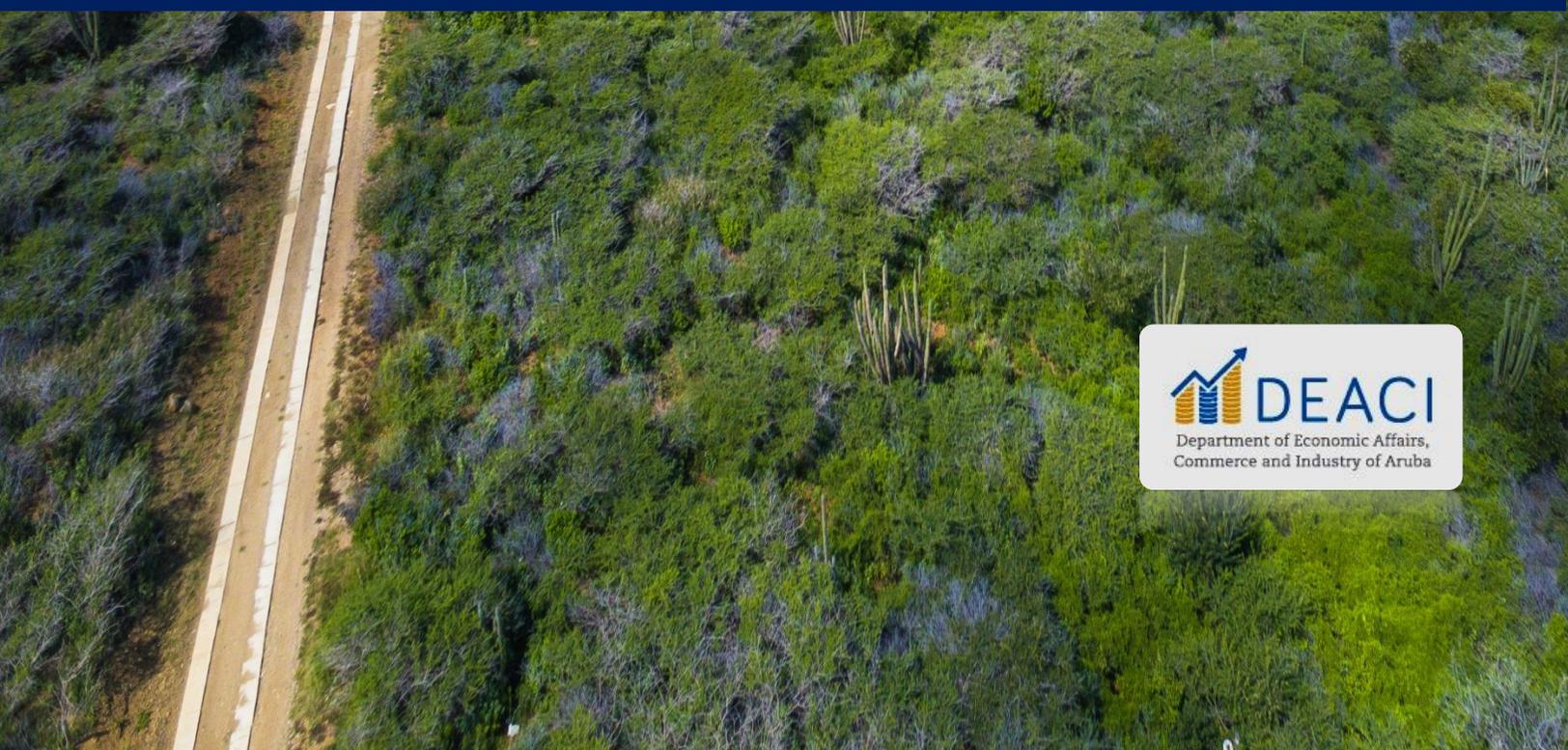




Economic Outlook 2022- 2023

October 2022



Disclaimer:

The Department of Economic Affairs, Commerce and Industry is prudent with the projection for 2022 and 2023 due to increasing uncertainties in time. Therefore, these estimations have to be considered preliminary and used with care.



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List of Abbreviations

ABBREVIATION	EXPLANATION
ADR	Average Daily Rate
ATA	Aruba Tourism Authority
CARTAC	The Caribbean Regional Technical Assistance Centre
DEACI	Department of Economic Affairs, Commerce and Industry
EGS	Exports Goods and Services
EIA	U.S. Energy Information Administration
ET	Exports Tourism
GDP	Gross Domestic Product at market prices
IGS	Imports Goods and Services
PC	Private Consumption
PUBC	Public Consumption
TC	Total Consumption
TCV	Total Cruise Visitor
TI	Total Investments
TSV	Total Stayover Visitor
PI	Private Investments
PUBI	Public Investments

Abstract



Abstract

The ongoing war in Ukraine between Russia that started in February 2022, resulting in a higher global inflation, the slowdown in China's supply chain (still an after-effect of the COVID-19 pandemic), the rising energy costs, the disrupted trade, the exodus of war victims to neighboring countries and the shortage of food have all major impact for the economies in the world, including for Aruba.

The Department of Economic Affairs, Commerce and Industry is prudent with the projection for 2022 and 2023 due to the volatile period. Therefore, these estimations have to be considered preliminary and used with care.

Compared to 2020 the estimation for the year 2021 shows an increase of 16.4 percent of the Gross Domestic Product in nominal terms (nominal GDP). When compared to the estimation in October 2021, this signifies a nominal GDP change of 0.6 percentage points lower (from 17.0 percent to 16.4 percent). See graph 1. This difference is mainly due to a slower increase of the private consumption in 2021 than earlier estimated. The nominal GDP in 2021 (Afl. 5,379m) was approximately at 87.9 percent compared to the level of 2019 (Afl. 6,118m).

For the years, 2022 and 2023 the nominal GDP is projected to increase by 10.0 percent and 4.5 percent compared to 2021 and 2022. It is expected that the nominal GDP for 2022 (Afl. 5,916m) will be at 96.7 percent of the level of 2019 (Afl. 6,118m), while the nominal GDP in 2023 (Afl. 6,184m) will be at 101.1

percent of the level of 2019. This indicates that the local economy is reaching its pre-pandemic level. Compared to the forecast of June 2022, the year 2022 shows an increase of 1.2 percentage points (from 8.8 percent to 10.0 percent), which is mainly influenced by the extraordinary recovery in the tourism sector.

For the year 2023, the nominal GDP also shows a growth of 1.2 percentage points compared to the previous projection in June 2022 (from 3.3 percent to 4.5 percent). This is also a result of the projected tourism growth.

In the baseline, the inflation rate is forecasted to be at 5.6 percent in 2022 and 5.4 percent in 2023. This calculation is based on the latest data from the CBS, August 2022 and includes the increases in the prices of water and electricity in 2022. In addition, it is assumed that the BBO will increase by 1.0 percent in 2023. If foreign prices continue to rise in 2023 as globally expected, DEACI forecasts an inflation of 7.1 percent.

According to the IMF, the inflation for Aruba is projected at 6.0 percent in 2022 and 5.5 percent in 2023. (WEO, October 2022).

The tourism sector is the main driver of the continuous growth since the COVID-19 pandemic in 2020. The growth in the Export Tourism is forecasted in 2022 at 38.9 percent which is 17.8 percent higher compared to 2019. Compared to the previous forecast in June 2022, Export Tourism in 2022 is estimated higher (+7.6 percentage points),

due to the positive performance of the tourism industry in the latest months. For 2023, an Export Tourism growth is forecasted at 4.2 percent, which is 22.7 percent higher compared to 2019. The growth of Export Tourism compared to 2019 is the consequence of a higher forecasted expenditure per night, which the main contributors are a higher projected Average Daily Rate and non- accommodation expenditures for 2022 and 2023.

Furthermore, compared to the forecast in June 2022, Import of Goods and Services are expected to increase by 25.0 percent in 2022 that is mainly driven by a higher tourism flow and the foreign price inflation. Imports of Goods and Services is estimated 0.6 percentage points lower (25.6 percent to 25.0 percent) compared to the forecast in June 2022.

