the Omicron variant had a substantial negative impact on the number of visitors during Q1 2022.

Meanwhile, the number of visitor nights climbed by 10.2 percent in the first nine months of 2023 compared to 2022. However, tourists have consistently shortened their average (intended) length of stay (ALoS) since YTD September 2020 (ALoS: 7.7 nights) which has led to a smaller rise in visitor nights compared to the number of stay-over visitors (Chart 3). During the first three quarters of 2023, ALoS fell to 7.0 nights from 7.2 in the corresponding period of 2022. Moreover, after recording 7.6 nights in the first quarter of 2023, the ALoS came down noticeably in the second and third quarters of 2023 to 6.6 nights and 6.8 nights, respectively. The main contributors to the increase in the number of stay-over visitors were the U.S. (+9.9 percent), Canadian (+73.1 percent), and Colombian (+53.5 percent) markets. In the first three quarters of 2023, the U.S. market share in the number of stay-over visitors fell by 1.8 percentage points to 77.4 percent compared to the same period of 2022. When considering the first nine months of the year, the U.S. market share had risen consistently since 2016 (market share: 56.3 percent), peaked in 2021 (86.8 percent), and decreased for the first time during 2022 (market share: 79.2percent). In terms of 2019-levels, stay-over visitors reached 108.1 percent, while total visitors' nights amounted to 104.1 percent, as the ALoS contracted compared to the corresponding period of 2019 (YTD September 2019: 7.3 nights).

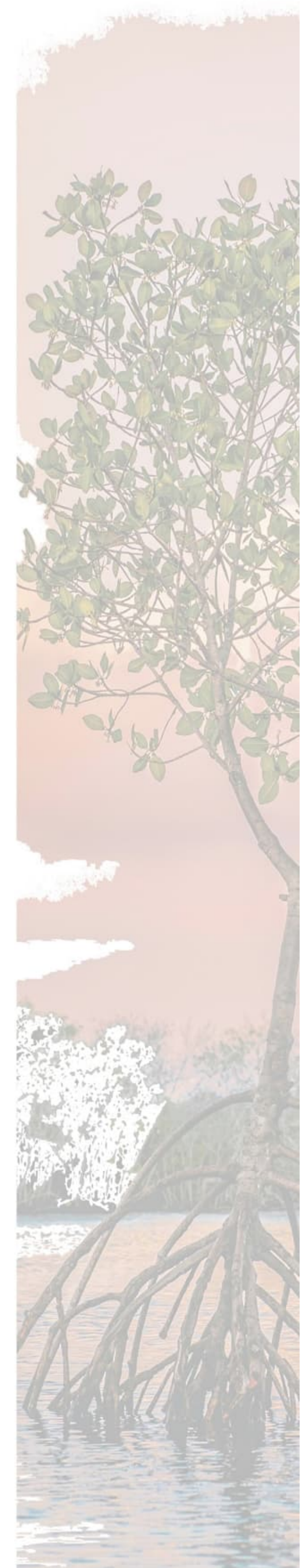
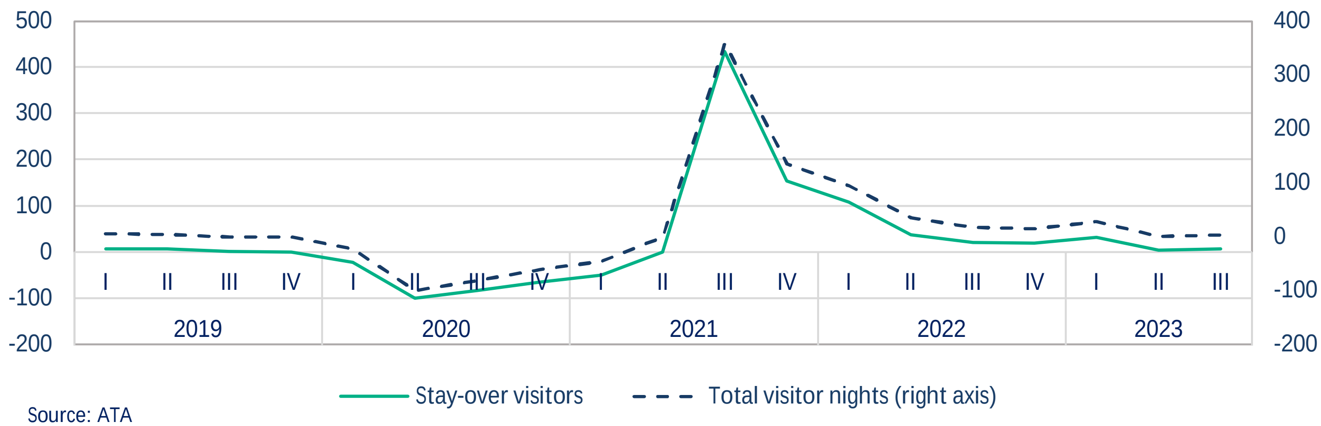
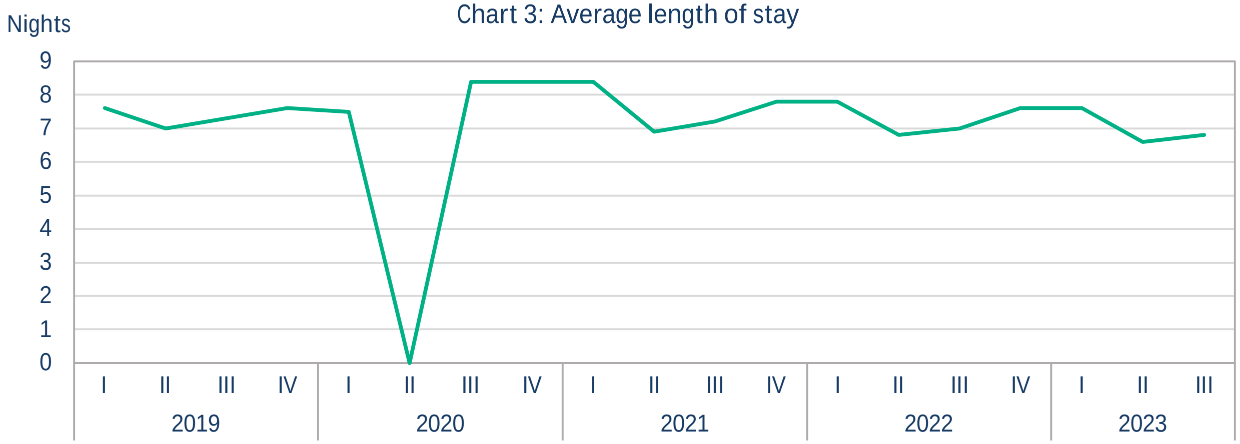


Chart 2: Stay-over visitors and visitor night growth (in %)



Source: ATA

Chart 3: Average length of stay



Source: ATA

Data from the hotel sector also drew a positive picture of the tourism industry (Table 1). In the first nine months of 2023, revenue per available room (RevPAR) rose by 19.1 percent compared to the same period of 2022. This jump in RevPAR resulted from a higher hotel occupancy rate during the first nine months of 2023 (77.8 percent) relative to the same period in 2022 (73.7 percent) combined with an increase in the average daily rate (ADR) (+12.9 percent). However, the hike in the occupancy rate could be ascribed completely to the rise recorded in the first quarter, as the occupancy rates registered in the subsequent quarters were lower than a year earlier, presumably due to the addition of new hotels.

Table 1: Tourism indicators for Aruba
YTD September

	2019	2022	2023
Stay-over visitors	848,841	816,362	917,739
Average length of stay (in nights)	7.3	7.2	7.0
Total visitor nights	6,191,419	5,850,732	6,446,572
Cruise visitors	555,525	358,679	575,597
Hotel occupancy (%)	85.7	73.7	77.8
Average daily rate (US$)	278.5	304.2	343.3
Revenue per available room (RevPAR) (US$)	238.7	224.3	267.2
Tourism revenue per night (in Afl.)	323.6	417.6	439.1
Tourism revenue* (in Afl. million)	2,003.4	2,443.2	2,830.4

Sources: CBA, ATA, AHATA. Table shows 2019 for comparison with pre-COVID period.

*Only those registered at local commercial banks.

Income from tourism revenue registered at local commercial banks advanced by 15.8 percent in the period under review. This expansion in tourism revenue was related to the growth in total visitor nights and higher tourism spending per night. In addition to the rise in tourism nights, tourism revenue per night jumped by 5.1 percent in the first nine months of 2023. Compared to 2019-levels, the gains in tourism

revenue per night (+35.7 percent) were substantially larger than the increase in total visitor nights (+4.1 percent) during the first three quarters of 2023. As such, total reported tourism revenue reached 141.3 percent of the 2019-level during the first nine months of 2023.
In the first nine months of 2023, cruise arrivals were above 2019-levels, reaching 103.6 percent of cruise visitors compared to the corresponding period in 2019. It is worth noting, however, that since June 2023 the number of cruise visitors has underperformed relative to the levels recorded in both 2022 and 2019. This underperformance is likely related to cruise companies extending the deployment of their ships for the summer season in Europe at the expense of the Caribbean. The Aruba Ports Authority (APA) reported 575,597 cruise visitors and 216 ship calls in the period under review (Table 1). The former represents a spike of 60.5 percent compared to the corresponding period of 2022. The relatively low number of cruise visitors in the first quarter of 2022 stemmed from a resurgence of COVID-19 at the beginning of the year.

Consumption

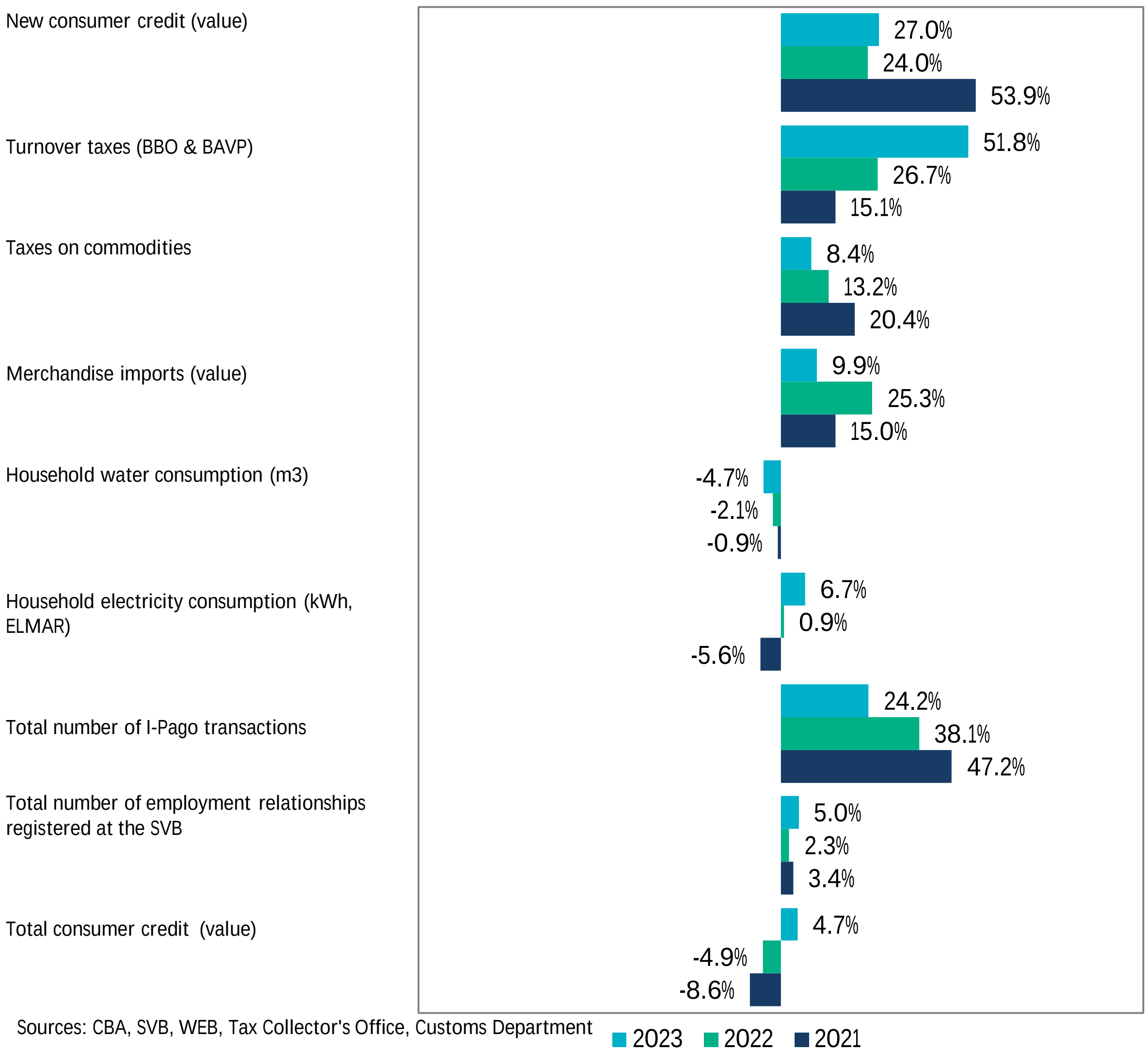
During the first three quarters of 2023, most consumption-related indicators suggested improved consumption (Chart 4). During the period under review, turnover taxes surged by 51.8 percent compared to the same period of the previous year. This upturn was positively affected by heightened domestic consumption and the strong performance of the tourism sector. Apart from growing consumption and tourism demand, the enhancement of turnover taxes mentioned above also reflected the 1.0 percentage point increase in the BBO rate as of January 1, 2023, as well as the implementation of the BBO at the border as of August 1, 2023. Taxes on commodities also increased (+8.4 percent) in the first three quarters of 2023. Following the rise in domestic consumption and buoyant tourism activity, merchandise imports (+9.9 percent) also pointed to an uptick in consumption compared to the same period in 2022.

