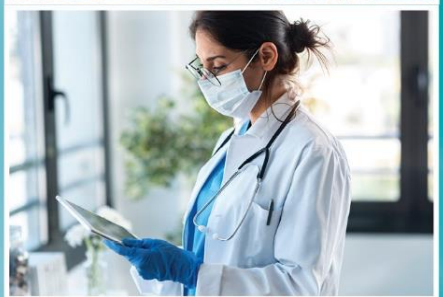




Cayman Islands
Government



THE CAYMAN ISLANDS' GROSS DOMESTIC PRODUCT (GDP) REPORT 2022



November 2023



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ABBREVIATIONS AND ACRONYMS

ANAS	Annual National Accounts Survey
BOP	Balance of Payments
BR	Business Register
CARTAC	Caribbean Regional Technical Assistance Centre
CFC	Consumption of Fixed Capital
CIMA	Cayman Islands Monetary Authority
CI\$	Cayman Islands Dollars
COE	Compensation of Employees
CPI	Consumer Price Index
ECLAC	Economic Commission for Latin America and the Caribbean
ESO	Economics and Statistics Office
ESS	External Sector Statistics
FCE	Final Consumption Expenditure
FISIM	Financial Intermediation Services Indirectly Measured
GCF	Gross Capital Formation
GDP	Gross Domestic Product
GDPE	Gross Domestic Product by Expenditure
GDPI	Gross Domestic Product by Income
GDPP	Gross Domestic Product by Production
GFCE	Government Final Consumption Expenditure
GNDI	Gross National Disposable Income
GNI	Gross National Income
GNP	Gross National Product
GO	Gross Output
GVA	Gross Value Added
HBS	Household Budget Survey
HFCE	Household Final Consumption Expenditure
IC	Intermediate Consumption
IPI	Implicit Price Index
ISIC	International Standard Industrial Classification of Economic Activity
LFS	Labour Force Survey
NPISH	Non-Profit Institutions Serving Households
PPI	Producer Price Index
ROW	Rest of the World
SITC	Standard International Trade Classification
SNA	System of National Accounts
SUT	Supply & Use Tables
TTM	Trade & Transport Margin
WIP	Work in Progress

1. EXECUTIVE SUMMARY

- 1.1 The Cayman Islands' Gross Domestic Product (GDP) Report 2022 presents the GDP estimates for the period 2018–2022. The estimates were calculated using all three approaches to calculating GDP, i.e. the production approach, the income approach, and the expenditure approach.
- 1.2 Nominal (current) purchasers' price GDP for the Cayman Islands grew to CI\$5,500.7 million, and an estimated per capita nominal GDP of CI\$70,024.2.
- 1.3 Real GDP at purchasers' price (i.e. GDP at constant 2015 prices or GDP adjusted for inflation) increased to CI\$4,748.1 million in 2022. The corresponding per capita real GDP for 2022 was estimated at CI\$60,443.7.
- 1.4 The Cayman Islands' economy expanded again in 2022, growing at a faster pace than in 2021. Inflation-adjusted GDP grew by 5.2 percent in 2022 after increasing by 4.9 percent in 2021. The positive economic outturn in 2022 signals the continued recovery from the decline in 2020, when the economy contracted by 5.0 percent. Prior to the decline in 2020, the economy posted nine consecutive years of positive economic performance since 2011 (1.2%), 2012 (1.2%), 2013 (1.3%), 2014 (2.7%), 2015 (2.8%), 2016 (3.2%), 2017 (3.2%) 2018 (4.3%), and 2019 (3.9%). The positive economic performance in 2022 was broad-based, with 15 of the 18 industries growing relative to 2021.
- 1.5 The five largest contributors to the 5.2 percent growth in real purchasers' price GDP in 2022 (i.e. their percent change weighted by their share of GDP) were: (i) hotel & restaurant services (1.4 percentage points); (ii) financial & insurance services (0.9 percentage points); (iii) transport & storage services (0.7 percentage points); (iv) other services (0.37 percentage points); and (v) human health & social work (0.35 percentage points).
- 1.6 The six industries posting the largest change in constant price GDP in 2022 were: (i) hotel & restaurant services (59.6%); (ii) transport & storage (38.9%); (iii) other services (15.8%); (iv) human health & social works (7.7%); (v) water supply, sewerage & waste management (7.0%); and (vi) public administration & defence (5.9%). Financial & insurance services grew by 2.9 percent in 2022, from 3.1 percent and 1.3 percent in 2021 and 2020, respectively.
- 1.7 The 5-year geometric average growth rate (2018-2022) showed an average annual constant price GDP growth of 2.6 percent for the total economy. For 2022, 16 of 18 industries posted positive average growth rates over the 5-year review period. The

highest average expansion over the period was recorded by human health & social work services (8.7%). Completing the top five performers are mining & quarrying (6.7%); construction activities (6.0%); public administration & defence (5.1%); and education services (4.5%). Financial & insurance services expanded by an average rate of 2.4 percent over the period. Due primarily to the pandemic-induced shocks in 2020 and 2021, negative average growth rates were posted by hotel & restaurant services (-4.7%), and transport & storage activities (-3.7%).

- 1.8 The share of financial & insurance services in total constant price GDP continued to decline, reaching 31.2 percent in 2022 from 31.9 percent in 2021 and 32.4 percent in 2020. The other industries making up the top seven in terms of share of GDP in 2022 are (i) professional, scientific & technical activities, which comprises primarily legal and accounting services (13.9%); (ii) real estate activities (7.9%); (iii) wholesale & retail trade (6.5%); (iv) public administration & defence, which consists primarily of central government operations (5.8%); (v) human health & social work (4.7%); and (vi) construction services (4.3%). There were increases in the share of constant price GDP for 4 industries in 2022 compared to 2021, 4 industries posted a reduction in their shares, while 10 remained unchanged.
- 1.9 In 2022, all income components of GDP continued to rebound, which started in 2021. The largest increase in 2022 was posted by the compensation of employees, which grew by 10.0 percent to CI\$2,514.2 million. This was followed by taxes (less subsidies) on production and imports, which increased by 8.9 percent to CI\$840.0 million. Operating surplus/mixed-income grew by 8.5 percent to reach CI\$1,853.7 million, while consumption of fixed capital reached CI\$292.8 million after increasing by 3.2 percent.
- 1.10 Total compensation of employees as a share of GDP rose to 45.7 percent in 2022 from 45.3 percent in 2021. The share of operating surplus/mixed-income continued the decline that started in 2020, dropping to 33.7 percent of GDP in 2022, down from the 33.8 percent realised in 2021. Consumption of fixed capital as a share of GDP continued to decline in 2022 for the second consecutive year, reaching 5.3 percent, from 5.6 percent in 2021 and 5.9 percent in 2020. Net taxes on production and imports as a share of GDP remained unchanged in 2022 at 15.3 percent, compared to 2021.
- 1.11 The expenditure of resident households on goods and services, as measured by nominal Household Final Consumption Expenditure (HFCE), increased by 8.9 percent to CI\$3,012.2 million in 2022, adding to the 9.4 percent increase in 2021, after declining by 4.3 percent in 2020. Government's final consumption expenditure grew by 9.7 percent in 2022 to reach CI\$642.9 million, while that for