In addition to having a baseline, two other scenarios have also been added for the year 2023. A positive scenario A and a conservative scenario B that are based on the performance of the tourism industry, the geopolitical developments and its expected effects on the global economy, in particular global inflation. In scenario A the nominal GDP will grow by 6.8 percent and in scenario B the nominal GDP is expected to decrease by 1.9 percent.

Finally, the real GDP for the baseline in 2022 is expected to increase by 7.2 percent and decline by 0.6 percent in 2023. In the baseline a negative development can be observed for Total Consumption in real term, which indicates an expected loss of purchasing power among consumers in 2022 and 2023.

For the scenarios A, the real GDP is forecasted to increase by 1.5 percent and for scenario B to decrease by 7.5 percent.

Graph 1: Development nominal GDP estimates from Outlook June 2022 versus Outlook October 2022 for the years 2021- 2023



Graph created by DEACI using the MARUBA Model, October 2022

A photograph of a white building with green accents and a red staircase leading to a balcony. The building features a central entrance with a white door and green shutters, flanked by white columns and a balcony with a white railing. The sky is blue with some clouds. The text "Chapter 1: Introduction" is overlaid on a dark blue banner across the middle of the image.

Chapter 1: Introduction

Chapter 1: Introduction

The Economic Outlook is a product of the Department of Economic, Commerce and Industry (DEACI) that provides analysis and forecasts of the economic indicators and growth of Aruba. For compilation of the Economic Outlook different data sources are used from various institutions, like the Central Bank of Aruba, the Central Bureau of Statistics, the Department of Finance, the Tax Department, the Aruba Tourism Authority, the Aruba Hotel and Tourism Association, the Aruba Airport Authority, the Social Insurance Bank Aruba and the Department of Labor and Research.

In addition to these institutions, certain organizations are also interviewed to discuss their perception of the economic situation of Aruba. Not only their perception of the current economic conditions is being requested, but also what the mayor investment plans and risks are for the current and coming years for various projects on the island. At last, the DEACI holds regular meeting with the Commission Macro Model members to present and discuss the assumptions, estimations and forecasts before publishing the Economic Outlook.

According to the International Monetary Fund, IMF (WEO, October 2022), the projected global economy is not growing as predicted in the latest economic outlook.

The GDP growth is recovering slower than projected for advanced economies, emerging markets and developing economies. According to the IMF the world real GDP growth in 2021 is estimated at 6.1

percent, and a slight increase of 3.2 percent is expected for the year 2022 and a 2.7 percent growth in 2023. For the USA that has a direct impact on the Aruban economy, the real GDP is expected to increase by 1.6 percent in 2022. In 2023 a growth of 1.0 percent is projected. Latin America and the Caribbean is projected to grow by 3.5 percent in 2022 and 1.7 percent in 2023. Netherlands is projected to grow by 4.5 percent in 2022 and 0.8 percent in 2023.

The real GDP growth according to the IMF for Aruba is 4.0 in 2022 and 2.0 in 2023.

The reason for the sharp slowdown in the global economic growth are: higher-than-expected inflation that weakens consumer demand, the ongoing war in Ukraine which disrupts the supply chains and has a negative effect on the commodity markets, tighter financial conditions could induce debt distress, the worsening food insecurity and the slowdown in China's economy have contributed to a lower economic forecast. Inflation has become one major concerns for the global economy. The reasons for the inflationary pressures stem from increase in energy prices due to the war and the disruption of the supply chains that has persisted since the pandemic.

The war between Ukraine and Russia has contributed greatly to higher prices for food, energy and commodities prices.

According to IMF (WEO, October 2022), the world inflation is estimated at 8.8 percent in 2022 and 6.5 percent in 2023. For the USA,

the inflation is expected to be 8.1 percent in 2022 and 3.5 percent in 2023. Inflation in Latin America and the Caribbean is projected to grow by 14.1 percent in 2022 and 11.4 percent in 2023. The inflation in Netherlands is expected to be 12.0 percent in 2022 and 8.0 percent in 2023 and last but not least the inflation for Aruba is expected to be 6.0 percent in 2022 and 5.5 percent in 2023.

Last June 2022, the DEACI presented the outlook for the years 2021-2023 based on data up to June 2022. After monitoring and reviewing the forecasts based on new national and international developments and more updated data, DEACI presents the final estimates for 2021 and the forecasts for 2022-2023. Please note that DEACI is still cautious about forecasts for 2022 and 2023

due to the uncertainties in the coming period. These estimates should still be considered preliminary and used with care.

The following chapter 2 presents the baseline for the final estimation for the year 2021 and the forecasts for 2022 and the year 2023.

In chapter 3 two different scenarios are presented, a positive scenario A for the year 2023 and a conservative scenario B for the year 2023, based on the changes in the total stayover visitors, cruise visitors and the impact of the worldwide inflation. Subsequently, in chapter 4, the real GDP figures are presented for 2022 and 2023. In chapter 5, the global economy is analyzed and finally, the Annexes include all tables, graphs and assumptions of this Economic Outlook 2022-2023, October 2022.



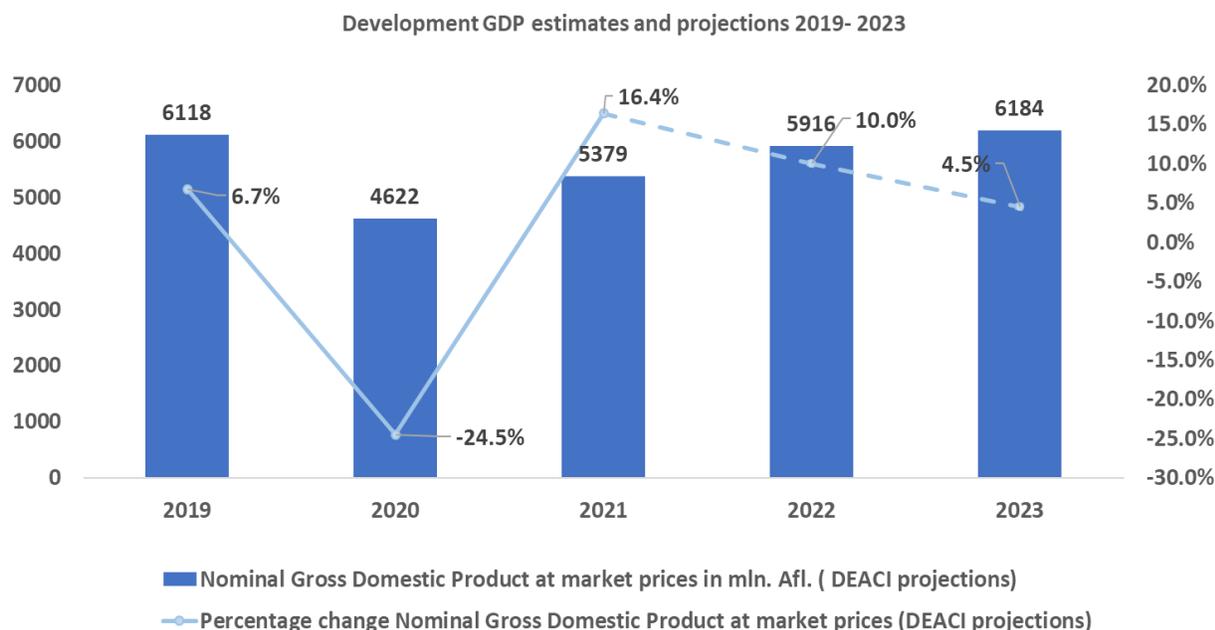


Chapter 2: Economic Outlook 2022 - 2023



Chapter 2: Economic Outlook 2022 - 2023

Graph 2: Development nominal GDP estimates and projections 2019- 2023



Graph created by DEACI using the MARUBA Model, October 2022

The economy of Aruba has been steadily recovering since 2021 as a consequence of the excellent performance of the tourism sector.