Developments in commercial banking data complemented the tax and import indicators discussed previously. During the first three quarters of 2023, the value of new consumer credit loans expanded by 27.0 percent. The total value of consumer credit loans also rose (+4.7 percent), with all components registering increases except for personal loans (-0.6 percent). Car loans, which grew by 16.1 percent compared to the same period of the previous year, recorded the most noteworthy upturn in consumer credit. During the reviewed period, the developments in car loans were significantly different from those seen in the first three quarters of recent years (2021: -13.3 percent; 2022: -11.3 percent). The latter reflects the availability of cars following the global semiconductor shortage and car sale campaigns by local commercial banks in the summer of 2023. Consumer Confidence Survey (CCS) responses matched the evidence provided by car loan data, as the proportion of respondents who indicated that buying an automobile was suitable increased to 12.3 percent in Q3 2023 compared to 8.8 percent at the end of Q3 2022.

Compared to the first three quarters of 2022, the total number of transactions processed by I-Pago jumped by 24.2 percent, mostly pushed up by transactions between Afl. 0 and Afl. 250, which went up by 33.8 percent. Transactions above Afl. 250 (+16.2 percent) also rose, albeit to a lesser extent. The registered growth in the number of transactions processed by I-Pago reflects increased spending activities through the Aruban banking system.

At the same time, the number of employment relationships recorded at the Sociale Verzekeringsbank (SVB) expanded in the first nine months of 2023 (+5.0 percent) compared to the same period of 2022. This expansion, more than double the growth in the first three quarters of 2022 (+2.3 percent), likely intensified the propensity to consume.

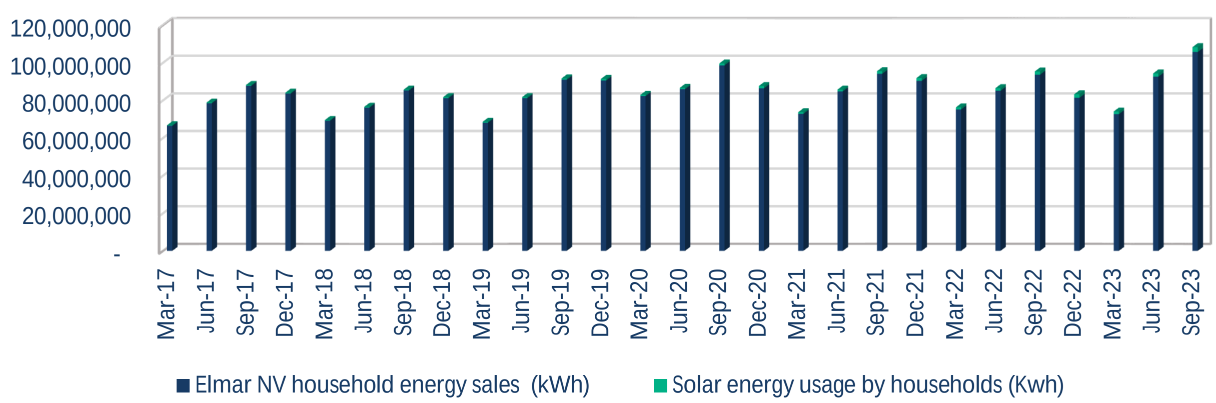
Chart 3: Consumption-related indicators
(YTD September 2023 vs. YTD September 2022 vs. YTD September 2021)



Sources: CBA, SVB, WEB, Tax Collector's Office, Customs Department

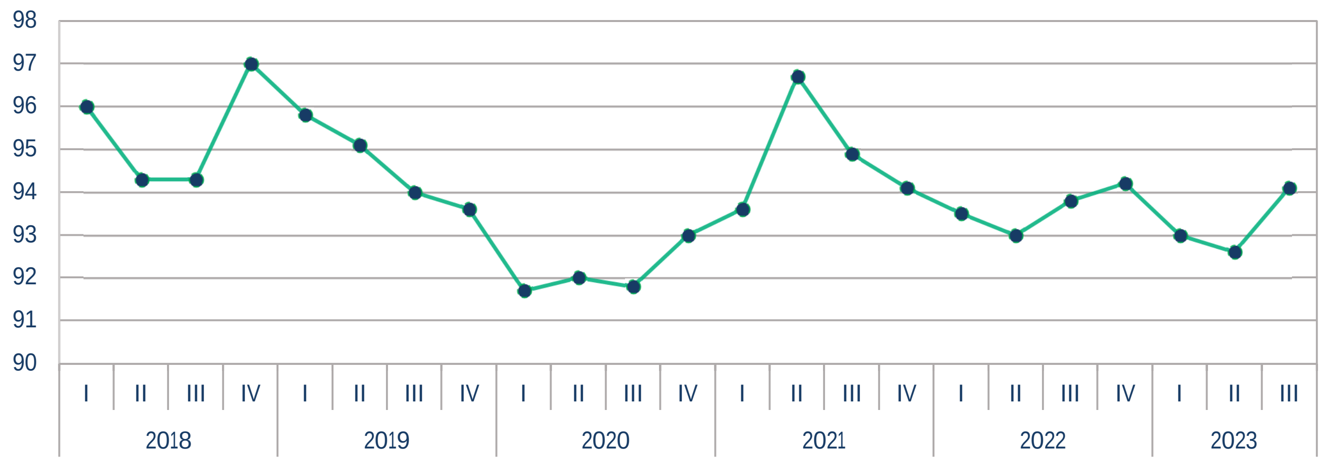
Utility usage data were inconclusive on consumption. Household water consumption (in cubic meters) contracted by 4.7 percent, suggesting a more conservative use of water by consumers. Simultaneously, water sales to households (in Afl.) climbed by 14.7 percent following the increase in the water tariff as of August 1, 2022. Contrary to water consumption, household electricity consumption in kWh increased by 6.7 percent, resulting from greater prepaid (+15.5 percent) and non-prepaid (+5.7 percent) energy sales. Taking household solar electricity consumption into account, total household electricity consumption in kWh went up by 7.2 percent. Compared to December 2022, prepaid energy connections went up by 6.6 percent, while non-prepaid connections grew by 1.7 percent. This development indicates a higher propensity to control electricity consumption at home using prepaid energy installations. The substitution of non-prepaid for prepaid meters by current consumers might be at play. Alternately, consumers seeking new energy meter connections may have a stronger preference for prepaid meters. Another potential explanation may be the surge in residential rentals, which may be more inclined to use prepaid energy installations to avoid the risk of liability for unpaid energy bills and the administrative burden of name-switching on contracts. During the first three quarters of 2023, solar energy consumption surged by 36.8 percent compared to the same period of the previous year (Chart 5), following higher demand for solar installations. Compared to the end of 2022, the number of installed residential solar connections jumped by 30.1 percent.

Chart 5: Household energy consumption (KwH)



The Consumer Confidence Index (CCI) picked up in the third quarter of 2023, after being on a downward path since the first quarter of 2023 (Chart 6). Consumers were relatively less pessimistic in the third quarter of 2023 (CCI: 94.1), compared to the same period of the previous year (CCI: 93.8). The rise in the CCI was due in part to improved consumer sentiments about their present situation and expected future. The uptick in the Future Expectation Index, from 94.0 in Q3 2022 to 94.5 in Q3 2023, may reflect less uncertainty about price developments and the implementation of the BBO at the border as of August 1, 2023. Regarding consumption and borrowing habits, except for major appliances, a higher number of respondents indicated that large-scale spending, such as on automobiles and vacations, was suitable compared to the third quarter of 2022. In addition, a larger share of respondents believed that taking out a mortgage was suitable compared to the same period of the previous year. Furthermore, during the period under review, the CCI surpassed the pre-pandemic level of 93.6 registered in the fourth quarter of 2019.

Chart 6: Consumer Confidence Index



90-100: pessimistic
100-110: optimistic
Source: CBA

Investment

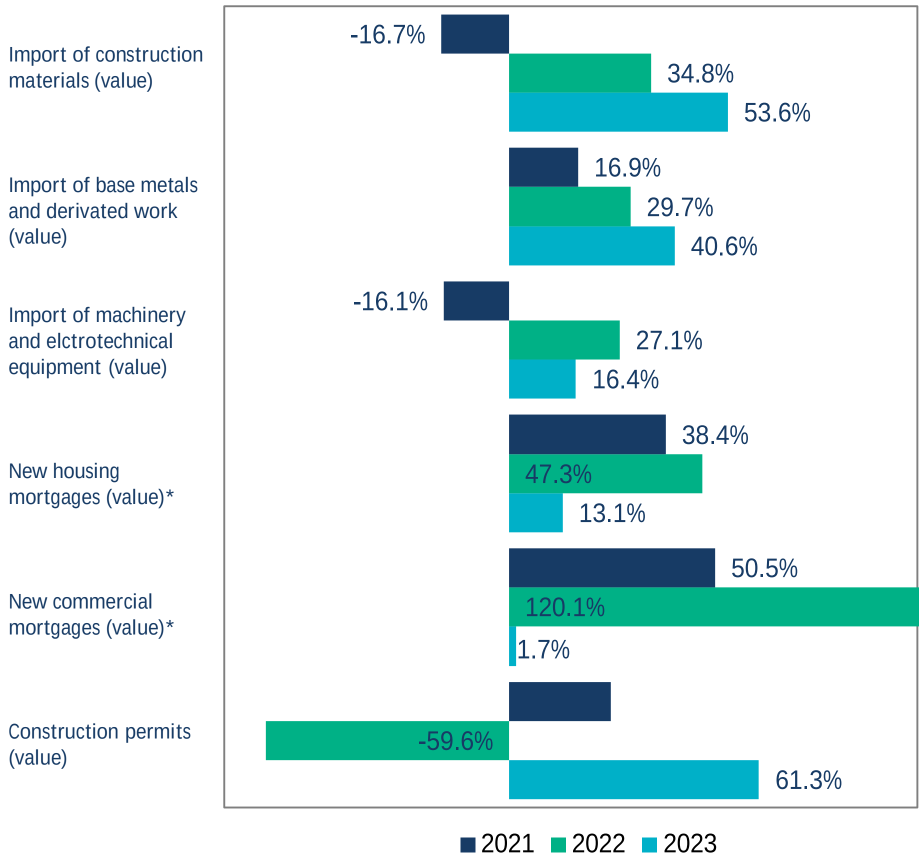
During the first three quarters of 2023, investment indicators generally displayed improvement (Chart 7). More specifically, all investment indicators highlighted upticks except for housing and commercial mortgages. Moreover, mortgages only fell because of artificial (non-investment related) surges in the first quarter of 2022 (see discussion about mortgages below).