non-profit institutions serving households grew by 7.3 percent to CI\$38.6 million. Investment in capital goods and buildings (as measured by nominal Gross Fixed Capital Formation-GFCF) rose to CI\$1,112.3 million in 2022, an increase of 7.0 percent. Total exports of goods and services reached CI\$3,403.1 million in 2022 after increasing by 18.1 percent compared to 2021. Imports of goods and services also increased in 2022 to reach CI\$2,709.2 million. The value of net exports (i.e. exports less imports) grew to CI\$694.0 million in 2022 from CI\$563.1 million in 2021 and CI\$730.7 million in 2020.

- 1.12 The share of final consumption expenditure in nominal GDPE decreased to 67.1 percent in 2022 from 67.9 percent in 2021. The second-largest share was posted by gross fixed capital formation (20.2%), a contraction in its share from 20.8 percent in 2021. The share of net exports increased in 2022 to 12.6 percent from 11.3 percent in 2021. The share of changes in inventories declined year over year to 0.03 percent in 2022 when compared to 0.05 percent in 2021.
- 1.13 Gross National Product (GNP) - which adds investment income earned by residents from investments abroad and subtracts the investment income paid to foreigners from their investments within the Cayman Islands – decreased to CI\$3,670.4 million in 2022. The 6.1 percent decrease in GNP in 2022 resulted from the CI\$1,832.9 million increase in property income paid to the rest of the world (i.e. the outflow from the local economy) surpassing the CI\$1,143.5 million increase in property income received from the rest of the world, plus the CI\$450.7 million increase in nominal GDP.

2. INTRODUCTION

2.1 Importance of the System of National Accounts (SNA)

The SNA is a system of accounts that is used globally to measure the economic performance of countries and jurisdictions. It utilizes internationally accepted standards issued by the United Nations and the International Monetary Fund (among others). In the context of the Cayman Islands, its main uses are to:

- a. Comply with the Public Management & Finance Act (2013 Revision), which requires the reporting of gross domestic product in the Strategic Policy Statement. Governments, in general, use SNA statistics as key indicators for evaluating the potential and actual macroeconomic impact and sustainability of fiscal policies.
- b. Provide data that can assist government departments, local businesses, and non-government organizations for market research (e.g. preparing business plans, etc.).
- c. Comply with data requirements of foreign investors and creditors. For example, data from the SNA are required for inclusion in official borrowing documents (i.e., Offering Memorandum or Private Placement Memorandum). These statistics are necessary for assessing the worthiness of the jurisdiction as an investment site and/or the worthiness of its entities as borrowers.
- d. Comply with data requirements of international credit rating agencies, which provide credit ratings for the Cayman Islands government and private entities that borrow from the global financial market.
- e. Compare the performance and structure of Cayman's economy to other economies, i.e. for international comparison.
- f. Provide necessary data for conducting of economic impact assessments of hurricanes and other disasters, which are required by funding and other donor agencies. As pointed out by previous teams from the Economics Commission for Latin America and the Caribbean (ECLAC), the GDP statistics by sector for Cayman are necessary for calculating the economic impact of disasters in each sector and, therefore, the approximate amount of resources required for the reconstruction of these sectors.
- g. Provide data for government departments and business associations to forecast, simulate and monitor overall economic performance and the contribution of individual sectors.

2.2 Key data sources

The GDP estimates contained in this report are based on the Annual National Accounts Survey (ANAS) conducted among all relevant establishments included in the ESO Business Register. The survey was conducted from April to June 2023. It should be noted that all information provided via the survey is treated with the strictest confidence as per Sections 8 and 18 of the Statistics Act (2016 Revision). Information from the survey is supplemented by secondary data provided by various government ministries, departments and statutory authorities, including the Cayman Islands Monetary Authority (CIMA), Department of Agriculture, Public Transport Unit, Health Services Authority, and other informal interviews with industry sources.

As in any survey, the response rate to the ANAS is mainly a function of the appreciation and understanding of the respondents on how the data will be used. It is hoped that this report will be an instrument to demonstrate the potential uses of the SNA to the business sector, business associations, and those providing services to businesses in the Cayman Islands.

2.3 Valuation of Gross Domestic Product (GDP)

Tables are presented at both basic and purchasers' (i.e. market) prices. The main difference between basic and purchaser prices is the taxes less subsidies (net taxes) on products. Taxes on products are taxes on goods and services that become payable when the goods are produced, sold, imported, or otherwise disposed of by their producer. The tax may be a specific amount of money per unit or a specified percentage of the value of the goods or services. The following are the categories of this type of tax:

- a. Taxes and duties on imports
- b. Other taxes on products, excluding taxes and duties on import (e.g. hotel occupancy tax).

2.4 Improvement in methodology

The System of National Accounts (SNA) - as practised globally by official statistical agencies - is ever-evolving. As such, there will be adjustments in the methodology used to derive the estimates from time to time. This includes refinement of the estimation process, availability of new and improved data sources, etc. The GDP series for the Cayman Islands included in this report benefits from improvements in, and refinements of, the data sources and methodology in the compilation process.

3. GROSS DOMESTIC PRODUCT ESTIMATES-THE PRODUCTION APPROACH

3.1 Overview of GDP at purchasers' prices

The Cayman Islands' Gross Domestic Product (GDP) Report 2022 presents the GDP estimates for 2018-2022.¹ The GDP for the Cayman Islands is compiled using all three approaches to measuring GDP. The primary estimates are compiled using the production approach (GDPP) supplemented with the income approach (GDPI). The third approach - GDP by expenditure (GDPE) - is only available for data years 2015 onwards.

The production approach to estimating GDP is obtained by summing the value-added of all industries within the economy (i.e. the gross value of outputs minus the value of intermediate consumption). The income approach is obtained by summing the income earned by the factors of production, i.e. compensation of employees, consumption of fixed capital, taxes less subsidies on production and imports, and operating surplus/mixed-income. The expenditure approach sums the expenditures on final goods and services, capital investments by business, and net exports of goods and services (i.e. exports minus imports).