For the years 2022 and 2023 the tourism industry is expected to have a positive impact on the economic growth in Aruba. In 2021 the total stayover visitors (TSV) has shown an unexpected growth reaching 72.1 percent of the level of 2019. For 2022 and 2023, the tourism sector is also forecasted to be the main driver of the island's economic performance by assuming a level of 99.2 percent in 2022 and a level of 105.0 percent in 2023 compared to 2019.

Baseline 2021

Compared to 2020 the estimation for the year 2021 shows an increase of 16.4 percent of the nominal GDP as shown in Graph 2. This is mainly due to a positive recovery in the tourism sector and private investments. The nominal Export Tourism (ET) shows a growth of 66.0 percent in 2021 compared to 2020 (see Annex B).

This all resulting in a nominal Private Consumption (PC) growth of 3.3 percent in 2021 compared to previous year. As a result, nominal Import of Goods and Services (IGS) are expected to increase by 20.3 percent compared to 2020.

The nominal GDP in 2021 (Afl. 5,379m) will be approximately at 87.9 percent compared to the level of 2019 (Afl. 6,118m). See table 4 in Annex B for the detailed figures for the baseline estimates 2021.

Baseline 2022 and 2023

For the years 2022 and 2023, the nominal GDP is forecasted to increase by 10.0 percent and 4.5 percent respectively compared to 2021 and 2022. It is expected that the nominal GDP for 2022 (Afl. 5,916m) will be at 96.7 percent of the level of 2019 (Afl. 6,118m), while the nominal GDP in 2023 (Afl. 6,184m) will be at 101.0 percent of the level of 2019. See table 4 in Annex B for the detailed figures for the baseline forecast 2022-2023.

Nominal GDP growth could reach 10.0% in 2022, which is 96.7% of the level of 2019. For 2023 a Nominal GDP growth is projected of 4.5%, which is 101.0% of the level of 2019.

In the baseline, the prices of water and electricity rose in September 2022, because of international increases in energy prices. DEACI has adjusted the water and electricity prices in September 2022 compared to the Outlook dated June 2022.

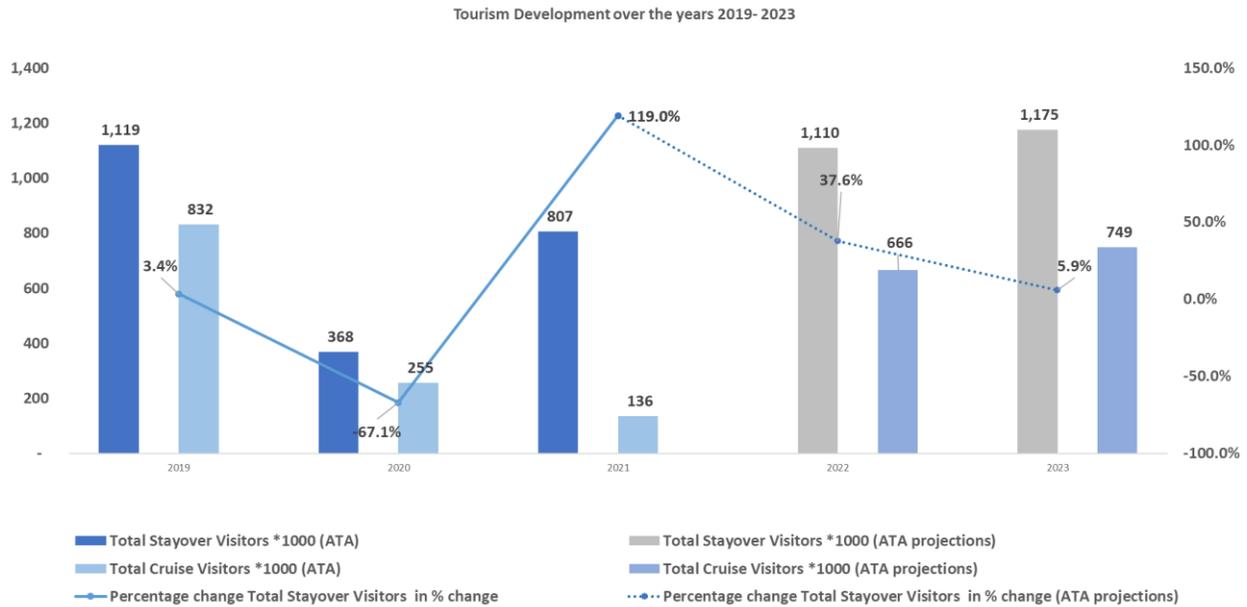
Export

It is expected that the tourism industry will continue to develop positively thanks to the promotion of the Aruba Tourism Authority (ATA) and other key stakeholders in the core business of the tourism sector. A continuous increase in the number of tourists is forecasted for the years 2022 and 2023. In this outlook 1,110,341 TSV is forecasted in 2022 and in 2023 TSV is forecasted to achieve 1,174,891 TSV, which is 105.0 percent of the level of 2019 (Commission Macro Model, August 2022). See graph 3.

Subsequently an increase in the number of TCV is forecasted for the years 2022 and 2023. TCV is expected to total 665,601 in 2022 and a total 748,801 is forecast for 2023 which is 90.0 percent of the level of 2019 (The Aruba Tourism Authority, August 24, 2022). See graph 3. It is important to note that the cruise industry opened later than the stay-over industry and had a slower start with the COVID-19 restrictions.

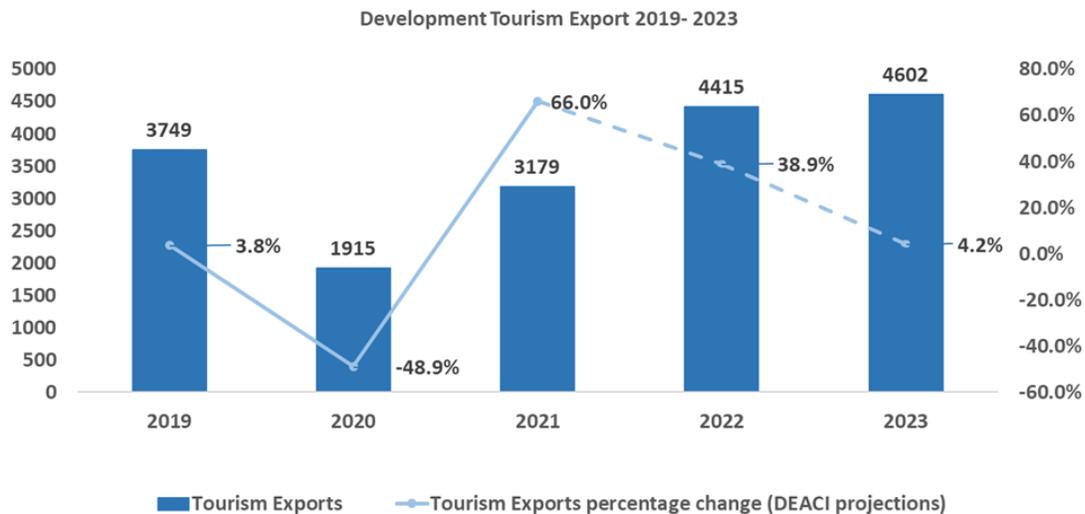


Graph 3: Development Tourism 2019- 2023



Graph created by DEACI using the MARUBA Model, October 2022

Graph 4: Development Tourism Exports 2019- 2023



Graph created by DEACI using the MARUBA Model, October 2022

Not only the quantity of tourism has been gradually increasing since 2019, but the average spending per tourist per night has also shown an increase. The main driver of the expected growth in 2022 compared to 2021 is an increase in ET by 38.9 percent as shown in graph 4. For 2023, an ET growth is expected of 4.2 percent compared to 2022.

The main contributor for the higher expenditure per night is a higher projected ADR and non-accommodation expenditures for 2022 and 2023 compared to 2019.