Data on construction permits paint a positive picture for investment in the first three quarters of 2023 (see Chart 7). During this period, the value of construction permits reached Afl. 466.8 million, exhibiting a growth of 61.3 percent compared to the same period in 2022. The aforementioned rise was attributable to expanded construction permits for (1) houses (+37.8 percent), (2) apartments (+44.9 percent), and (3) stores and shopping malls (+56.9 percent). Most notably, "other" permits, which include hotels and condominiums, incurred the largest gain at 134.3 percent and realized a level of Afl. 218.3 million. In contrast, there were reductions in office building permits (-76.6 percent). However, these permits represent a negligible share of total permits.

Import indicators of investment also reflected robust investment activities. The imported value of base metals and derivated works expanded by 40.6 percent, while that of machinery and electrotechnical equipment increased by 16.4 percent compared to the first three quarters of 2022. Similarly, the value of imported construction materials rose by 53.5 percent. In part, higher import price levels likely caused these upturns. The estimated price per kilo of base metals and derivative works climbed by 3.6 percent, while that of machinery and electrotechnical equipment grew by an estimated 4.7 percent. The estimated import prices were initially easing in the first half of 2023, but the third quarter indicated a reverse of this short-lived trend.

During the first three quarters of 2023, new housing mortgages contracted compared to the same period of 2022. Specifically, the value of new housing mortgages declined by 3.6 percent. However, new housing mortgages softened due to an artificial (non-investment-related) boost in the first quarter of 2022. In this instance, one bank took over the loan portfolio of another bank; these were registered as new housing mortgages but did not affect the stock of loans. If this effect is filtered out, new housing mortgages incurred an uptick of 13.1 percent, ascribable to a higher number of loans and average loan value. The Consumer Confidence Survey (CCS) results on borrowing sentiments differ from those on new housing mortgages. In the first three quarters of 2023, on average, 10.0 percent of CCS respondents indicated that taking out a mortgage loan is "suitable", down from 12.8 percent registered in the first three quarters of 2022. As for new commercial mortgages, an easing can be noted in this category (-24.3 percent). Nevertheless, accounting for the loan portfolio acquisition already mentioned suggests a growth of 1.7 percent in new commercial mortgages. Therefore, developments in new commercial mortgages largely corroborate other investment indicators.

Chart 7: Investment-related indicators
(Percentage change current year vs. prior year)



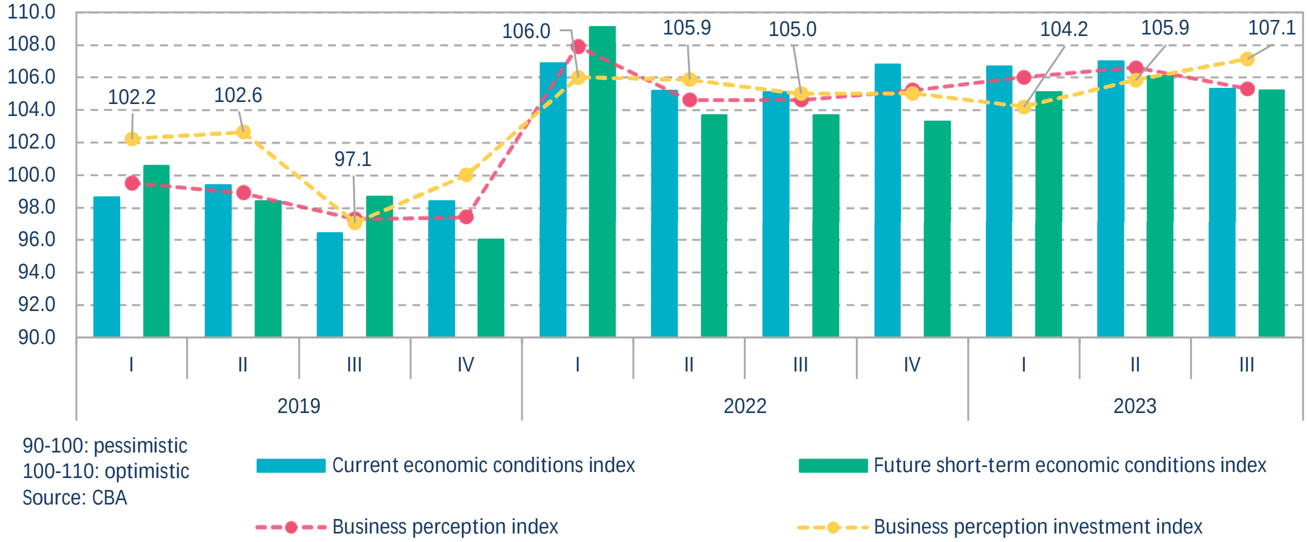
*Corrected for 2022 loan portfolio takeover.

Sources: CBA, CBS, DOW

Business Perception Survey (BPS) data aligned with most investment-related indicators. In particular, through the BPS, businesses are asked if their investments have improved, stayed the same, or worsened compared to the same quarter last year. From the answers received on those questions, the Research Department derived a BPS investment index, which inched up to 105.7 in 2023 Q1–Q3 from 105.6 in 2022 Q1–Q3 (Chart 8). Hence, the BPS investment index advanced, notwithstanding the introduction of BBO at the border in August 2023. On the other hand, reported investment plans suggest ambiguous investment intensity. As shown in Chart 9, the share of businesses declaring investment plans over Afl. 5 million in the next six months grew by 3.9 percentage points. However, more companies reported no investment plans (2022 Q1–Q3: 32.1 percent vs. 2023 Q1–Q3: 37.6 percent). Furthermore, in the first three quarters of 2023, the proportion of businesses with small (less than Afl. 1 million) to medium (between Afl. 1 and Afl. 5 million) investment plans totaled 44.5 percent — 9.5 percentage points lower than the same period of 2022 (Chart 9). An important caveat is that the BPS investment plans are a forward-looking indicator that asks businesses about their expectations over the next 12 months.

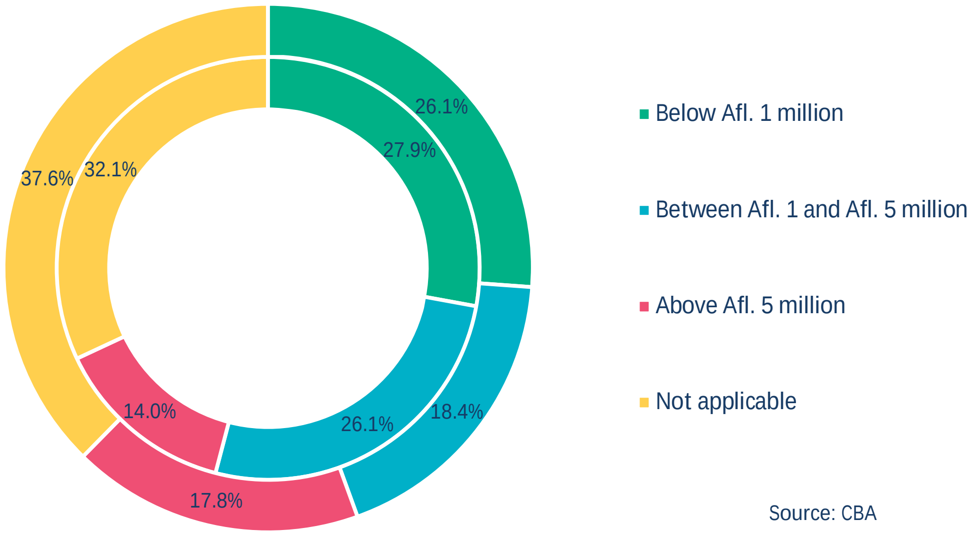
The BPS index edged up in the first three quarters of 2023, akin to the BPS investment index. Explicitly, the BPS index climbed from 105.7 during 2022 Q1–Q3 to 106.0 throughout 2023 Q1–Q3. This minor improvement resulted from the enhanced current economic conditions index, while the index for future short-term economic conditions was unchanged.

Chart 8: Business Perception Index



90-100: pessimistic
100-110: optimistic
Source: CBA

Chart 9: Share of businesses' responses on their investment plans
Inner circle: YTD September 2022. Outer circle: YTD September 2023.



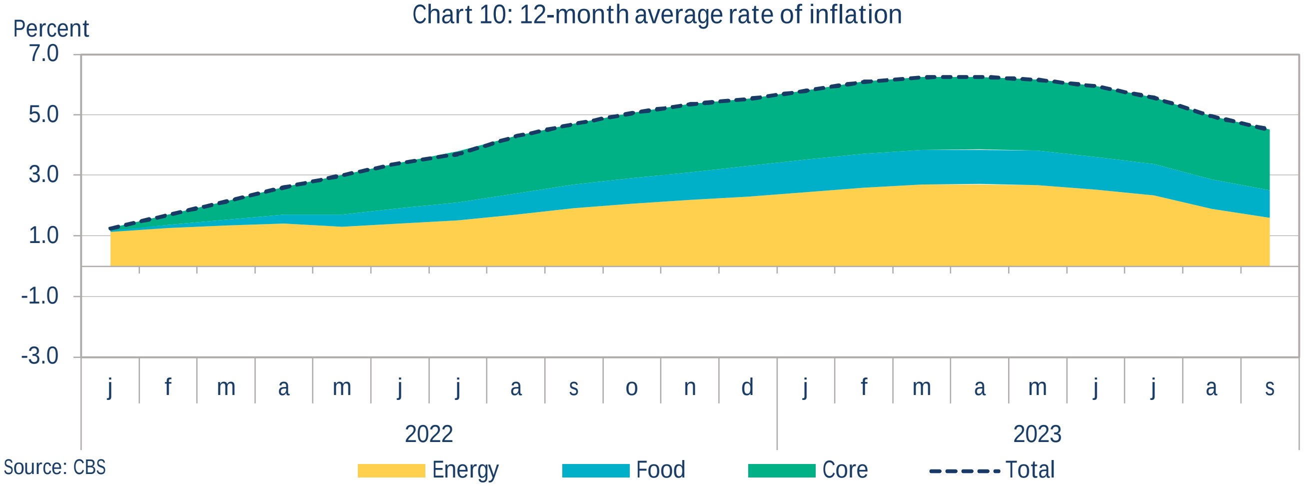
Source: CBA

Consumer price index (CPI)

At the end of September 2023, the 12-month average inflation rate amounted to 4.5 percent, a 0.2 percentage point drop compared to the same period in 2022 (4.7 percent) (Chart 10). The components housing (+2.3 percentage points contribution) and food and non-alcoholic beverages (+1.0 percentage points contribution) were mainly responsible for the 12-month average inflation rate of 4.5 percent. The components household operation (+0.4 percentage point contribution), restaurants and hotels (+0.4 percentage point contribution), transport (+0.3 percentage point contribution), miscellaneous goods and services (+0.3 percentage point contribution), as well as health (+0.1 percentage point contribution) also registered growth. In contrast, the communication (-0.2 percentage point contribution), clothing and footwear (-0.1 percentage point contribution), in addition to recreation and culture (-0.1 percentage point contribution) components pushed down the 12-month average rate of inflation. The rise in the housing component resulted from the hike in utility tariffs from August 2022, while the food component went up mainly as a result of elevated prices for meat, bread, cereals, vegetables, and dairy products.