This section takes a detailed look at GDPP (the main calculation methodology used in the SNA for the Cayman Islands) through the presentation of tables and graphs showing the 2022 GDP estimates by industry. GDPI and GDPE will be detailed in Sections 4 and 5, respectively.

The Cayman Islands economy continued to rebound in 2022, notwithstanding the lingering effects of the global pandemic that started in 2020. Inflation-adjusted GDP at purchasers' price grew by 5.2 percent, accelerating on the 4.9 percent growth posted in 2021. The ongoing economic recovery in 2022 is a welcome sign after the decline in 2020, which reversed nine consecutive years of economic growth going back to 2011. The positive economic performance in 2022 (5.2%) represents the highest annual rate of increase in real GDP posted for the Cayman economy (for the directly calculated GDP series)², the second highest growth was posted in 2021 (4.9%). The growth in 2022 resulted in an average annual expansion of 2.6 percent for the five-year period 2018-2022.

Both the service and the goods-producing industries expanded in 2022, posting growth of 5.6 percent and 3.0 percent, respectively. The growth in services was broad-based, with 13 of the 14 industries registering increased output in 2022. The five largest increases in output posted by service industries in 2022 came from hotel & restaurant services

¹GDP by income components and GDP by expenditure are provided for the period 2017-2022.

²The calculated GDP series started in 2006. Prior to 2006 GDP estimates for the Cayman Islands were derived using indicators, not direct calculations.

(59.6%); transport & storage activities (38.9%); other services (15.8%); human health & social work (7.7%); and water supply, sewerage & waste management activities (7.0%). The only service industry that contracted in 2022 was real estate activities, which marginally contracted by 0.2 percent. Two of the four goods-producing industries expanded in 2022, led by construction services (4.9%), and mining & quarrying activities (4.0%). The goods-producing that contracted in 2022 were manufacturing (-4.3%), and agriculture & fishing (-0.3%).

Table 1 shows the total value of domestic output for 2018 to 2022. Domestic output relates to all entities that have a physical presence in the Cayman Islands; therefore, for the most part, they exclude entities registered in the Cayman Islands but have no physical presence in the country. The table shows the current and constant (i.e. inflation-adjusted) price estimates of GDP valued at both basic and purchasers' prices. The table also shows the per capita indicators relating to the respective GDP aggregates.

Table 1: Cayman Islands Main GDP Aggregates and Per Capita Indicators					
Main Aggregates (CI\$'000)	2018	2019	2020 ^R	2021 ^R	2022
GDP (Current Basic Prices)	4,329,196.2	4,668,790.2	4,494,073.6	4,750,256.6	5,174,402.7
GDP (Constant Basic 2015 Prices)	4,094,112.4	4,269,855.8	4,093,494.2	4,247,013.2	4,477,900.2
GDP (Current Purchasers' Prices)	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3
GDP (Constant Purchasers' 2015 Prices)	4,357,900.7	4,528,540.2	4,304,159.8	4,515,275.8	4,748,098.3
Mean Population ('000)	64.420	66.248	64.958	67.721	78.554
Per Capita Indicators (CI\$)	2018	2019	2020 ^R	2021 ^R	2022
GDP (Current Basic Prices)	67,202.7	70,474.4	69,184.3	70,144.5	65,870.6
GDP (Constant Basic 2015 Prices)	63,553.4	64,452.6	63,017.6	62,713.4	57,004.1
GDP (Current Purchasers' Prices)	71,537.8	74,742.8	72,551.2	74,570.7	70,024.2
GDP (Constant Purchasers' 2015 Prices)	67,648.3	68,357.4	66,260.7	66,674.7	60,443.7

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Notes:

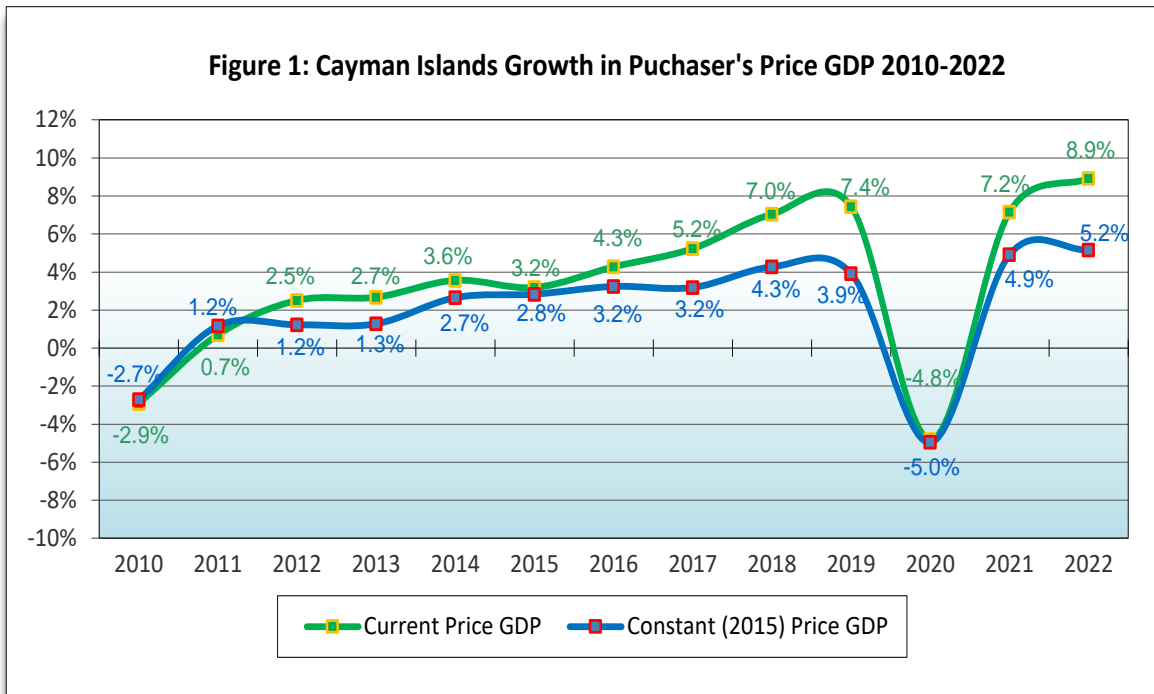
1. GDP at basic price excludes net taxes on goods and services
2. GDP at purchasers' price includes net taxes on goods and services
3. Mean population refers to the mid-year population

Notwithstanding the 5.2 percent growth in the overall real (purchasers' price) GDP³, real GDP per capita declined by 9.4 percent as the estimated mid-year population increased by 16.0 percent. The real GDP per capita decline in 2022 reversed the marginal 0.6 percent

³Real GDP refers to GDP at constant (2015) prices, i.e. the inflation-adjusted GDP.

increase posted in 2021. Real GDP per capita declined to its lowest level in 2022, reaching CI\$60,443.7 from CI\$66,674.7 in 2021 and CI\$66,260.7 in 2020.