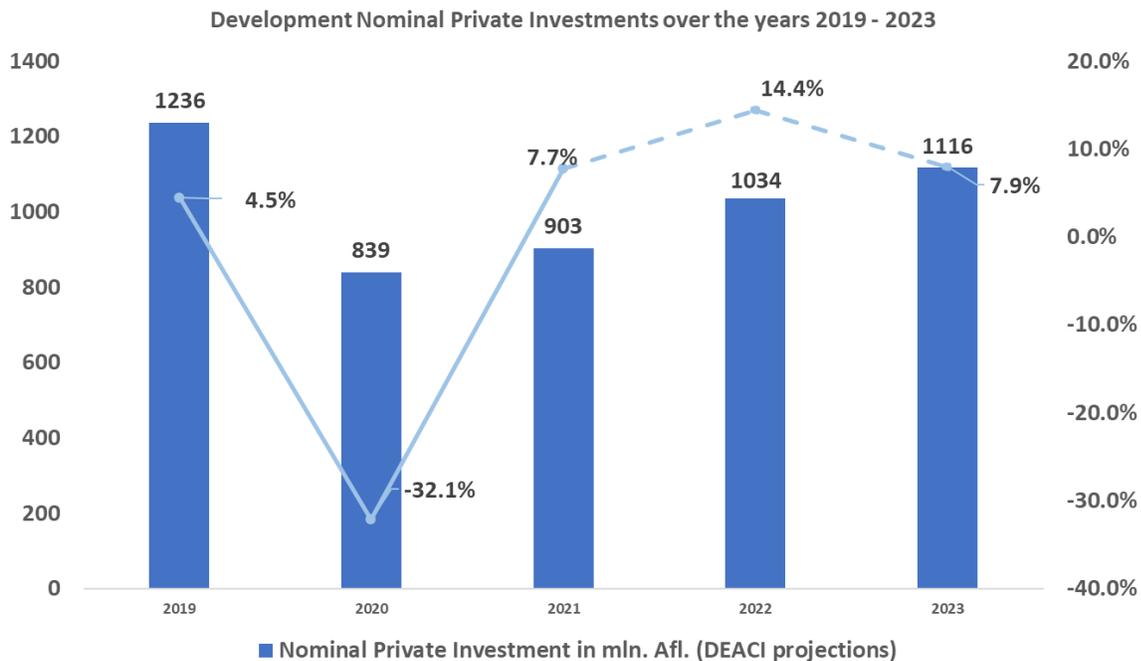
The assumption is that the ADR is projected to grow by approximately 10.0 percent in 2022 compared to 2021 and 3.0 percent in the year 2023 compared to previous year.

Finally, the total Export of Goods and Service (EGS) is expected to grow in 2022 by 34.0 percent compared to 2021 and for 2023 a

growth of 4.7 percent (see Annex B). Note that in 2022, this growth is due to more tourism, that result in more tourism revenue. In chapter 4 the real components are presented.

Investment

Graph 5: Development Nominal Private Investments over the years 2019- 2023



Graph created by DEACI using the MARUBA Model, October 2022

Another driver is Private Investment (PI) which is expected to rise in 2022 by 14.4 percent, that is 83.6 percent of the level of

2019. It is expected that the investments that were on hold in 2020 and 2021, due to the pandemic, will be gradually picking up in

2022 and in 2023. However, the execution of the projects is slower than expected compared to previous outlook of June 2022, as a consequence of the various economic uncertainties and the subsided global economic growth in the 2nd quarter of 2022. The speed of the gradual pick up is adjusted downwards in 2022 and spreaded out further

in 2023 and 2024. Still the pickup in the tourism sector will keep having a spin off effect and will keep resulting in more economic activities. For 2023, a PI is forecasted to grow by 7.9 percent, which is 90.3 percent of the level of 2019. See graph 5.

The assumption regarding PI is that in the years 2022 a 50 percent risk factor for planned projects has been calculated for those projects that does not show any progress as per September 2022. The assumption regarding PI for the year 2023 is a risk factor of 50 percent for planned project that as per 2022 didn't start constructing yet.

Subsequently Public Investment (PUBI) is projected for 2022 with a growth of 41.0 percent compared to 2021 while a 9.1 percent decrease is expected in 2023. For PUBI in 2022 an amount of Afl. 22 mln. is budgeted and in 2023 an amount of 20 mln. has been budgeted.

PI is forecasted in 2022 at a 83.6 percent of the level of 2019. For 2023 a PI is forecasted at 90.3 percent of the level of 2019.

Consumption

Total Consumption (TC) shows a growth of 0.7 percent in 2022, which is 89.9 percent of the level of 2019. For 2023, a TC is projected of 3.7 percent, which is 93.3 percent of the level of 2019. See graph 6.

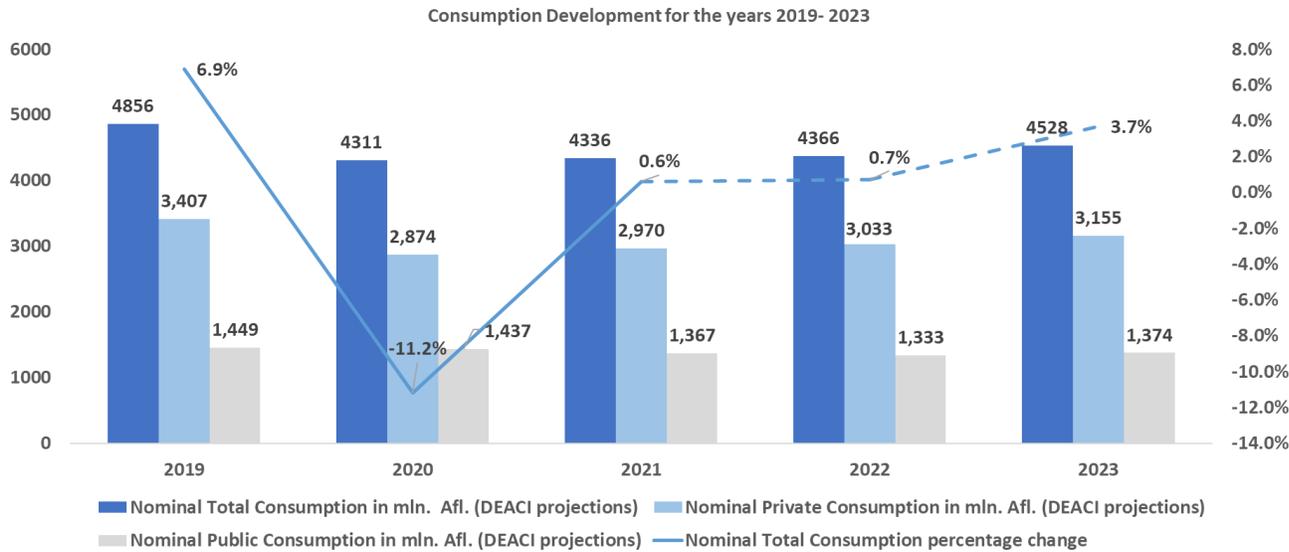
Private Consumption (PC) shows a growth of 2.1 percent in 2022. For 2023, PC is projected to grow by 4.0 percent. In 2022, PC will be at the level of 89.0 percent of 2019 and in 2023 this will be at a level of 92.6 percent.

The influencing factors in 2022 are based on the assumptions that the average wages in the private sector will recover in 2022 to the level of 2019. In 2023, the labor market will grow with tourism and investments development and average wages will grow with the wage rate.

Subsequently for Public Consumption (PUBC) for 2022 is projected a decrease of 2.5 percent compared to 2021 and a growth of 3.1 percent in 2023. This is related to the public sector's wage adjustment at the pre-pandemic level.

PC is forecasted in 2022 at 89.0 percent of the level of 2019. For 2023 a PC is forecasted at 92.6 percent of the level of 2019.