At the end of the third quarter of 2023, the 12-month average inflation rate decreased compared to the same period in the previous year, and is a continuation of the descent that followed a peak in April 2023 (Chart 10). On average, lower gasoline prices, resulting from decreased oil prices on the international markets, mainly contributed to the lower 12-month average inflation. At the end of September 2023, the 12-month average core inflation remained virtually unchanged at 2.0 percent compared to end Q3 2022. When compared to December 2022, the 12-month average inflation rate decreased to 4.5 percent from 5.5 percent, mainly due to lower gasoline prices.

Chart 10: 12-month average rate of inflation

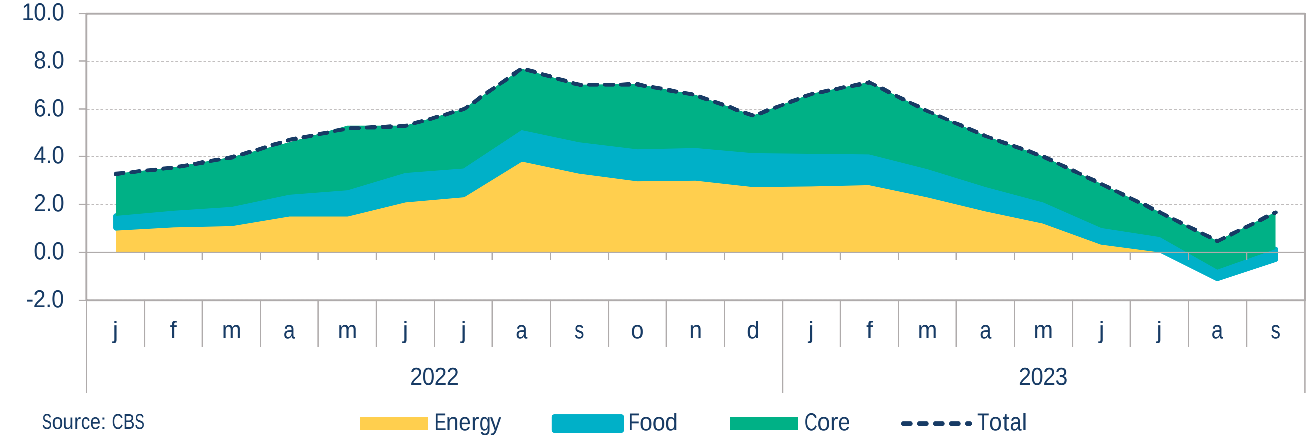


Source: CBS

At the end of September 2023, the End-of-Period (EoP) inflation rate reached 1.7 percent, compared to 7.0 percent at the end of September 2022 (Chart 11). The components communication (+0.6 percentage points contribution), food and non-alcoholic beverages (+0.5 percentage point contribution), housing (+0.4 percentage point contribution), miscellaneous goods and services (+0.4 percentage point contribution), restaurants and hotels (+0.3 percentage point contribution), and household operation (+0.3 percentage point contribution) drove the EoP inflation rate. Lower prices for recreation and culture (-0.5 percentage point contribution), transport (-0.3 percentage point contribution), and clothing and footwear (-0.3 percentage point contribution), on the other hand, mitigated the upward pressure on the EoP inflation rate.

During the period under review, the EoP inflation rate (1.7 percent at September 2023) followed the downward trend exhibited between February (7.1 percent) and June (2.8 percent) 2023. The decreased contribution of housing (September 2023: 0.4 percentage point; June 2023: 2.5 percentage points) compared to February 2023 (3.1 percentage points) mainly caused EoP inflation to drop, while mitigated in part by a rise in the contribution of the communication component (September 2023: 0.6 percentage point; June 2023: -0.4 percentage point). At the end of the third quarter of 2023, the EoP core inflation amounted to 1.6 percent, a reversal of the descending trajectory observed until July 2023 (trough: 1.0 percent). As opposed to December 2022, the EOP inflation at the end of the third quarter of 2023 fell from 5.7 percent to 1.7 percent, primarily influenced by the lower gasoline prices in September 2023.

Chart 11: End-of-period inflation



Source: CBS

Box: Demand-pull pressures on core inflation

Core inflation contributed 1.6 percentage points to headline EoP inflation in September 2023. According to the literature, demand-pull pressures significantly determine core inflation (Peach et al., 2013)[1]. However, does this phenomenon also hold in Aruba? After all, the inflationary impact of demand-pull pressures on core inflation might be considerably lower since inflation is presumed to be primarily imported (CBA, 2019)[2]. Accordingly, this box quantifies the impact of demand-pull pressures on core inflation and compares it with headline inflation.

Data and model

An extended Phillips curve is modeled by augmenting the regression model developed by Ridderstaat (2004)[3] with a term for inflation persistence (Abbas et al., 2016)[4] and demand-pull pressures (proxied by real GDP):

$$(1)\quad CoreInfl_t = \gamma * CoreInfl_{t-1} + \beta_1 * ImpInfl_t + \theta_1 * g(TurnoverTax) + \theta_2 * g(WaterTarrif) + \theta_3 * g(ElectrTarrif) + \varphi * g(GDP) + \varepsilon_t$$

The advantage of representing core inflation (i.e., the dependent variable) as a sum of the explanatory variables' effect is that each effect can easily be represented in a bar chart (see Graph 1). Data on the dependent and explanatory variables span mostly from 2000 Q1 to 2022 Q2. From left to right in equation (1), $CoreInfl_t$ represents the quarterly year-over-year core CPI inflation at time t. γ measures inflation persistence or stickiness — in other words, the sensitivity of current inflation to past inflation. In other words, if past inflation causes workers to expect inflation, they may attempt to negotiate higher wages, which causes inflation, creating an endless loop (Abbas et al., 2016). In all likelihood, γ varies between [0, 1], as inflation expectations impact current inflation but do not entirely determine it. For example, such values have been observed in Alichi (2015)[5].

β_1 represents the impact of a one percentage point change in imported inflation on core CPI inflation. The sign of β is presumably positive as businesses pass higher import prices -- and thus input costs -- to the consumers. Conversely, $g(TurnoverTax)$ signifies quarterly year-over-year growth in the turnover tax rate, which includes the BBO, BAZV, and BAVP. The units of $WaterTarrif$ and $ElectrTarrif$ are in florins per m3 and florins per kWh, respectively. Following similar arguments as for β, θ_1, θ_2, and θ_3 are expected to be positive. Lastly, $g(GDP)$ signifies year-over-year real GDP growth, with φ proxying the effect of demand-pull pressures on core inflation. The presumed sign is positive, as more money chasing fewer or the same amount of goods should lead to inflation.

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[1] Peach, R. W., Rich, R. W., & Linder, M. (2013). The parts are more than the whole: separating goods and services to predict core inflation. Current Issues in Economics and Finance, 19(7).

[2] Central Bank of Aruba. (2019) Fostering economic resilience: From roots to routes.

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[5] Alichi, Ali. A New Methodology for Estimating the Output Gap in the United States. IMF Working Papers 2015.144 (2015), A001. < https://doi.org/10.5089/9781513507569.001.A001>. Web. 16 Sep. 2022.

Regression results

Table 2 reports the results of the Phillips curve model with EoP core (1) and EOP headline inflation (2). The first specification underlines a statistically significant effect of demand-pull pressures on core inflation. In particular, if year on year (YoY) real GDP increases by Afl. 1 million, then everything else being equal, EOP core inflation would climb by 0.003 percentage point. To give an indication, real GDP jumped by roughly Afl. 800 million in 2021[6]. The latter, everything else being equal, would equate to a growth of 2.4 percentage points in EoP core inflation. Hence, demand-pull pressures likely affect core inflation, but extreme events must materialize before the effects can be noted (see also Graph 1). Similar findings hold for headline inflation.

Table 2: Regression results of two Phillips curve models

	(1) Core	(2) Headline
EOP inflation (lag 1)	0.87 (0.04)*	0.51 (0.05)*
EOP imp. inflation proxy	0.01 (0.01)***	0.05 (0.01)*
EOP imp. inflation proxy (lag 4)		0.03(0.01)***
Y-o-y growth in electricity tariff	3.87 (1.87)**	11.0 (4.87)**
Y-o-y growth in water tariff		0.79 (0.18)*
Y-o-y growth in water tariff (lag 4)	0.09 (0.00)	
Y-o-y growth in turnover taxes	0.19 (0.09)**	0.64 (0.14)*
Y-o-y growth in real GDP	0.003 (0.00)*	0.003 (0.00)*
Adjusted R-squared	0.85	0.88
Period	2003 Q1-2022 Q2	2003 Q1-2022 Q2
*p-value<0.01, **p-value<0.05, ***p-value<0.10 standard errors in parenthesis		

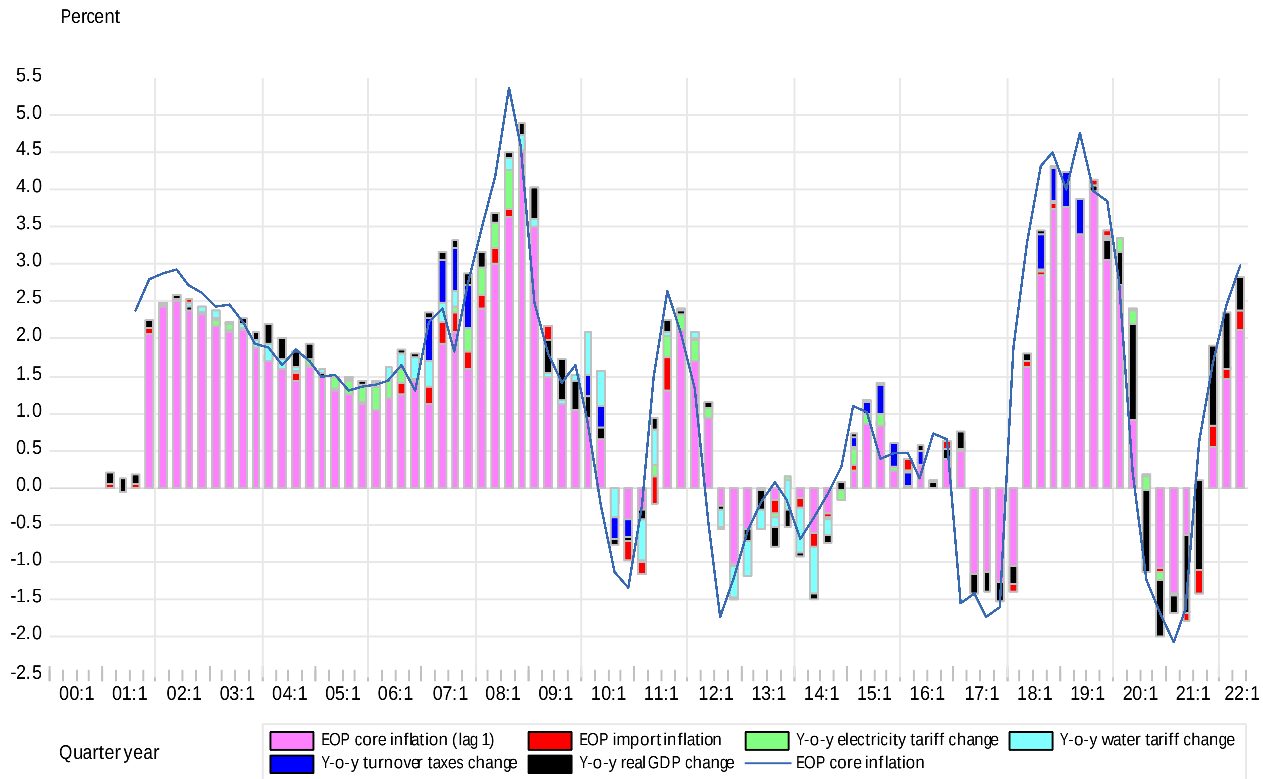
Graphical results

Table 1 only shows the effect of a unit change in the explanatory variable on core inflation. For example, a unit change for real GDP equals a change of Afl. 1 million. However, in practice, we do not observe unit changes. The actual changes are much larger.