Figure 1 below shows the comparative growth rates of GDP at current and constant purchaser prices for 2010-2022.⁴ The graph reflects the ongoing economic recovery after the decline in 2020. The decline in 2020 ended nine consecutive years of economic growth since 2011. Real GDP grew by 5.2 percent in 2022, the highest annual rate of increase posted by the local economy for the directly calculated GDP series.⁵ This extends the economic recovery that started in 2021 (4.9%), after the decline in 2020 (-5.0%). Current price GDP (i.e. nominal GDP) increased by 8.9 percent in 2022, adding to the 7.2 percent in 2021, turning around the 4.8 percent decline recorded in 2020.



3.2 GDP by industrial origin

The estimated real GDP (at purchasers’ prices) for the Cayman Islands improved to CI\$4,748.1 million in 2022 from CI\$4,515.3 million in 2021. Positive economic performance was posted by 15 of the 18 industries in 2022. Of the three industries that contracted in 2022, two were goods-producing industries, i.e. agriculture & fishing

⁴The entire calculated GDP series runs from 2006-2022, therefore the growth rate series would then be 2007-2022. The GDP estimates up to 2005 are based on an indicator method and not direct calculations.

⁵The calculated GDP series started in 2006. Prior to 2006 GDP estimates for the Cayman Islands were derived using indicators, not direct calculations.

activities (-0.3%) and manufacturing activities (-4.3%). Real estate activities were the only service-producing industry that declined in 2022 (-0.2%). Table 2 below shows real GDP by industry in purchasers' prices.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN					
TABLE 2: GDP AT CONSTANT BASIC & PURCHASERS' PRICES, 2015=100 (CI\$'000)					
INDUSTRY	2018	2019	2020^R	2021^R	2022
01 Agriculture & Fishing	16,578.4	17,306.0	16,913.8	18,494.6	18,443.4
02 Mining & Quarrying	9,676.4	10,506.1	10,933.9	12,221.4	12,710.0
03 Manufacturing	38,837.7	40,780.5	38,031.7	41,983.7	40,168.7
04 Electricity, Gas & Air Conditioning Supply	60,913.2	65,186.3	62,513.3	64,046.1	65,324.6
05 Water Supply, Sewerage & Waste Management	39,697.2	40,817.7	38,787.4	39,155.9	41,905.2
06 Construction	160,721.9	176,740.4	179,197.5	193,113.9	202,495.8
07 Wholesale & Retail Trade	275,479.7	291,691.7	287,186.5	294,415.6	307,298.5
08 Transport & Storage	148,675.4	154,436.6	93,442.8	85,709.9	119,065.4
09 Hotels & Restaurants	234,936.5	250,968.8	122,407.2	105,585.9	168,566.6
10 Information & Communication	114,145.3	119,906.1	118,007.5	123,108.4	123,465.7
11 Financial & Insurance Services	1,344,684.7	1,378,451.7	1,395,966.9	1,438,992.9	1,480,247.1
12 Real Estate Activities	369,574.2	378,847.0	368,065.2	376,359.1	375,546.2
13 Professional, Scientific & Technical Activities	565,573.3	583,695.6	619,212.1	650,168.1	659,919.3
14 Administrative & Support Service Activities	110,296.8	114,920.7	108,175.8	112,899.3	118,150.8
15 Public Administration & Defence	222,314.6	237,996.9	246,924.3	260,855.4	276,341.7
16 Education Services	101,595.1	109,423.7	108,958.5	116,049.6	121,713.9
17 Human Health & Social Work	156,669.9	164,377.0	176,429.7	208,521.0	224,548.0
18 Other Services	123,741.9	133,803.0	102,340.2	105,332.3	121,989.3
GDP at Constant Basic (2015) Prices	4,094,112.4	4,269,855.8	4,093,494.2	4,247,013.2	4,477,900.2
Add: Taxes Less Subsidies on Products	263,788.3	258,684.4	210,665.5	268,262.5	270,198.1
GDP at Constant Purchasers' (2015) Prices	4,357,900.7	4,528,540.2	4,304,159.8	4,515,275.8	4,748,098.3

R-revised

3.3 GDP rates of growth by industry

Table 3 below shows the growth rate of real GDP disaggregated by industry. The local economy recorded a growth of 5.2 percent in 2022, which resulted in a 5-year (2018-2022) average growth rate of 2.6 percent. The economic expansion in 2022 resulted from growth in goods-producing (3.0%) and service-producing industries (5.6%).

Two (2) of the four (4) goods-producing industries recorded higher levels of activity in 2022 when compared to 2021. The increase in the goods-producing industries resulted in a five-year annual average growth rate of 5.1 percent. The service-producing industries also registered growth, posting a five-year annual average growth rate of 2.4 percent. Real estate activities was the only service industry to have contracted in 2022, declining by 0.2 percent.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN						
TABLE 3: RATE OF GROWTH OF GDP AT CONSTANT BASIC & PURCHASERS' PRICES, 2015=100						
INDUSTRY	2018	2019	2020	2021	2022	5-Year Average
Goods Producing Industries	5.9%	8.6%	-0.1%	8.5%	3.0%	5.1%
01 Agriculture & Fishing	1.0%	4.4%	-2.3%	9.3%	-0.3%	2.4%
02 Mining & Quarrying	5.4%	8.6%	4.1%	11.8%	4.0%	6.7%
03 Manufacturing	7.5%	5.0%	-6.7%	10.4%	-4.3%	2.1%
06 Construction	6.0%	10.0%	1.4%	7.8%	4.9%	6.0%
Service Producing Industries	3.5%	4.0%	-4.4%	3.5%	5.6%	2.4%
04 Electricity, Gas & Air Conditioning Supply	1.3%	7.0%	-4.1%	2.5%	2.0%	1.7%
05 Water Supply, Sewerage & Waste Management	5.1%	2.8%	-5.0%	1.0%	7.0%	2.1%
07 Wholesale & Retail Trade	5.5%	5.9%	-1.5%	2.5%	4.4%	3.3%
08 Transport & Storage	3.5%	3.9%	-39.5%	-8.3%	38.9%	-3.7%
09 Hotels & Restaurants	9.8%	6.8%	-51.2%	-13.7%	59.6%	-4.7%
10 Information & Communication	-0.2%	5.0%	-1.6%	4.3%	0.3%	1.5%
11 Financial & Insurance Services	2.4%	2.5%	1.3%	3.1%	2.9%	2.4%
12 Real Estate Activities	2.1%	2.5%	-2.8%	2.3%	-0.2%	0.7%
13 Professional, Scientific & Technical Activities	3.5%	3.2%	6.1%	5.0%	1.5%	3.9%
14 Administrative & Support Service Activities	3.9%	4.2%	-5.9%	4.4%	4.7%	2.2%
15 Public Administration & Defence	3.4%	7.1%	3.8%	5.6%	5.9%	5.1%
16 Education Services	4.1%	7.7%	-0.4%	6.5%	4.9%	4.5%
17 Human Health & Social Work	5.7%	4.9%	7.3%	18.2%	7.7%	8.7%
18 Other Services	4.4%	8.1%	-23.5%	2.9%	15.8%	0.6%
GDP at Constant Basic (2015) Prices	3.6%	4.3%	-4.1%	3.8%	5.4%	2.5%
Taxes Less Subsidies on Products	15.3%	-1.9%	-18.6%	27.3%	0.7%	3.4%
GDP at Constant Purchasers' (2015) Prices	4.3%	3.9%	-5.0%	4.9%	5.2%	2.6%