Graph 6: Development Consumption over the years 2019- 2023



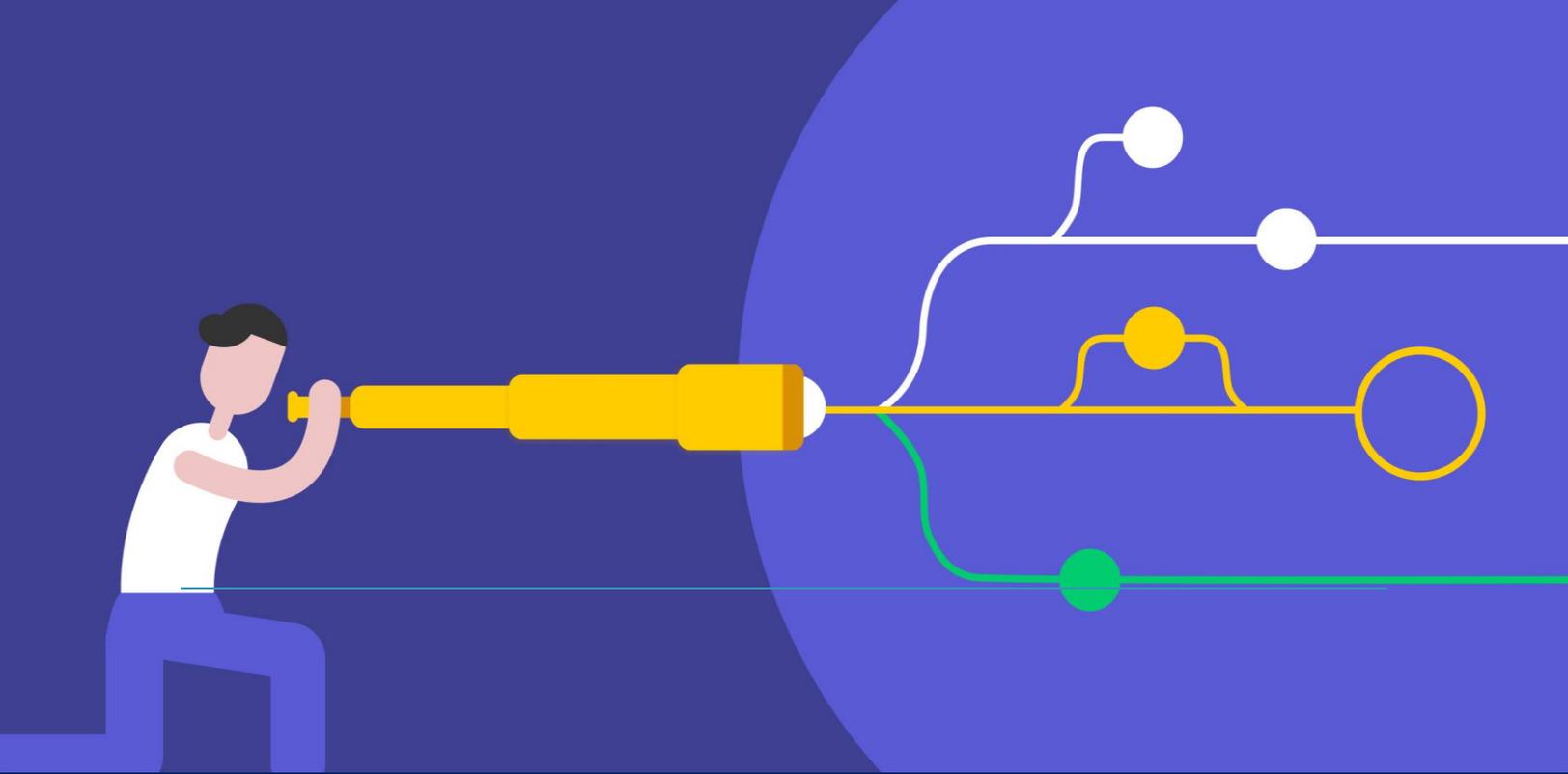
Graph created by DEACI using the MARUBA Model, October 2022

Import of Goods and Services

Tourism has been the main source of income for Aruba since the nineties. This has created a correlation between an increase in tourism consumption and the increase in imports. The higher the dependency on tourism, the higher the dependency on IGS. The IGS shows a growth of 25.0 percent in 2022, which is 3.5 percent higher compared to the level of

2019. For 2023, an IGS is expected to increase with 4.7 percent, which is 8.3 percent higher compared to the level of 2019. These growths are mainly driven by the high imported inflation due to international developments and the demand in the tourism industry.

For this outlook the inflation for the baseline for the year 2022 is 5.6 percent and in 2023 is 5.4 percent, assuming a 1.0 percent increase in BBO as of January 2023. This calculation is based on the latest data of the CBS (August 2022). If foreign prices continue to rise in 2023 as globally expected, DEACI forecasts an inflation of 7.1 percent.



Chapter 3: 2023 Scenario A and scenario B

Chapter 3: 2023 Scenario A and scenario B

In addition to having a baseline, two other scenarios are presented for the year 2023. Initially, the intention was to publish an economic outlook with only a baseline and a positive outlook scenario. Regarding the geopolitical developments and its longer expected effects on the global economy, in particular global inflation, it has been decided to present two scenarios in which scenario A represents a positive scenario and scenario B a conservative scenario. See Annex D, for the scenario's assumptions for the year 2023.

The positive scenario:

Scenario A: The assumption is that TSV will be in 2023 at 110.0 percent of the level of 2019 and the TCV will be equal to the amount of TCV in the year 2019. For this scenario, we forecast a nominal GDP growth of 6.8 percent, which is 3.3 percent higher compared to the level of 2019 (see Table 1).

The conservative scenario:

Scenario B: The assumption is that the geopolitical developments and the global inflation will affect the Aruban prices and this could affect the tourism flow.

The assumption in this scenario is that the foreign prices will increase by 25.0 percent compared to 2022, especially for the US CPI and the Netherlands export price. For oil price, it is assumed that this will remain the same compared to the year 2022. The expected decline in oil prices will therefore not continue.

The TSV in 2023 will be at 90.0 percent of the level of the year 2019 and the TCV at 80.0 percent of the level of 2019. For this scenario a nominal GDP decline of 1.9 percent is projected. This represents 94.8 percent of the level of 2019. Finally, an inflation is projected of 7.1 percent compared to the year 2022 (see Table 1).

Table 1: 2023 Scenario A and scenario B.

Economic Outlook October 2022				Scenario A: Stayover Visitors (110 % of the level of 2019) and Cruise Visitors (100 % of the level of 2019)	Scenario B: 25% increase foreign prices. Stayover Visitors (90 % of the level of 2019) and Cruise Visitors (80 % of the level of 2019)
Nominal (in %)	Estimate 2021	Estimate 2022	Projection 2023	Projection 2023	Projection 2023
Inflation (%)	0.7	5.6*	5.4*	5.4*	7.1**
GDP at market prices (In M. AfIs)	5379	5916	6184	6317	5800
GDP at market prices (%)	16.4	10.0	4.5	6.8	-1.9
Private consumption (%)	3.3	2.1	4.0	4.1	3.8
Public consumption (%)	-4.9	-2.5	3.1	3.1	3.5
Total consumption (%)	0.6	0.7	3.7	3.8	3.7
Private investments (%)	7.7	14.4	7.9	7.9	7.9
Public investments (%)	-55.0	41.0	-9.1	-9.1	-9.1
Total investments (%)	5.2	14.9	7.6	7.6	7.6
Exports Goods and Services (%)	52.7	34.0	4.7	9.1	-7.3
<i>Exports (tourism) (%)</i>	66.0	38.9	4.2	9.2	-9.5
Imports Goods and Services (%)	20.3	25.0	4.7	6.6	-0.3
Tourism					
Total Stayover Visitors (number *1000)	807	1110	1175	1231	1119
Total Cruise Passengers (number *1000)	136	666	749	832	749
Export from Tourism(In M. AfIs)	3179	4415	4602	4822	4408

* Based on latest data from the CBS (August 2022)

** Inflation based on US CPI and Netherlands Export price change goods and services

Table created by DEACI using the MARUBA Model, October 2022

According to the calculations of the different scenarios, the GDP is expected to be between a decrease of 1.9 percent (scenario B) and an increase of 6.8 percent (scenario A).