[6] According to the GDP estimate 2023-period 1. Published in *Economic Outlook: GDP forecast, June 2022.*

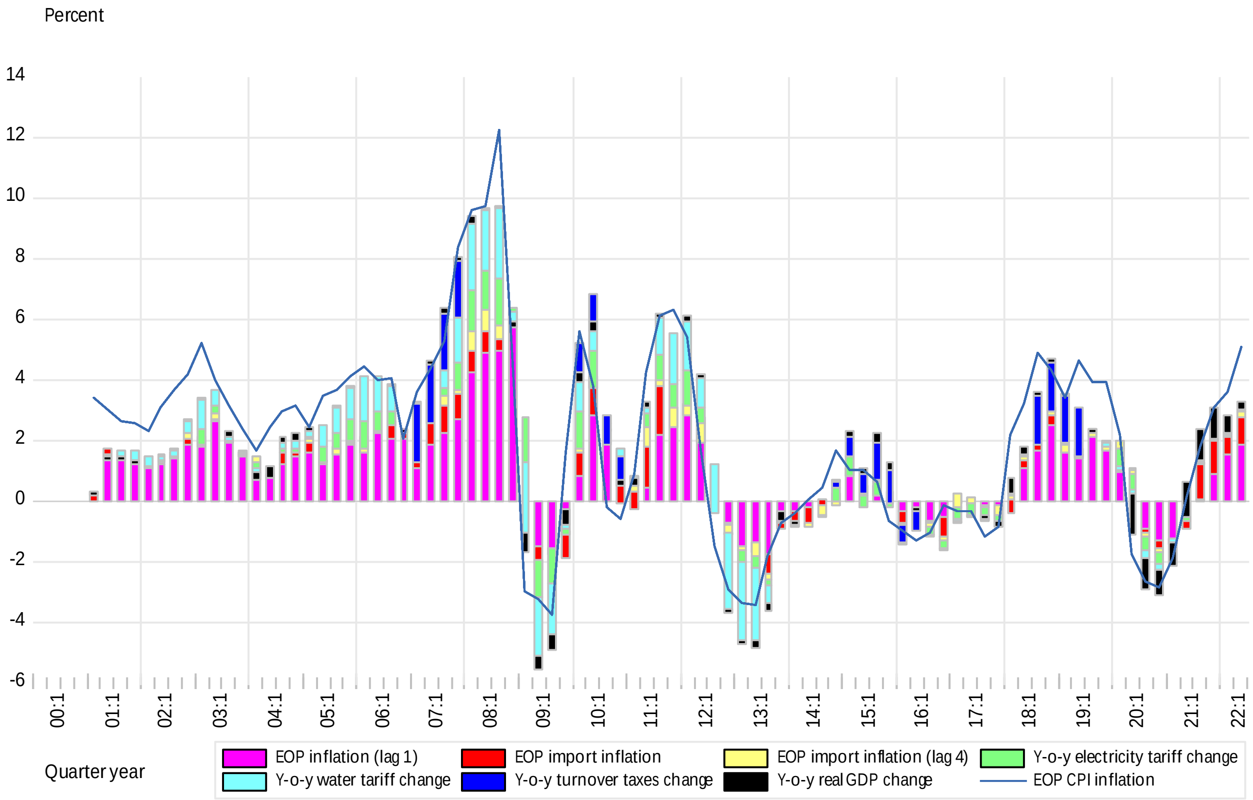
Accordingly, Graph 1 displays how actual changes in the explanatory variables affected core inflation. Graph 2, which considers headline inflation, compares Graph 1 results.

Graph 1: Effect of explanatory variables on core inflation



As observed from Graph 1, demand-pull pressures have affected core inflation in many instances. Nevertheless, some periods show significantly more contributions (of demand-pull pressures on core inflation) than others. In particular, between 2020 and 2021, demand-pull pressures explain about half of core inflation. This weight (of demand-pull pressure) on inflation is much smaller for headline inflation. Specifically, demand-pull pressures cause roughly one-third of the headline inflation. Other dissimilarities can also be noted. For example, compared to headline inflation, core inflation is less moved by (1) utility tariffs (see height of light green and turquoise blue bar) and (2) turnover taxes (dark blue bar), while core inflation is more sticky (pink bar).

Graph 2: Effect of explanatory variables on headline inflation



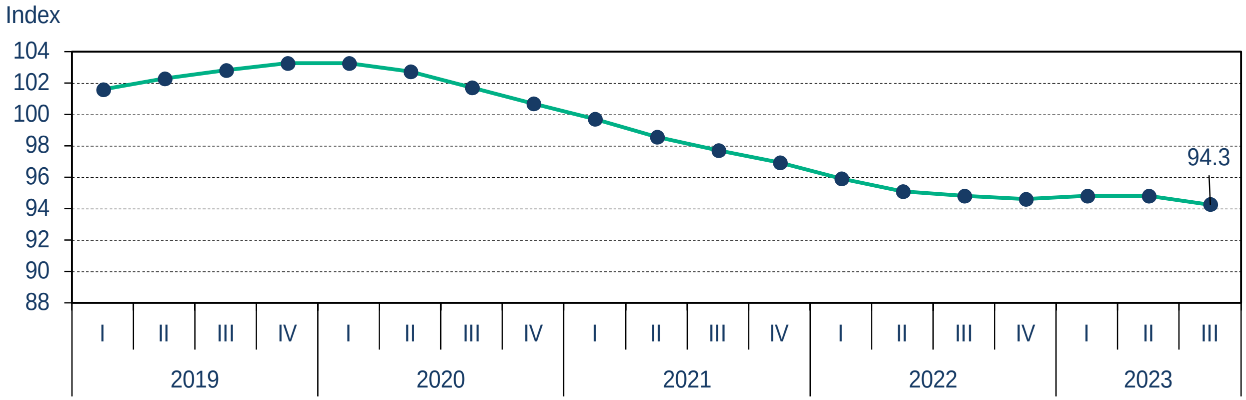
Conclusion

Demand-pull pressures have a statistically significant effect on core inflation. In particular, if YoY real GDP increases by Afl. 1 million, then everything else equal, EoP core inflation climbs by 0.003 percentage point. Nonetheless, in practice, extreme shocks in GDP must materialize before those effects can be felt in core inflation (see also Graph 1). For instance, between 2020 and 2021, demand-pull pressures explain about half of core inflation.

International competitiveness

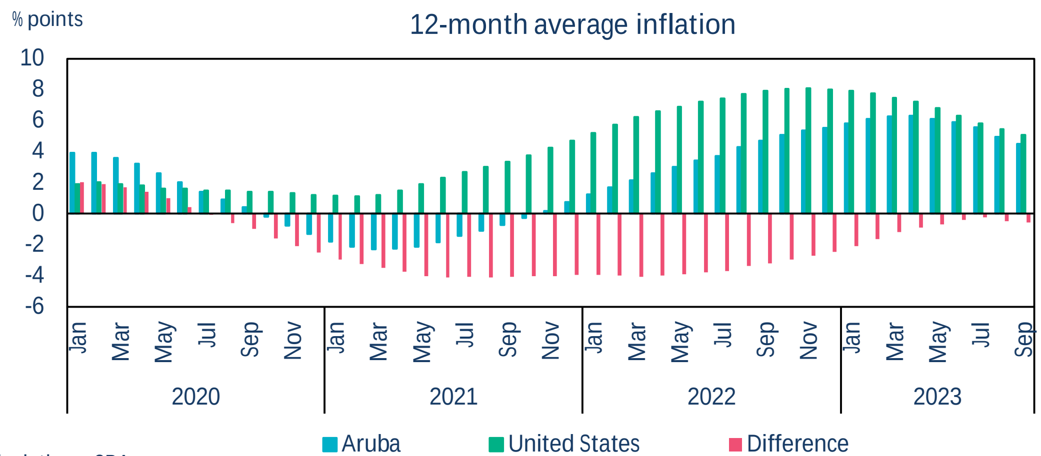
During the third quarter of 2023, the real exchange rate for the Aruban florin vis-à-vis the U.S. dollar fell by 0.5 index point compared to the previous quarter of 2023 (Chart 12). The continued descent of the real exchange rate reaching 94.3 index points follows the sustained improvement in the competitive position of Aruba vis-à-vis the United States, which commenced in the second quarter of 2020, and started to slow down in 2022. During the above-mentioned period, consumer prices rose faster in the United States than in Aruba (Chart 13). Lower prices for food and gasoline, as well as a reduction in electricity tariffs as of January 1, 2020, contributed to the deceleration in the 12-month average inflation rate for Aruba during the period mentioned above. At the end of September 2023, the 12-month average inflation rate in the United States reached 5.1 percent. According to calculations from the Research Department, the core component (+3.5 percentage points contribution), and food (+1.4 percentage points contribution) added to total U.S. inflation while energy mitigated the rise (-0.2 percentage point contribution). At the same time, the 12-month average inflation in Aruba amounted to 4.5 percent, pushed up by the core component (+2.0 percentage points contribution), energy (+1.6 percentage points contribution), and food (+0.9 percentage point contribution). The uptick in the energy component for Aruba during the period under review primarily reflects higher utility prices due to the hike in tariff rates in August 2022. These developments led to an increased inflation differential of 0.6 percentage point (June 2023: 0.4 percentage point) at the end of September 2023. Nonetheless, a narrowing inflation differential between the United States and Aruba as of November 2021 resulted in a stabilization of the real exchange rate.