R-revised

Note: Average growth rate represents the geometric mean of the annual growth rates.

3.3.1 Goods-producing industries

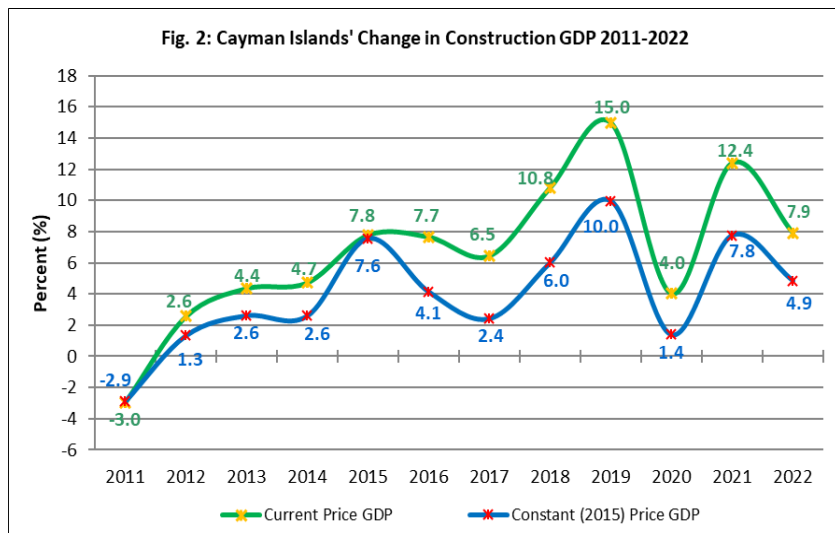
The goods-producing industries registered their second consecutive year of growth in 2022, posting an increase of 3.0 percent, compared to the 8.5 percent increase realised in 2021. The higher levels of activity resulted from growth in construction and mining & quarrying activities.

The activities of **agriculture & fishing** declined by 0.3 percent in 2022, reversing the 9.3 percent growth recorded in 2021. This decline resulted in a five-year annual average growth rate of 2.4 percent. The decreased activity in 2022 was due mainly to reduced output in the sub-groups relating to the growing of crops and farming of animals.

Mining & quarrying activities increased by 4.0 percent in 2022 compared to 2021. The growth continued the positive performance of the industry, resulting in a five-year annual average growth rate of 6.7 percent. The increased output in mining & quarrying was realised as the imports of construction aggregate declined by 17.4 percent in 2022 (moving to 317,606 tons in 2022, down from 384,351 tons in 2021).⁶

The **manufacturing industry** posted the most significant decline in 2022, contracting by 4.3 percent, the second year of reduced activity in three years. This resulted in a five-year annual average growth rate of 2.1 percent. However, the decline in 2022 was tempered by an increase in the manufacture of food and beverage products.

The value added of **construction activities** grew by 4.9 percent in 2022, a slowing of the 7.8 percent growth in 2021. This continues the industry’s robust performance, resulting in a five-year annual average growth rate of 6.0 percent. The higher level of output in 2022 was due mainly to improvements in building construction, construction of utility projects and building



⁶Source: https://www.caymanport.com/wp-content/uploads/cargo_stats.pdf

installation. There were declines in road construction and construction equipment rental activities.

3.3.2 Service-producing industries

In 2022, the service-producing industries grew by 5.6 percent, continuing on the 3.5 percent growth in 2021. The improvement in 2022 led to a five-year annual average growth of 2.4 percent. The expansion was broad-based, driven by higher levels of activity in all but one (1) industry, led by hotel & restaurants; transport & storage; other services; and human health & social work.

The **electricity, gas & air conditioning supply industry** registered a growth of 2.0 percent in 2022, a continuation on the 2.5 percent increase in activity in 2021. The industry posted a five-year annual average growth of 1.7 percent. The expansion was partly influenced by a 2.1 percent increase in electricity consumption, which rose to 674,124 megawatt-hours (Mwhrs) in 2022 from 660,469 Mwhrs in 2021.⁷ The increase is mainly attributed to increases in commercial and residential electricity consumption.

The **water supply, sewerage & waste management industry** grew by 7.0 percent in 2022, which increased the five-year annual average change to 2.1 percent. The improved performance of the industry was spurred by growth in all sub-industries. The growth in water supply service was underpinned by the increase in the consumption of desalinated water from 1,946.6 million US gallons in 2021 to 2,085.9 million US gallons in 2022.

Wholesale & retail trade recorded growth of 4.4 percent in 2022, resulting in a five-year annual average growth rate of 3.3 percent. The improved performance of the industry was attributed to an increase in the aggregate demand related to the 14.7 percent increase in the year-end population, which moved to 81,546 in 2022 from 71,105 in 2021.

Transport & storage activities started to rebound as the impact of the global pandemic on travel weakened. The activity grew by 38.9 percent in 2022, a turnaround from the decline of 8.3 percent and 39.5 percent recorded in 2021 and 2020, respectively. Despite the increase in 2022, the industry posted a five-year annual average decline of 3.7 percent. The improved activity in the industry was driven by the 47.9 percent and 41.5 percent increases in the transport services and supporting transport activities sub-industries. The growth in the transport services sub-industry was positively influenced by a 45.9 percent increase in passenger air transport activities. The growth in the industry was tempered by a 2.3 percent decline in post and courier activities.