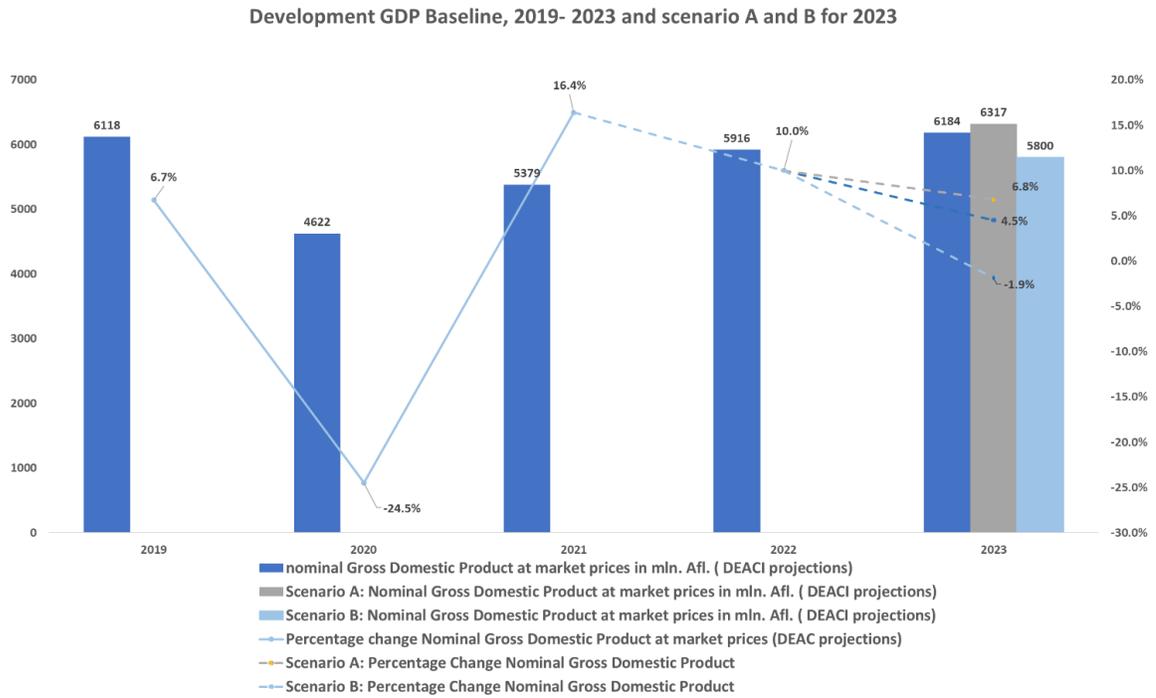
Regarding the inflation, this will fluctuate between 5.4 percent and 7.1 percent for the year 2023.

Changes are mainly seen in the ET with an expected decrease of 9.5 percent (scenario B) and an increase of 9.2 percent (scenario A), subsequently EGS will fluctuate between a decrease of 7.3 (scenario B) percent and an increase of 9.1 percent (scenario A).

The IGS will also fluctuate between a decrease of 0.3 percent (scenario B) and an increase of 6.6 percent (scenario A). This growth in scenario A is the consequence of the forecasted performance of the tourism industry.

Graph 7 shows the estimated and forecasted development in the nominal GDP from 2019-2022 and the different scenarios for 2023. Note, once more that we are very prudent with the projections due to the unpredictable medium- and short-term factors related to the international- and national developments.

Graph 7: Development GDP Baseline 2019-2023 and scenario A and B for 2023



Graph created by DEACI using the MARUBA Model, October 2022

Chapter 4: Real GDP 2022 and 2023

Chapter 4: Real GDP 2022 and 2023

Since the COVID-19 and Russian invasion of Ukraine, food and energy costs have risen worldwide. This worldwide inflation, especially its impact on Aruba, makes it necessary for the Department of Economic Affairs, Commerce and Industry (DEACI) to publish the Real Gross Domestic Product (real GDP) in addition to the Nominal Gross Domestic Product.

To date, DEACI has only published GDP in nominal terms, as DEACI has so far been waiting for the official deflator from the National Accounts.

Despite this and following the advice of CARTAC, DEACI decided to work on the real figures of our estimations and projections in order to publish them. After months of intense work with different experts and in cooperation with the Central Bank of Aruba the real figures of the GDP and GDP components can be presented.

Table 2 shows that the real GDP and its components are estimated to grow less than in nominal terms, due to the high inflation for the years 2022 and 2023. In addition, a decrease in the real GDP in 2023 is expected.

The real GDP will increase by 7.2 percent and decline by 0.6 percent in 2022 and 2023, respectively. This positive growth in 2022 is

related to an increase in TI and the performance of the tourism sector. The performance of the tourism sector is measured by ET and EGS, which show positive developments in both years.

A negative development can be observed for TC. This indicates that a loss of purchasing power among consumers is expected in 2022 and 2023.

Subsequently, the real figures show an estimated increase in the IGS. This increase is attributed to an increase in volume that is related to the demand in the tourism industry.

In 2023, however, no growth is expected in real terms. The real figures show a GDP decrease of 0.6 percent. Real growth is expected in some components of GDP like TI, EGS and IGS. The positive growth in TI is related to the ongoing investments. The increases of EGS and IGS is related to the performance of the tourism industry. The outlook for TC shows a decline that will continue in 2023.

Finally, for the positive and conservative scenario a real GDP is forecasted between a decrease of 7.2 percent (scenario B) and an increase of 1.5 percent (scenario A) compared to 2022.

Table 2: Real GDP developments vs. Nominal GDP developments

	Economic Outlook October 2022		Economic Outlook October 2022	
	Estimate 2022	Projection 2023	Estimate 2022	Projection 2023
	<i>Nominal</i>	<i>Nominal</i>	<i>Real</i>	<i>Real</i>
GDP	10.0	4.5	7.2	-0.6
Private consumption (%)	2.1	4.0	-3.3	-1.3
Public consumption (%)	-2.5	3.1	-5.7	-1.0
Total consumption (%)	0.7	3.7	-3.9	-1.2
Private investments (%)	14.4	7.9	8.2	5.1
Public investments (%)	41.0	-9.1	33.4	-11.5
Total investments (%)	14.9	7.6	8.7	4.8
Exports Goods and Services (%)	34.0	4.7	24.0	1.8
<i>Exports (tourism) (%)</i>	38.9	4.2	28.1	1.3
Imports Goods and Services (%)	25.0	4.7	11.9	2.8

Table created by DEACI using the MARUBA Model, October 2022

Table 3: Real GDP developments in scenario A and B for the year 2023

	Scenario A: 10% growth in 2023 (vs. 2019) in Stayover Visitors and Cruise Visitors will be at 100% of the level of 2019	25% increase on foreign prices
	Projection 2023	Projection 2023
Real GDP	1.5	-7.2

Table created by DEACI using the MARUBA Model, October 2022



Chapter 5: Global Economy

Chapter 5: Global Economy

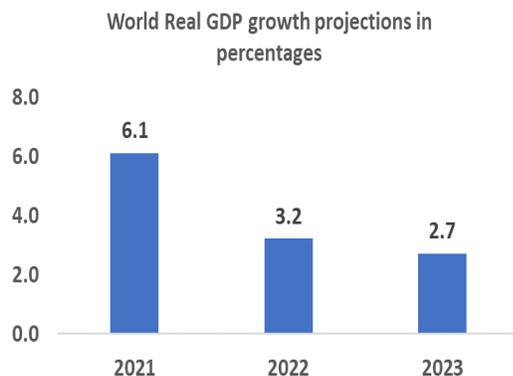
According to the International Monetary Fund, IMF (WEO, October, 2022), the projected global economy is not growing as predicted in the latest economic outlook.

The GDP growth is recovering slower than projected for advanced economies, emerging markets and developing economies.