Chart 12: Real exchange rate for the Aruban florin vis-à-vis the U.S. dollar (2017=100)



Source: CBA

Chart 13: Inflation differential for Aruba - USA:
12-month average inflation



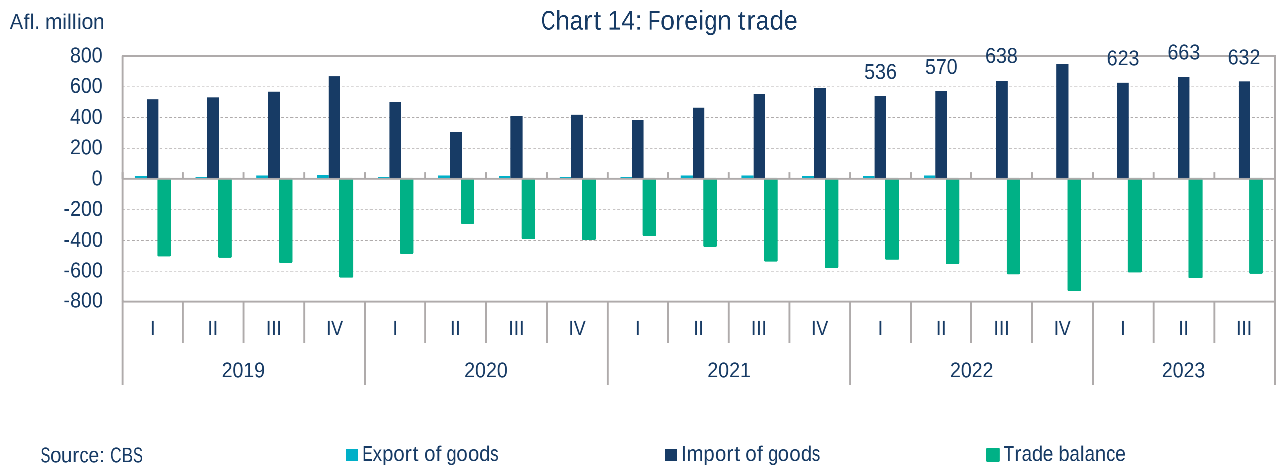
Calculations: CBA

Foreign trade

At the end of September 2023, the trade deficit for goods stood at Afl. 1,861.6 million compared to Afl. 1,693.3 million at the end of September 2022 (see Chart 14). An expansion of Afl. 173.5 million (+10.0 percent) in imported goods largely explains the widened deficit, while the impact of exported goods was minute (+ Afl. 5.2 million).

Continued strong tourism performance and domestic demand led to the rise of imported goods. Additionally, the estimated price level for imports increased by 3.0 percent, pushing up imported goods further (Chart 14). The bearing of foreign prices on imported goods is meaningful as Chart 14 highlights. Nominal imported goods for 2023 Q1–Q3 surpassed 2022 Q1–Q3 levels by 10.0 percent, while for real imported goods this was 6.6 percent. Most components of imported goods featured growth, although those that contributed the most included transport equipment, e.g., cars, motorcycles and cycles (48.7 percent), and base metals and derivated works (+40.5 percent). Components that partly mitigated the increased imports were live animals and other animal products (-4.0 percent) and wood, charcoal and woodwork (-10.3 percent), but the latter represented a low share of the total goods imports.

The export of goods (value) grew by Afl. 5.2 million compared to the first three quarters of 2022. The main items supporting export growth were other goods (+20.0 percent) and art objects and collectors' items (+24.1 percent). In contrast, the export of transport equipment (-45.7 percent) and machinery and electrotechnical equipment (-33.5 percent) had a dampening effect.



Balance of payments

International transactions settled through the commercial banking sector led to a net foreign exchange outflow of Afl. 298.4 million during the first three quarters of 2023 (Table 3). Tightening of global financial markets led to domestic refinancing of foreign loans, resulting in large net outflows on the financial account. As such, the financial account recorded an Afl. 439.6 million net outflow (2022 Q1–Q3 Afl. 85.9 million net inflow). In contrast, continued strong tourism performance resulted in an Afl. 138.0 million net inflow on the current account and partially mitigated the financial account deficit. Meanwhile, the capital account registered a small net outflow (i.e., -Afl. 5.5 million) while “items yet not classified” recorded a net inflow of Afl. 8.6 million.

Table 3: Balance of payments (in Afl. million)*	YTD Q3 2022	YTD Q3 2023
Current account	160.9	138.0
Goods	-1,534.5	-1600.5
Services	1,782.4	2065.5
Primary income	-100.5	-305.8
Secondary income	13.5	-21.1
Capital account	-6.9	-5.5
Financial account	85.9	-439.6
Direct investment	166.3	53.1
Portfolio investment	-288.2	-205.9
Financial derivatives	4.7	3.3
Other investment	244.4	-103.4
Foreign accounts	-41.3	-186.6
Items not yet classified	-42.4	8.6
Change in international reserves (excluding revaluation differences)	197.6	-298.4

Source: CBA
*Transactions recorded through local commercial banks.

The financial account experienced a net outflow of Afl. 439.6 million, which dampened gains in the current account. The former resulted from net outflows across most components except for direct investment and financial derivatives. Specifically, the portfolio investment account recorded a net outflow of Afl. 205.9 million spurred by government foreign bond repayment. Additionally, foreign accounts recorded an Afl. 186.6 million net outflow driven by the private sector's local refinancing of a foreign loan. The other investment account added Afl. 103.4 million to the net outflows on the financial account owing to, among others, foreign loan extensions and foreign debt repayments by the other sector. Financial derivatives, substantially influenced by hedging, had a minor role with a net inflow of Afl. 3.3 million. On the other hand, a net inflow of Afl. 53.1 million on the direct investment account mitigated in part the net outflows mentioned above. The inflow on the direct investment account ensued largely from real estate purchases in Aruba by non-residents and borrowing by non-resident-affiliated parties.

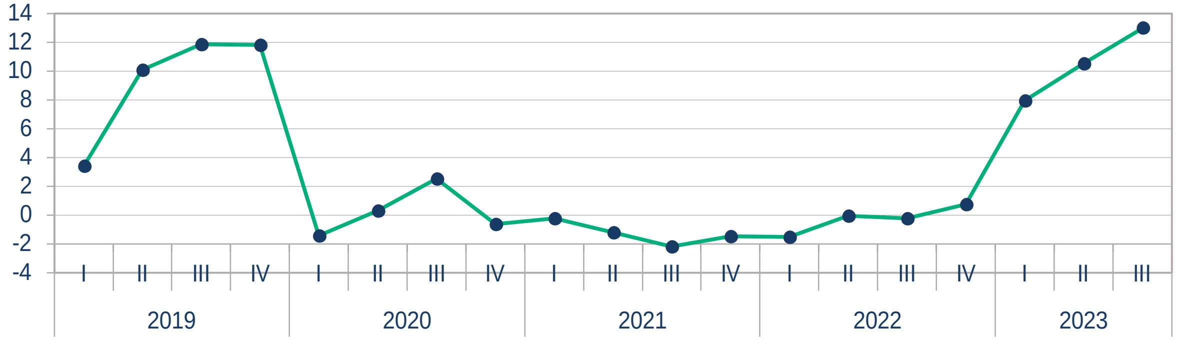
In the first three quarters of 2023, strong tourism demand drove a current account net inflow of Afl. 138.0 million as tourism revenue recorded an inflow of Afl. 2,830.4 million. Compared to the same period in 2022, the larger net inflow related to tourism services was due to the growing number of stay-over visitors and their spending per night. This tourism credit gain, along with heightened local consumption and higher import prices, also affected the goods account. During the first nine months of 2023, the goods account showed a net outflow of Afl. 1,600.5 million (2022 Q1–Q3: Afl. 1,534.5 million), partially mitigating the large inflow on the services account. Additionally, the primary income account registered a large net outflow of Afl. 305.8 million. The latter stemmed primarily from the hotel and commercial banking sector dividend payments, in addition to GoA's interest payments on foreign loans.

Monetary survey

Overall, credit expanded in the first three quarters of 2023. During the period under review, total credit provided by the local commercial banks rose by 7.0 percent compared to December 2022. The abovementioned development starkly contrasts with that observed a year earlier, where overall credit decreased by 0.2 percent in the third quarter of 2022 compared to December 2021. A higher amount of business loans (+13.0 percent), loans to individuals (+3.9 percent), and other credit (+0.8 percent) pushed up overall credit at the end of September 2023, compared to December 2022.

Term loans longer than two years (+23.1 percent), complemented by commercial mortgages (+7.0 percent), drove the increase in business loans despite contractions in term loans shorter than two years (-75.6 percent) and current accounts (-11.3 percent [Chart 15]). The growth in term loans longer than two years was mainly due to greater demand for local refinancing of existing foreign loans, given the interest rate differential resulting from relatively low interest rates on the domestic market vis à vis rates abroad.

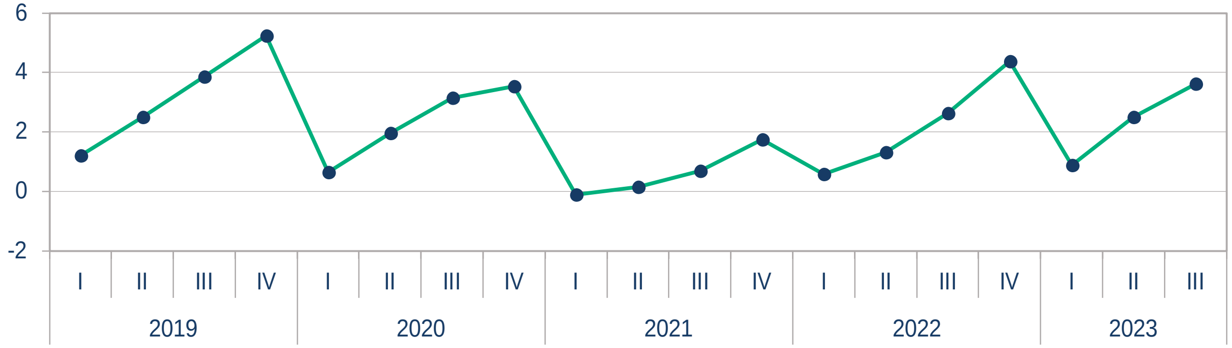
Chart 15: Loans to enterprises provided by local commercial banks
(year-to-date growth rates)



Source: CBA

At the same time, loans to individuals grew due to a considerable demand for consumer credit (+4.7 percent) and housing mortgages (+3.6 percent) (Chart 16). Following a long-term declining trend, consumer credit picked up in the third quarter of 2023. A jump in car loans (+16.1 percent) and other consumer credit (+5.4 percent) were the main contributors to the increase in total consumer credit. Credit cards (+0.0 percent) remained flat and personal loans (-0.6 percent) contracted in September 2023 compared to December 2022. Results from the Centrale Bank van Aruba's Consumer Confidence Survey also reflected these developments in credits to individuals, as the Consumption and Borrowing Habits Index of individuals climbed to 95.2 percent in the third quarter of 2023 compared to 94.8 a year earlier.

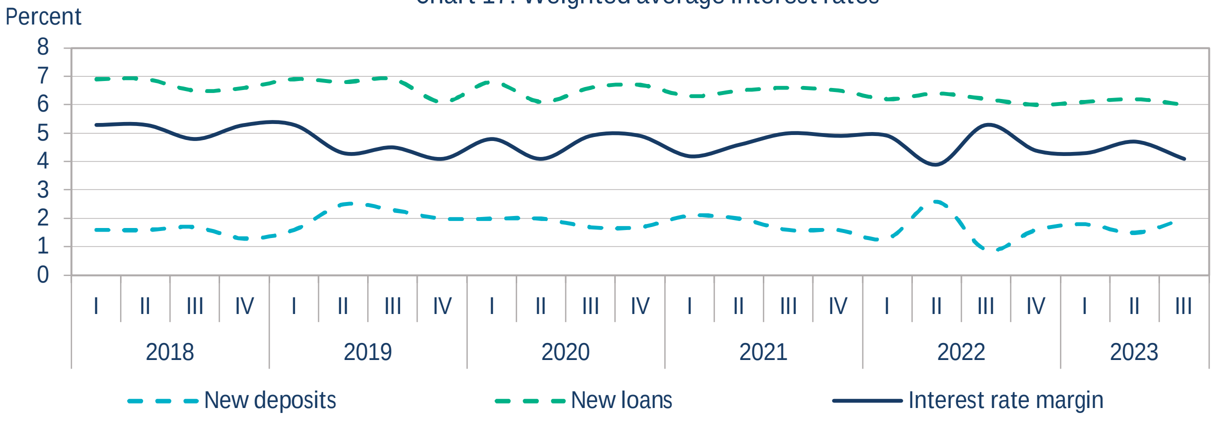
Chart 16: Housing mortgages provided by local commercial banks (year-to-date growth rates)



Source: CBA

The quarterly weighted average interest rate margin fell to 4.1 percent at the end of the third quarter of 2023, down from 4.4 percent at the end of the fourth quarter of 2022 (Chart 17). The lower interest rate margin resulted from higher average interest rates on new deposits (Q4-2022: 1.6 percent; Q3-2023: 2.0 percent), while the average interest rate on new loans remained unchanged (Q4-2022: 6.0 percent; Q3-2023: 6.0 percent). The average interest rate on deposits mainly increased due to an upturn in the interest rate on time deposits shorter than 12 months, which went from 1.1 percent in Q4-2022 to 1.7 percent in Q3-2023. Despite the stable average interest rate on new loans in Q3-2023 compared to Q4-2022, there was volatility in the interest rates for different types of loans. The average interest rate on consumer credit dropped from 8.6 percent in Q4-2022 to 7.7 percent in Q3-2023. The average interest rates on housing mortgages (Q4-2022: 5.2 percent; Q3-2023: 5.1 percent) and commercial mortgages (Q4-2022: 6.0 percent; Q3-2023: 5.9 percent) edged down, while other commercial loans (Q4-2022: 5.9 percent; Q3-2023: 6.1 percent) inched up.