⁷This represents electricity consumption for Grand Cayman; data for the Sister Islands was unavailable.

The **hotels & restaurants industry** posted the largest growth in 2022, growing by 59.6 percent. This reversed two consecutive years of decline as the industry continued to recover from the fall in tourism activities arising from the global pandemic. The growth in the industry was largely due to the 1,543.4 percent increase in stay-over visitors, which rose to 284.3 thousand in 2022 from 17.3 thousand in 2021. Accommodation activities grew by 98.5 percent in 2022, after declining in 2021 (-26.7%) and 2020 (-59.8%). Restaurant



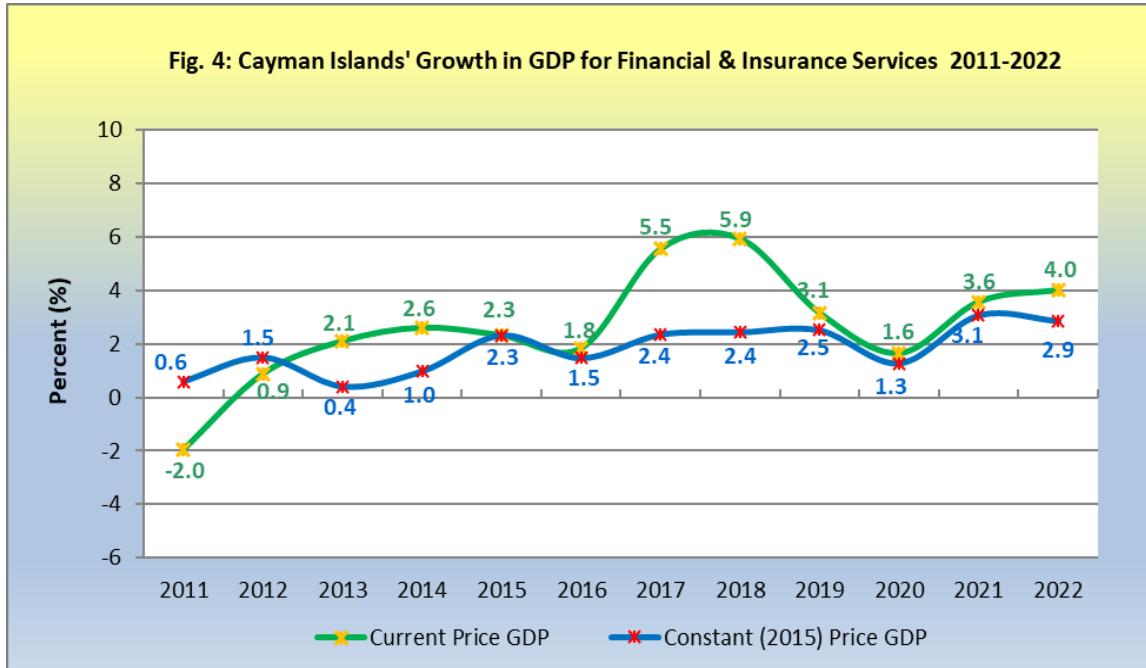
services continued its improvement, growing by 19.0 percent in 2022, adding to the 6.0 percent increase in 2021. Figure 3 illustrates the continued positive relationship between real GDP for the hotels & restaurants industry and the stay-over (air arrival) visitors. However, it should be noted that while both maintain a positive relationship, other underlying factors influence the movements in GDP for the hotels & restaurants industry.

Information & communication activities increased by 0.3 percent in 2022, a slowing of the 4.3 percent increase recorded in 2021. The expansion resulted in a five-year annual average growth rate of 1.5 percent. The performance of the industry was positively impacted by increases in computer & related services, which grew by 3.7 percent. The growth in the industry was adversely affected by the 0.9 percent decline in telecommunication services, which includes broadcasting activities.

The **financial & insurance services industry** maintained its steady growth, expanding by 2.9 percent in 2022. The consistent growth resulted in a five-year annual average growth rate of 2.4 percent. The performance of the industry was broad-based, with all sub-industries expanding in 2022 except for banking institutions (the largest sub-industry), which declined by 0.3 percent. The improved activity in the industry stemmed from the growth in insurance and pension funding services (5.7%), auxiliary financial services⁸

⁸Auxiliary financial services include portfolio management services, stock exchange services, security brokers, etc.

(5.0%), and other financial services⁹, which increased by 2.3 percent. Figure 4 provides a graphical display of the performance of the sector over the period 2011-2022.



Real estate activities is the only service industry to have declined in 2022, contracting by 0.2 percent. This represents a turn-around from the 2.3 percent increase in 2021. The reduced activity may be attributed to a 5.5 percent decline in other real estate activities.¹⁰ The decline was somewhat offset by increased output in the renting of commercial buildings (1.3%), operations of owner-occupied dwellings (0.4%), and renting of residential buildings (0.4%). The unfavourable performance of other real estate activities reflects the 8.1 percent decline in the total value of property transfers in the Cayman Islands in 2022 (from CI\$1360.6 million in 2021 to CI\$1250.2 million in 2022).

The **professional, scientific & technical activities** industry recorded an increase of 1.5 percent in 2022, continuing on its growth trajectory although at a slower pace than 2021. The industry recorded a five-year annual average growth rate of 3.9 percent, resulting from the continued expansion since 2009. The performance in 2022 was positively influenced by an increase in the value added of accounting services (6.1%). The growth in the industry was moderated by a decrease in legal services (1.2%).

⁹Other financial services include credit unions, building societies, remittance services, property trusts services, etc.

¹⁰Other real estate activities include real estate agents and brokers and property managers.

Administrative & support service activities grew by 4.7 percent in 2022, recording growth for the second consecutive year. The growth in 2022 led to a five-year annual average growth rate of 2.2 percent. The expansion was fuelled by increased activity in car rental services (3.8%), landscaping activities (1.4%), and building cleaning activities (4.7%). Growth in the industry was slightly hampered by the 4.9 percent decline in security services.

Public administration & defence activities posted a growth of 5.9 percent in 2022, slightly outpacing the 5.6 percent recorded in 2021. This resulted in a five-year annual average growth rate of 5.1 percent. The growth in public administration services was due mainly to the 6.0 percent increase in personnel costs, which increased to CI\$398.2 million in 2022 from CI\$375.5 million in 2021.