The reason for the sharp slowdown in the global economic growth are: higher-than-expected inflation that weakens consumer demand, the ongoing war in Ukraine which disrupts the supply chains and has a negative effect on the commodity markets, tighter financial conditions could induce debt distress, the worsening food insecurity and the slowdown in China's economy have contributed to a lower economic forecast.

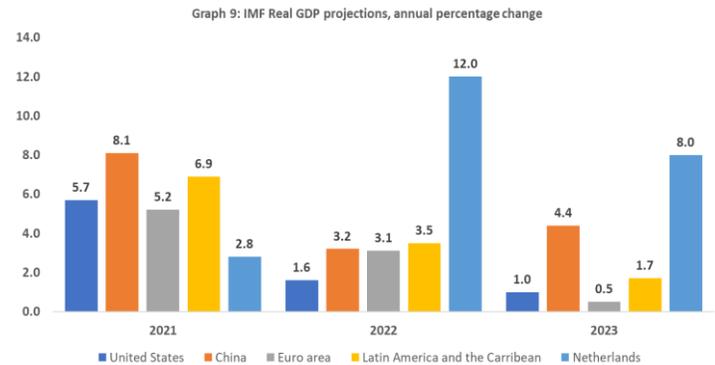
According to the IMF the real GDP growth in 2021 is estimated at 6.1 percent, and a slight increase of 3.2 percent is expected for the year 2022 and a 2.7 percent growth in 2023 (see graph 8).

Graph 8: IMF World Real GDP projections



Graph created by DEACI using the IMF WEO July 2022, October 2022

Graph 9: IMF Real GDP projections



Graph created by DEACI using the IMF WEO July 2022, October 2022

For the USA that has a direct impact on the Aruban economy, the real GDP is expected to increase by 1.6 percent in 2022 which is 0.7 percentage points lower than projected in the last world economic outlook. In 2023 a growth of 1.0 percent is projected (see graph 9). China in turn is also growing by 3.2 percent in 2022 and 4.4 percent in 2023. The new projected 3.2 percent growth is 0.1 percentage points lesser than expected in the last outlook.

Responsible for this slower increase in real GDP in China is related to the ongoing retrenchment of the real estate sector and the slower recovery of the private consumption and the COVID19 policies to stop infections. For the European area, real GDP is expected to grow in 2022 by 3.1 percent and 0.5 percent in 2023.

Latin America and the Caribbean is projected to grow by 3.5 percent in 2022 and 1.7 percent in 2023.

Global Inflation

Inflation has become one major concerns for the global economy. The reasons for the inflationary pressures stem from increase in energy prices due to the war and the disruption of the supply chains that has persisted since the pandemic.

The war between Ukraine and Russia has contributed greatly to higher prices for food, energy and commodities prices.

In addition, the OPEC's decision to reduce oil production in October 2022 will only contribute to price hikes. Russia is the world's leading exporter of natural gas and second largest supplier of imported oil after Saudi Arabia. The sanctions that Western countries have imposed on Russia have negative consequences not only Russia but also for Western countries. The EU is working to end its dependence on Russian energy, but it is currently an ongoing process by seeking alternatives to Russian gas and through green transitions.

To combat the rising inflation, Central Banks of major economies are increasing their policy rates with the intention to reduce consumers purchasing power, thereby lowering the demand for goods and services.

Due to the high socio-financial-economic nexus between nations, the impact of the supply chains disruption and the Ukrainian war will be felt by all nations, particular rising costs are driving low-income communities deeper



into poverty.

According to the IMF, the world inflation is projected at 8.8 percent in 2022, and 6.5 percent in 2023 (WEO, October 2022).

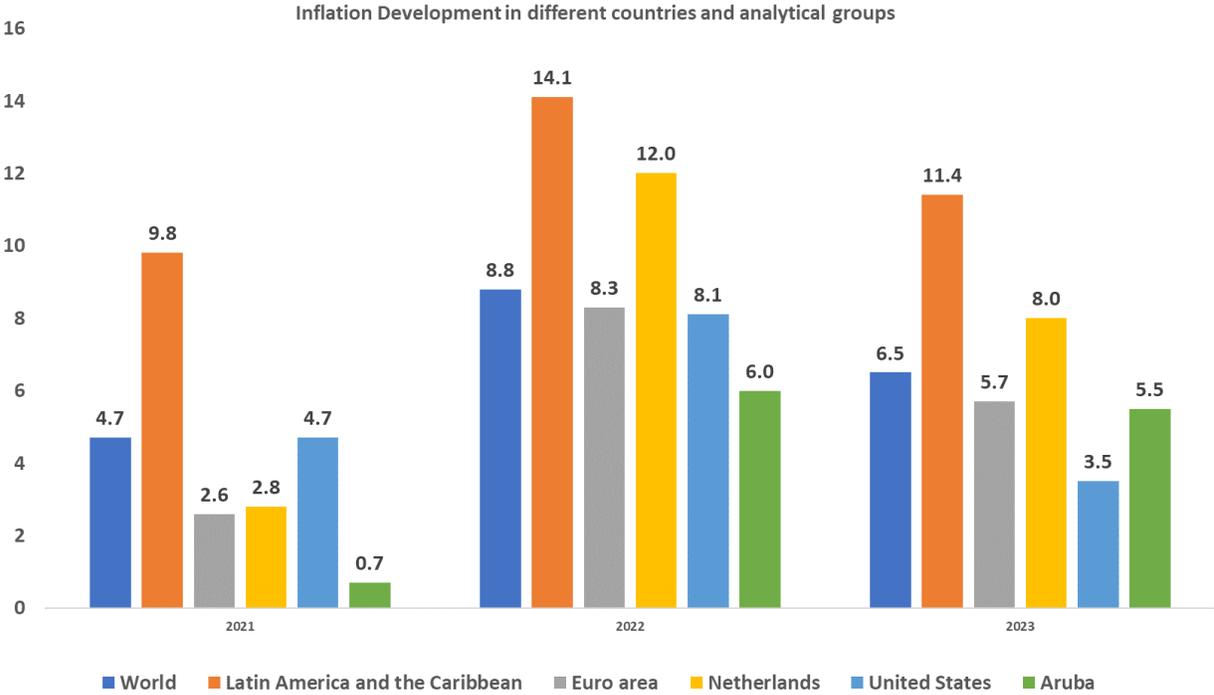
The U.S. inflation is expected to be 8.1 percent in 2022 and for 2023 the inflation is estimated at 3.5 percent (WEO, October 2022).

The Netherlands inflation is expected to be 12.0 percent in 2022 and 8.0 percent in 2023 (WEO, October 2022).

Latin America and the Caribbean inflation is expected to be at 14.1 percent for 2022 and 11.4 percent for 2023 (WEO, October 2022).

According to the IMF, the inflation for Aruba is projected at 6.0 percent in 2022 and 5.5 percent in 2023. (WEO, October 2022). See table 10.

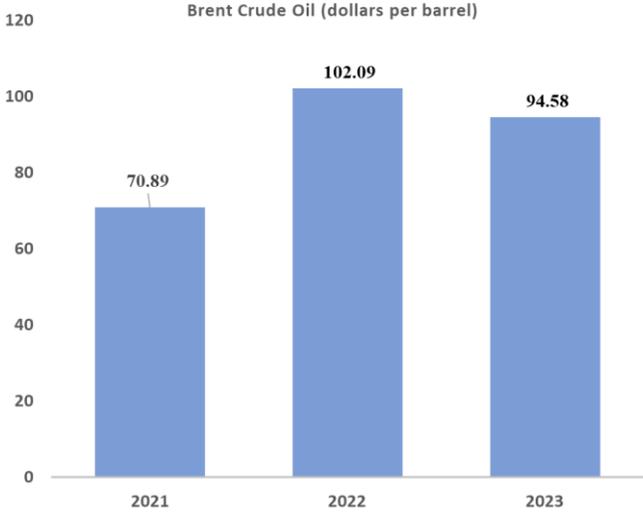
Graph 10: Inflation Development in different countries and country groups



Graph created by DEACI using the IMF WEO October 2022, October 2022

Oil Prices

Graph 11: Brent Crude Oil (dollars per barrel)



Graph created by DEACI using the data of the U.S. Energy Information Administration, October 2022, October 2022

According to U.S. EIA (Short-term energy outlook, September 2022), the latest data for Brent Crude Oil prices shows an amount of \$70.89 per barrel in 2021. For 2022 and 2023 respectively \$102.09 and \$94.58 per barrel is expected. There are now two opposite poles that are influencing the oil market:

Slower-than- expected economic growth, causing oil price to fall due to lack of demand.