Chart 17: Weighted average interest rates



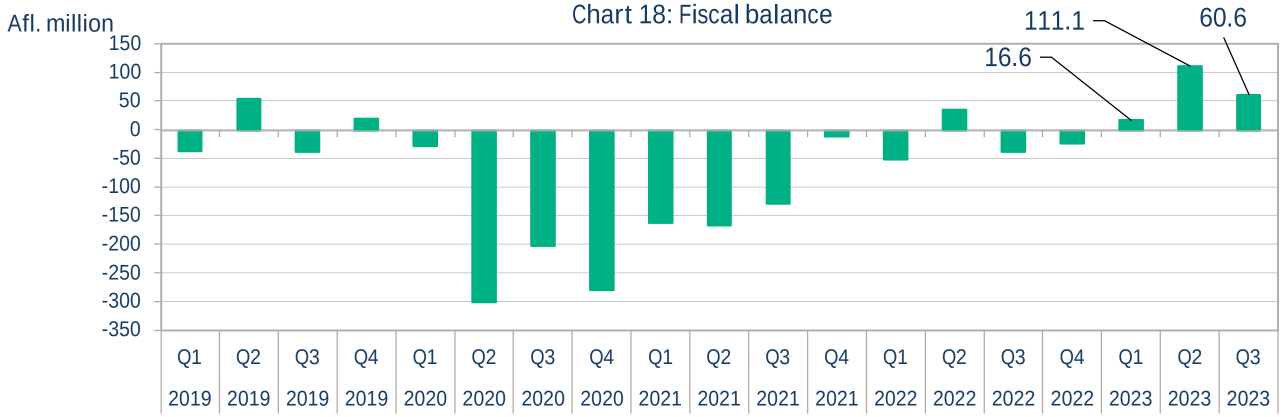
Source: CBA

The financial soundness indicators remained adequate throughout the first three quarters of 2023. The capital adequacy ratio decreased to 32.1 percent, down from 39.8 percent in the fourth quarter of 2022. Asset quality, measured as nonperforming loans to gross loans, strengthened, reaching 1.8 percent compared to 3.5 percent at the end of December 2022. Nonperforming loans have been following a downward trend since April 2021, likely due to the impressive recovery of the Aruban economy following the COVID-19 pandemic. During the period under review, return on assets before taxes, equity before taxes, assets after taxes, and equity after taxes contracted compared to the fourth quarter of 2022. This development points to decreased profitability of the local commercial banks. On the other hand, the interest margin to gross income (from 52.4 percent to 54.0 percent), noninterest expenses to gross income (from 61.2 percent to 71.9 percent), and interest rate margin (from 4.2 percent to 4.9 percent) expanded. The commercial banks aggregated prudential liquidity ratio (PLR) stood at 23.4 percent at the end of September 2023 (minimum required PLR: 18.0 percent), 6.4 percentage points lower than in December 2022. This lower level coincided with liquidity outflows related to the local refinancing of foreign loans early in 2023.

Government

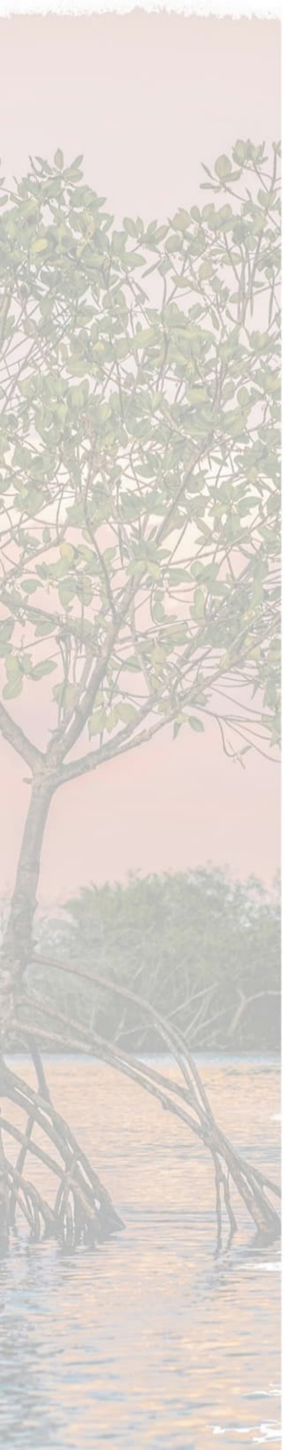
During the first nine months of 2023, the GoA recorded a financial surplus of Afl. 188.1 million compared to an Afl. 55.6 million deficit in the same period of 2022 (Chart 18). This turnaround represented a jump of Afl. 243.7 million in government revenues, although government expenditures (on a cash basis) grew by Afl. 36.7 million. Moreover, at the end of September 2023, government revenues continued its upward trend (i.e., Afl. 1,240.8 million) exceeding the level (i.e., Afl. 1047.3 million) registered in the first three quarter of 2019.

Chart 18: Fiscal balance



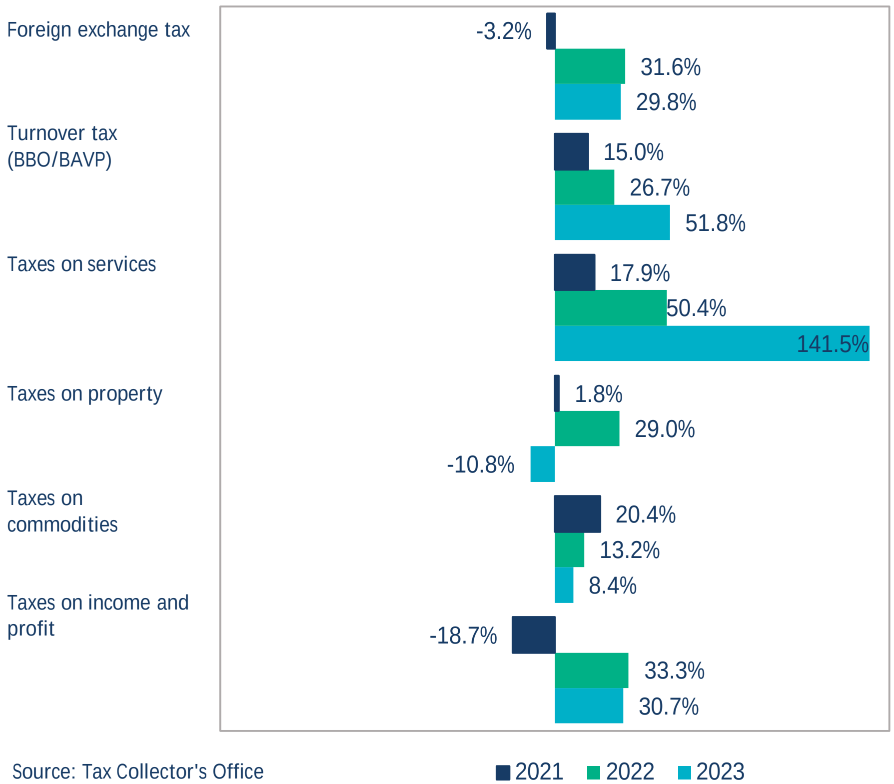
Calculations: CBA

In the first three quarters of 2023, almost all tax components registered an expansion leading to an Afl. 238.9 million (+28.1 percent) gain in tax revenues. Revenues from the turnover tax and taxes on income and profit were the main engines of growth in tax revenues. Income from turnover taxes rose by Afl. 86.5 million (+51.8 percent), likely due to heightened local consumption, boosts in tourism spending, and increased prices for goods and services (Chart 19). In addition, the increased turnover tax rate at the beginning of the year also contributed to the hike in turnover tax revenue and to a lesser degree the implementation of the BBO at the border in August 2023. Receipts from taxes on income and profit expanded by Afl. 82.2 million (+30.7 percent), resulting from elevated income tax, wage tax, and profit tax revenues.



The hike in receipts from income and wage tax reflected improved employment. Profit tax revenues jumped by Afl. 53.1 million (+58.3 percent) to Afl. 144.3 million, surpassing pre-pandemic levels. Meanwhile, revenues from taxes on services grew by Afl. 48.9 million (+141.5 percent), primarily due to higher collected hotel room tax revenues. The latter was impacted by multiple factors that included, among others, improved tourism activities and associated hotel rate hikes, the rise in the hotel room tax from 9.5 percent to 12.5 percent, and the larger share of the total hotel room tax collections that the government receives as of the first of January 2023. Income from taxes on commodities grew by Afl. 20.2 million (+8.4 percent), principally due to elevated import duties (+15.8 percent). The latter reflects the increased value of imported goods in merchandise trade data. Moreover, foreign exchange tax collections climbed by Afl. 11.9 million (i.e., +29.8 percent) due to the increased number of payments to nonresidents during the period under review. On the other hand, receipts from taxes on property fell by Afl. 10.9 million (-10.8 percent), due largely to a drop in transfer tax revenues.

Chart 19: Government revenue
(Percentage change YTD Sept. 2023 vs. YTD Sept. 2022)

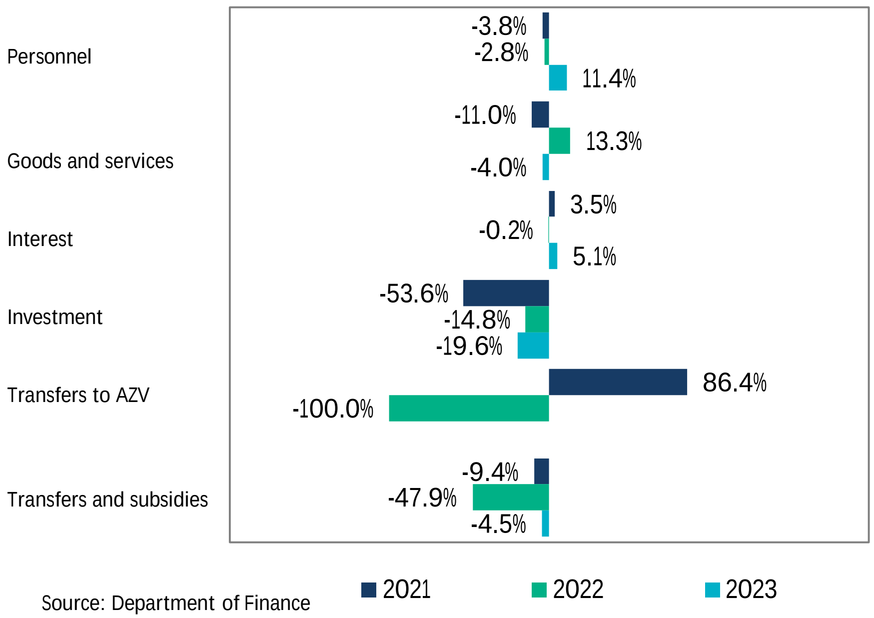


Source: Tax Collector's Office

Government expenses (on a cash basis) reached Afl. 1043.4 million at the end of September 2023. This development pointed to an expansion of Afl. 36.7 million or 3.6 percent compared to the first nine months of 2022. Most components of government expenditures showed an uptick compared to the same period in 2022 (Chart 21). The largest upward movements were noted in personnel-related expenses

(+Afl. 45.7 million or +11.3 percent), and interest payments (+Afl. 9.6 million or +5.0 percent). Personnel expenses rose likely in relation to the complete roll-back of the COVID-19 curtailment of public-sector wages. Meanwhile, interest payments expanded as a result of rising interest rates from tighter global financial conditions.