Education services recorded an increase of 4.9 percent in 2022, registering growth for the second consecutive year. The increase in activity resulted in a five-year annual average growth rate of 4.5 percent. Contributing to the increase in output was the growth in both the public and private education sub-industries of 4.8 percent and 4.9 percent, respectively.

The **human health & social work industry** continued on its robust growth trajectory. The industry grew by 7.7 percent in 2022 compared to the 18.2 percent increase in 2021. The strong performance in 2022 resulted in the highest five-year annual average growth of all industries (8.7%). The sustained improvement was driven by higher levels of output in both private and public health services. Health services continued to be one of the main drivers of growth, with public health services expanding by 10.6 percent while private health services grew by 5.5 percent.

The value added of **other services** increased by 15.8 percent in 2022. The growth in the industry may be attributed to a 42.9 percent increase in private arts, entertainment & recreation amidst the increase in tourism-related activities. The increase in private arts, entertainment & recreation was due mainly to the growth in water sports activities (223.7%). Personal & household services also contributed to the improved output, increasing by 14.5 percent.

In summary, the Cayman Islands' economy grew for a second consecutive year in 2022 as it continued its recovery from the effects of the global pandemic. The increase in activity in 2022 (5.2%) outpaced the 4.9 percent increase posted in 2021. This expansion led to a five-year annual average growth rate of 2.6 percent for the local economy. Domestic economic activity was bolstered by the general increase in the aggregate demand for goods and services associated with the increase in the resident population. The removal of global travel restrictions and public health measures implemented to combat the global

pandemic positively impacted tourist-related activities as stay-over visitors and cruise visitors increased in 2022. The continual growth in financial & insurance services, professional, scientific & technical activities, human health & social work services, and construction activities augurs well for the continued recovery of the local economy.

3.4 Contribution to growth in GDP by industry

The contribution to growth in GDP shows the weighted impact of the industry-level changes on the overall change in GDP. The industry changes in GDP are weighted by their contribution to GDP to present a more comprehensive examination of the impact on the change in GDP. Thus, contributions to growth reflect two effects: the magnitude of the change in the industry and the relative importance of the industry in total GDP.

Figure 5 reveals the contribution of the various industries to the 5.2 percent increase in real GDP in 2022. The five largest impacts on the performance in 2022 were (i) hotel & restaurants (1.39 percentage points); (ii) Financial & insurance services (0.91 percentage points); (iii) transport & storage services (0.74 percentage points); (iv) other services (0.37 percentage points); and (v) human health & social work (0.35 percentage points).

Fig. 5: Cayman Islands: Industry Contribution to Percent Change in Real GDP 2022
Real GDP increased by 5.2 percent in 2022