And the disruption of the oil supply that drives up prices. The main reason is the

The U.S. Economy and the European Area and its impact on the Caribbean Region

The IMF expects for the U.S. a real GDP growth of 5.7 percent for 2021 and for 2022 a growth of 1.6 percent and a growth of 1.0 percent in 2023.

The U.S. market account for approximately 79.1 percent of the tourism industry of Aruba in 2022. (ATA, September 2022, Monthly report). The market-share of the TSV from the Europe visiting Aruba in 2022 is 8.2 percent. (ATA, September 2022, Monthly report).

The slower than expected GDP growth in the U.S. Economy can have an impact on the

consequences of the ongoing war between Russia and Ukraine. The European Union will ban on imports of Russian oil, brought in by sea from December. Also, all imports of refined oil will be banned from Russia in February 2023. Not only European Union is taking sanction against Russia but also the United States is banning all Russian oil and gas. Meanwhile, the European Union is working to replace Russian oil from other areas to meet their demand.

Caribbean region, being one of the most tourism dependent regions in the world, which is a point of concern.

In addition, the uncertainties in the war where international price developments (inflation) go hand in hand can have a negative effect on traveling to the Caribbean region by becoming a more expensive destination. The economic recession can have a negative impact on the tourism industry performance of Aruba.

Annexes

Annex A: CARTAC and the MARUBA Model

DEACI structurally monitors the economy and advises the Minister of Economic Affairs, Communications, Sustainable Development on current and future economic developments. For analyzing purposes, the DEACI uses a macro-economic model tool, the MARUBA model. This MARUBA Model is based on the National Accounts and reflects the functioning of the Aruban economy, and is used to forecast the macro economic developments of Aruba.

In March and April 2021 an additional Technical Assistance mission (after two Technical Assistance missions in 2020) was held by **The Caribbean Regional Technical Assistance Centre (CARTAC)**. CARTAC is one of ten IMF Regional Technical Assistance Centers (RTACs) located around the world in the Pacific, the Caribbean, in Africa, the

Middle East, India and Central America. These Centers were created to help countries strengthen human and institutional capacity to design and implement sound macroeconomic policies that promote growth and reduce poverty.

The objective of CARTAC 's mission with Aruba was to analyze and review the medium-term projections of the MARUBA model before proceeding to publish these projections. During this mission, proposed recommendations for improvement of the medium-term projection of the model were implemented.

Annex B: Economic Outlook 2022-2023

Table 4: Economic Outlook 2022-2023 October 2022 compared to the Economic Outlook 2021-2023 June 2022

Nominal (in %)	Outlook June 2022. Baseline			Economic Outlook October 2022		
	Estimate 2021	Estimate 2022	Projection 2023	Estimate 2021	Estimate 2022	Projection 2023
Inflation (%)	0.7	4.3	5.5	0.7	5.6*	5.4
GDP at market prices (In M. Afls)	5426	5904	6101	5379	5916	6184
GDP at market prices (%)	17.0	8.8	3.3	16.4	10.0	4.5
Private consumption (%)	4.9	1.6	1.4	3.3	2.1	4.0
Public consumption (%)	-5.3	3.2	2.0	-4.9	-2.5	3.1
Total consumption (%)	1.5	2.1	1.6	0.6	0.7	3.7
Private investments (%)	7.7	30.1	3.3	7.7	14.4	7.9
Public investments (%)	-55.0	28.2	0.0	-55.0	41.0	-9.1
Total investments (%)	5.2	30.1	3.3	5.2	14.9	7.6
Exports Goods and Services (%)	52.1	27.7	4.8	52.7	34.0	4.7
<i>Export (tourism) (%)</i>	65.1	31.3	4.4	66.0	38.9	4.2
Imports Goods and Services (%)	20.2	25.6	3.2	20.3	25.0	4.7
Tourism						
Total Stayover Visitors (number *1000)	807	1063	1119	807	1110	1175
Total Cruise Passengers (number *1000)	136	521	748	136	666	749
Export from Tourism(In M. Afls)	3186	4185	4368	3179	4415	4602

* Based on latest data from the CBS (August 2022)

Table created by DEACI using the MARUBA Model, October 2022

Annex C: Assumptions Outlook 2022-2023

Table 5: Baseline assumptions Outlook 2022-2023 June 2022 compared to Economic Outlook 2021-2023 October 2022

Baseline Assumptions 2022 - 2023				
	2022- Baseline Outlook June 2022	2023- Baseline Outlook June 2023	2022- Baseline Outlook October 2022	2023- Baseline Outlook October 2023
Stayover Visitors	95% (2022 vs 2019) 1,062,997 visitors	100% (2023 vs 2019) 1,118,944 visitors	99.2% (2022 vs 2019) 1,110,341 visitors	105% (2023 vs 2019) 1,174,891 visitors
Cruise Visitors	62.6% level (2022 vs 2019) 520,880 visitors	89.9% level (2022 vs 2019) 748,259 visitors	80% level (2022 vs 2019) 665,601 visitors	90% level (2022 vs 2019) 748,801 visitors
Ad-Hoc Investments	Calculation with a 50% risk factor for planned project that as per 2022 didn't start constructing yet	Calculation with a 50% risk factor for planned project that as per 2022 didn't start constructing yet	Calculation with a 50% risk factor for projects that does not show any progress as per September 2022	Calculation with a 50% risk factor for planned project that as per 2022 didn't start constructing yet
Average Daily Rate Expenditure non- Accomodation Stayover	ADR +10% 2022 vs 2021 Exp. Non accommodation aligned with pre-COVID -19 level average growth trend	ADR same as 2022 Exp. Non accommodation aligned with pre-COVID -19 level average growth trend	ADR +10% 2022 vs 2021 Exp. Non accommodation will grow with the average growth of the realized data and historical trend	ADR +3.0 % 2023 vs 2022 Exp. Non accommodation aligned with pre-COVID -19 level average growth trend
Government Expenditure	Multi annual budget	Multi annual budget	URK Q2 2022	Multi annual budget
Labor Market	Gradually pick up in private sector employment due to pick up in tourism and investment. Average wages reach pre-Covid -19 level.	Gradually pick up in private sector employment due to pick up in tourism and investment. Average wages reach pre-Covid -19 level.	2.9% growth (vs 2021) in employment projections based on realised data. Employment reached 95% of the level of 2019. Average wages are 100% level of 2019	Labor market will grow with tourism and investments development. Average wages will grow with the wage rate.
Government Financial Support	No	No	No	No

Table created by DEACI using the MARUBA Model, October 2022

Annex D: Assumptions Scenario A and scenario B for the year 2023

Table 6: Scenarios 2023 assumptions Economic Outlook 2022-2023, October 2022

	Positive Scenario: Scenario A	Conservative Scenario: Scenario B
		25% increase on foreign prices
Inflation	5.4%	7.1%
Stayover Visitors	110% (2023 vs. 2019) 1,230,838 visitors	90% (2023 vs 2019) 1,007,050 visitors
Cruise Visitors	100% (2023 vs. 2019) 832,001 visitors	80% (2023 vs. 2019) 665.601 visitors

Table created by DEACI using the MARUBA Model, October 2022

Annex E: Pre-COVID19 Trend analysis

All the graphs belonging to this annex were prepared by DEACI in October 2022 with data from the MARUBA Model and the official data of the National Account. These graphs show the development of each macroeconomic component compared to the average growth of these components in the pre-pandemic years. The figures show that the economy of Aruba is recovering and it is forecasted to reach the pre-pandemic level.