Chart 20: Government expenditures
(Percentage change YTD Sep 2023 vs. YTD Sep 2022)

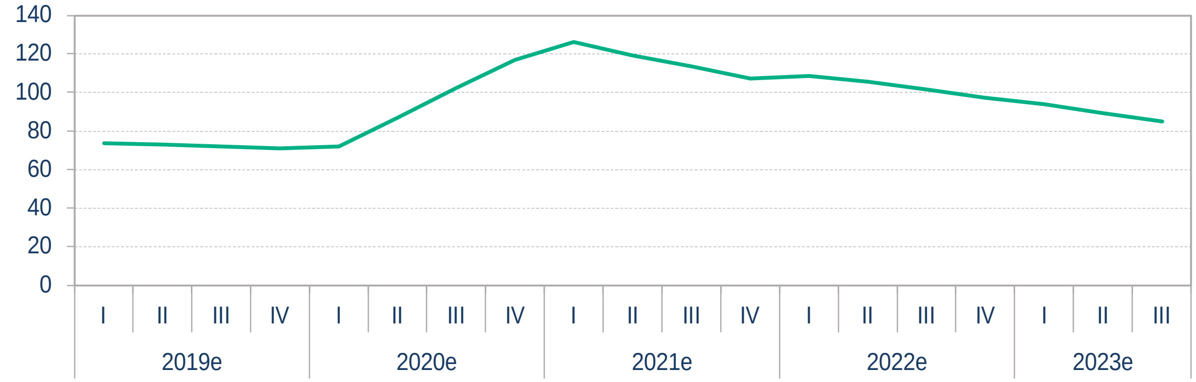


Source: Department of Finance

Compared to December 2022, total government debt shrank by Afl. 226.7 million to Afl. 5,490.9 million in September 2023. Lower foreign debt owed to the United States (-Afl. 171.2 million) predominantly led to the decline in government debt. Meanwhile, the debt owed to the

Dutch government for liquidity support (Afl. 915.5 million) stayed unchanged compared to December 2022. Domestic debt contracted (-Afl. 64.9 million), mostly due to decreased short-term non-negotiable debt (-Afl. 116.4 million) and treasury bills stock (-Afl. 53.8 million), while government bonds stock rose (+Afl. 105.3 million). Total government debt (as a ratio to GDP) stayed above the 2019 Q4 pre-pandemic level of Afl. 4,318.9 million (or 71.1 percent of GDP), highlighting the pandemic-induced expansion of government debt. Due to the combination of nominal GDP growth with debt contraction, the debt-to-GDP ratio fell to 84.9 percent by the end of September 2023, marking a reduction of 12.2 percentage points compared to the end of December 2022 (Chart 19).

Chart 19: Debt-to-GDP ratio



Calculations: CBA
e = estimated

II. INTERNATIONAL DEVELOPMENTS

In October 2023, the International Monetary Fund (IMF) published its most recent World Economic Outlook (WEO). The WEO contained updates to the global growth projections presented in July 2023. In the October 2023 WEO, the IMF foresees a decline in global growth to 3.0 percent in 2023 and 2.9 percent in 2024, down from the 3.5 percent estimated for 2022 (Table 4).

The October 2023 forecast follows the global recovery from the COVID-19 pandemic and a normalization of the global economic landscape after Russia invaded Ukraine. Consequently, supply chain challenges have mostly been resolved, and logistics costs and delivery times conform to their pre-pandemic levels. Inflation continues to be elevated, resulting in tight monetary policy stances. This development, in turn, raises borrowing costs and dampens economic activity. On a positive note, economic activity proved resilient in 2023 due to stronger consumption of services.

According to the October 2023 WEO, emerging market and developing economies (EMDE) were the main catalysts for global output. The forecasted increase for the abovementioned economies averaged 4.0 percent in 2023 and averages the same percentage in 2024. On the other hand, advanced economies (AE) will likely strengthen by 1.5 percent in 2023 and 1.4 percent in 2024. In addition to the discrepancy in global output growth between these two groups, there are vast differences between countries within each group. Concerning the AE, the IMF projects that the United States' output will rise 2.1 percent in 2023 and 1.5 percent in 2024. The US projections are driven by a strong consumption in YTD 2023 amid tight labor markets, and with the descent of inflation in 2024, the strong activity is not expected to slow significantly. Meanwhile, the Euro area is expected to experience growth of 0.7 percent in 2023 and further expand by 1.2 percent in 2024. This projection represents a downward revision of the Euro area's previous outlook and is primarily associated with lower-than expected growth in YTD 2023, alongside a divergence in growth between large economies. Owing to weak manufacturing output and other interest-rate-sensitive sectors, countries like Spain and Italy, which benefitted enormously from more robust services and tourism, outperformed countries like Germany within the Euro area. From the EMDE, Latin America and the Caribbean (LAC) will likely improve by 2.3 percent in 2023 and 2024 — improved projections compared to the July WEO (+0.4 percent in 2023; +0.1 percent in 2024). One of the countries contributing to the strong performance of the LAC is Brazil, due to a surge in agricultural production with spillover to activity in services. Furthermore, Mexico, with a delayed post-pandemic recovery in services and spillovers from resilient demand from the United States, also has contributed to the LAC performance.

There are various risks to the IMF's October 2023 WEO. Despite easing the adverse risks compared to the April 2023 WEO, on balance, the risks to the October 2023 WEO remain tilted to the downside. Downside risks include a deepening Chinese property sector crisis with potential global spillovers, more volatile commodity prices due to intensifying geopolitical tensions, more gradual than expected inflation deceleration with the possibility of continued monetary policy tightening, and increasing debt distress.

As a result of the risks, the IMF has indicated various policy priorities. These include: restoring price stability, preserving financial stability, rebuilding fiscal buffers while protecting the most vulnerable, reducing structural barriers to growth by encouraging labor market participation, enhancing multilateral coordination for debt resolution, and strengthening resilience to mitigate the effects of climate change.

Table 4: Projections for the world economy and selected economies
(Real GDP growth, in percent)

Indicator	2022e	2023f	2024f
World	3.5	3.0	2.9
Advanced Economies	2.6	1.5	1.4
United States	2.1	2.1	1.5
Euro Area	3.3	0.7	1.2
Emerging Markets and Developing Economies	4.1	4.0	4.0
Latin America and the Caribbean	4.1	2.3	2.3

Source: IMF

e = estimate ; f = forecast

III. CONCLUSION

During the first three quarters of 2023, tourism remained the main engine of economic growth although the former showed initial signs of pre-pandemic normalization in the second quarter of 2023. Growth in stay-over visitors and tourist spending were the main contributors to the year-on-year increase in real GDP of 6.1 percent. Consumption and investment indicators were primarily positive due to increased local demand for goods and services, and more optimistic business sentiments regarding current economic conditions.

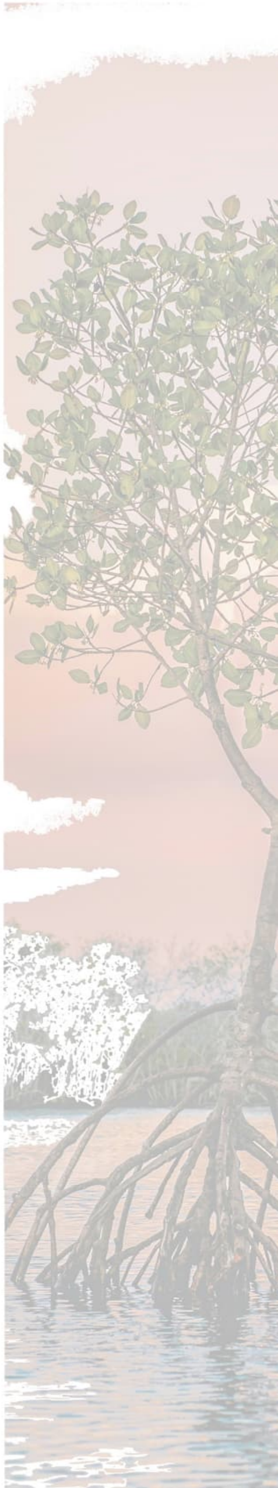
In the first nine months of 2023, tourism indicators continued to be robust, albeit showing initial signs of performance normalization as growth slowed in the second quarter of 2023. The US market was the primary driver of tourism demand, with the Canadian and Colombian markets increasing in significance. The hotel sector performance reflected a strong performance in tourism-related activities. The hikes in the number of stay-over visitors, total visitor nights, and tourism revenue led to a strengthening of the average hotel occupancy rate, average daily rate (ADR), and revenue per available room (RevPar).

At the end of September 2023, reduced average gasoline prices were the primary reason for the deceleration of the 12-month average inflation to 4.5 percent, down from 5.5 percent at the end of 2022. The End-of-Period (EoP) inflation slowed to 1.7 percent at the end of September 2023, from 5.7 percent at the end of 2022.

During the third quarter of 2023, the real exchange rate for the Aruban florin vis-à-vis the U.S. dollar fell by 0.5 index point compared to the previous quarter of 2023. The continued descent of the real exchange rate reaching 94.3 index points follows the sustained improvement in the competitive position of Aruba vis-à-vis that of the United States, which began in the second quarter of 2020 and started to slow down in 2022. A narrowing inflation differential between the United States and Aruba resulted in the stabilization of the real exchange rate.

International transactions settled through the commercial banking sector gave rise to a net foreign exchange outflow of Afl. 298.4 million during the first three quarters of 2023. This outcome was largely related to domestic refinancing of a foreign loan by the private sector and debt repayments by the utilities sector and the GoA, which led to a net outflow on the financial account of the balance of payments. Dividend payments abroad also contributed to the outflow of foreign exchange. A buoyant tourism performance and resulting strong tourism revenue inflows partially mitigated the net outflow.

Overall credit increased in the first three quarters of 2023 after remaining virtually flat since 2020. The uptick in overall credit was mainly due to augmented business loans, followed by higher loans to individuals. The former is primarily the consequence of greater demand for local refinancing of existing foreign loans due to lower interest rates on the domestic market vis-à-vis those abroad.



Government revenues (excluding non-tax revenue) surged in the first nine months of 2023 vis-à-vis the same period in 2022. Total tax revenues exceeded the level registered in the same period of 2019, resulting from improved economic conditions and the 2023 tax reform. Economic growth and debt contraction led to a decline in the debt-to-GDP ratio to 84.9 percent by the end of September 2023, marking a reduction of 12.2 percentage points compared to the end of December 2022.

In October 2023, the International Monetary Fund (IMF) published its most recent World Economic Outlook (WEO). The WEO contained updates to the global growth projections presented in July 2023. In the October 2023 WEO, the IMF predicted a decline in global growth to 3.0 percent in 2023 and 2.9 percent in 2024, down from the 3.5 percent estimated for 2022. Forecast risks remain tilted downward.

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