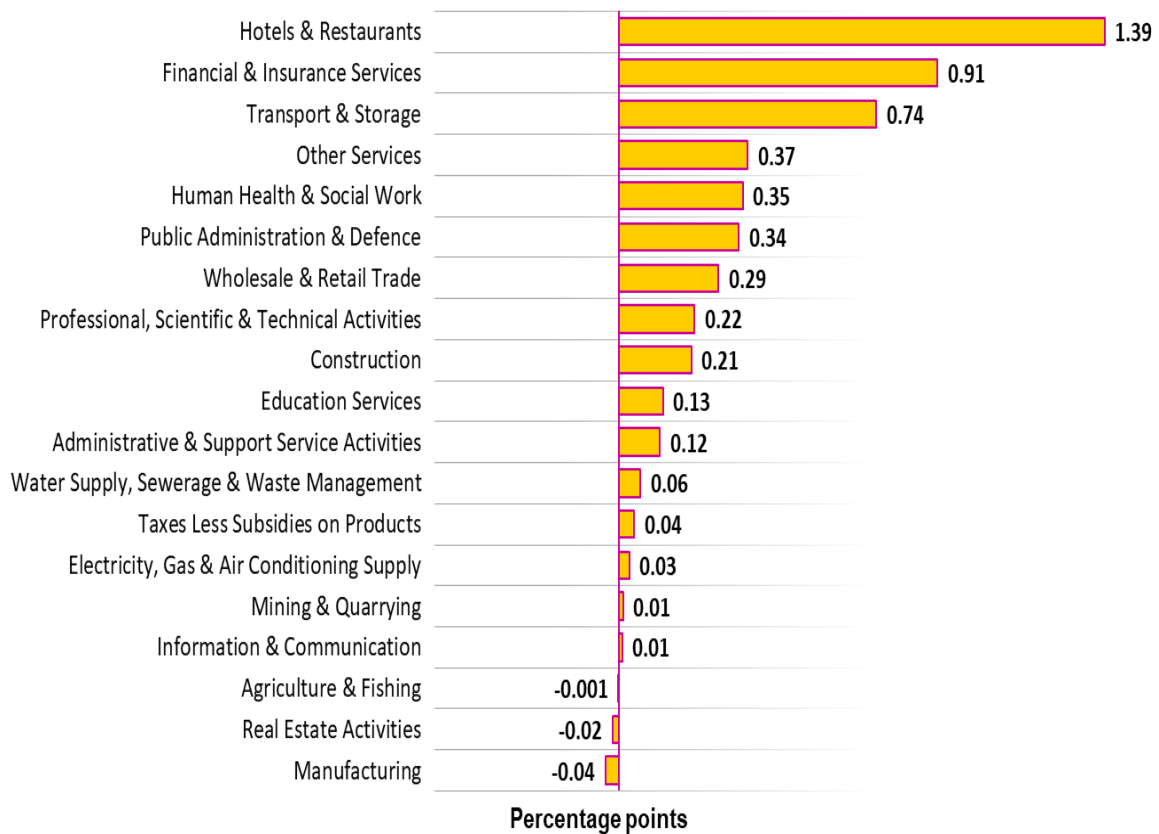


Table 4 shows the industry contribution to the annual economic performance of the local economy for 2018-2022.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN					
TABLE 4: INDUSTRY CONTRIBUTION TO GROWTH IN GDP AT CONSTANT PURCHASERS' PRICES, 2015=100					
INDUSTRY	2018	2019	2020^R	2021^R	2022
Goods Producing Industries	0.3%	0.4%	-0.01%	0.5%	0.2%
01 Agriculture & Fishing	0.00%	0.02%	-0.01%	0.04%	-0.001%
02 Mining & Quarrying	0.01%	0.02%	0.01%	0.03%	0.01%
03 Manufacturing	0.07%	0.04%	-0.06%	0.09%	-0.04%
06 Construction	0.22%	0.37%	0.05%	0.32%	0.21%
Service Producing Industries	3.1%	3.6%	-3.9%	3.1%	4.9%
04 Electricity, Gas & Air Conditioning Supply	0.02%	0.10%	-0.06%	0.04%	0.03%
05 Water Supply, Sewerage & Waste Management	0.05%	0.03%	-0.04%	0.01%	0.06%
07 Wholesale & Retail Trade	0.34%	0.37%	-0.10%	0.17%	0.29%
08 Transport & Storage	0.12%	0.13%	-1.35%	-0.18%	0.74%
09 Hotels & Restaurants	0.50%	0.37%	-2.84%	-0.39%	1.39%
10 Information & Communication	-0.01%	0.13%	-0.04%	0.12%	0.01%
11 Financial & Insurance Services	0.77%	0.77%	0.39%	1.00%	0.91%
12 Real Estate Activities	0.18%	0.21%	-0.24%	0.19%	-0.02%
13 Professional, Scientific & Technical Activities	0.46%	0.42%	0.78%	0.72%	0.22%
14 Administrative & Support Service Activities	0.10%	0.11%	-0.15%	0.11%	0.12%
15 Public Administration & Defence	0.17%	0.36%	0.20%	0.32%	0.34%
16 Education Services	0.10%	0.18%	-0.01%	0.16%	0.13%
17 Human Health & Social Work	0.20%	0.18%	0.27%	0.75%	0.35%
18 Other Services	0.13%	0.23%	-0.69%	0.07%	0.37%
GDP at Constant Basic (2015) Prices	3.4%	4.0%	-3.9%	3.6%	5.1%
Taxes Less Subsidies on Products	0.84%	-0.12%	-1.06%	1.34%	0.04%
GDP at Constant Purchasers' (2015) Prices	4.3%	3.9%	-5.0%	4.9%	5.2%

R-revised

3.5 Share of GDP by industry

In 2022, the combined share of the goods-producing industries declined slightly to 5.8 percent of the total GDP from 5.9 percent in 2021. The decline resulted from a lowering of the share of manufacturing activities, which decreased to 0.8 percent from 0.9 percent in 2021. The share of the service-producing industries increased to 88.5 percent in 2022 from 88.2 percent in 2021. This emanated from the increases in the shares of transport & storage, hotels & restaurants, health & social work, and other services. The gains were offset by the declines in the shares of information & communication, financial & insurance services, real estate activities, and professional, scientific & technical Activities. The share of net taxes decreased to 5.7 percent in 2022 from 5.9 percent in 2021.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN					
TABLE 5: INDUSTRY SHARE OF GDP AT CONSTANT PURCHASERS' PRICES, 2015=100					
INDUSTRY	2018	2019	2020	2021^R	2022
Goods Producing Industries	5.2%	5.4%	5.7%	5.9%	5.8%
01 Agriculture & Fishing	0.4%	0.4%	0.4%	0.4%	0.4%
02 Mining & Quarrying	0.2%	0.2%	0.3%	0.3%	0.3%
03 Manufacturing	0.9%	0.9%	0.9%	0.9%	0.8%
06 Construction	3.7%	3.9%	4.2%	4.3%	4.3%
Service Producing Industries	88.8%	88.9%	89.4%	88.2%	88.5%
04 Electricity, Gas & Air Conditioning Supply	1.4%	1.4%	1.5%	1.4%	1.4%
05 Water Supply, Sewerage & Waste Management	0.9%	0.9%	0.9%	0.9%	0.9%
07 Wholesale & Retail Trade	6.3%	6.4%	6.7%	6.5%	6.5%
08 Transport & Storage	3.4%	3.4%	2.2%	1.9%	2.5%
09 Hotels & Restaurants	5.4%	5.5%	2.8%	2.3%	3.6%
10 Information & Communication	2.6%	2.6%	2.7%	2.7%	2.6%
11 Financial & Insurance Services	30.9%	30.4%	32.4%	31.9%	31.2%
12 Real Estate Activities	8.5%	8.4%	8.6%	8.3%	7.9%
13 Professional, Scientific & Technical Activities	13.0%	12.9%	14.4%	14.4%	13.9%
14 Administrative & Support Service Activities	2.5%	2.5%	2.5%	2.5%	2.5%
15 Public Administration & Defence	5.1%	5.3%	5.7%	5.8%	5.8%
16 Education Services	2.3%	2.4%	2.5%	2.6%	2.6%
17 Human Health & Social Work	3.6%	3.6%	4.1%	4.6%	4.7%
18 Other Services	2.8%	3.0%	2.4%	2.3%	2.6%
GDP at Constant Basic (2015) Prices	93.9%	94.3%	95.1%	94.1%	94.3%
Taxes Less Subsidies on Products	6.1%	5.7%	4.9%	5.9%	5.7%
GDP at Constant Purchasers' (2015) Prices	100.0%	100.0%	100.0%	100.0%	100.0%

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Table 6 below shows the share of the eighteen (18) industries as well as their ranking over the period under review. The rankings reflect the relative importance of an industry (as it pertains to its direct share of real GDP) to the economy of the Cayman Islands. The change in the relative ranking of the industries in 2022 is also shown graphically in the table. There were changes in the relative ranking of eight (8) of the eighteen (18) industries in 2022 when compared to 2021. Four (4) industries increased in ranking, four (4) industries declined in ranking, and ten (10) industries remained unchanged. The industries increasing in ranking in 2022 were hotels & restaurants, other services, transport & storage, and water supply, sewerage & waste management. The industries falling in the ranking were information & communication, education services, administrative & support service activities, and manufacturing. The most significant change in ranking was posted by both hotel & restaurant services (from 11th in 2021 to 8th in 2022) and administrative & support service activities, which moved from 10th in 2021 to 13th in 2022. There were changes in the individual shares of eight (8) of the industries, with four posting increases and four declining.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN											
TABLE 6: INDUSTRY SHARE OF GDP AT CONSTANT PURCHASERS' PRICES, 2015=100											
Ranking					Change 22/21	INDUSTRY	% Share of GDP				
2018	2019	2020	2021	2022			2018	2019	2020	2021	2022
1	1	1	1	1	▬	Financial & Insurance Services	30.9	30.4	32.4	31.9	31.2
2	2	2	2	2	▬	Professional, Scientific & Technical Activities	13.0	12.9	14.4	14.4	13.9
3	3	3	3	3	▬	Real Estate Activities	8.5	8.4	8.6	8.3	7.9
4	4	4	4	4	▬	Wholesale & Retail Trade	6.3	6.4	6.7	6.5	6.5
6	6	5	5	5	▬	Public Administration & Defence	5.1	5.3	5.7	5.8	5.8
8	8	7	6	6	▬	Human Health & Social Work	3.6	3.6	4.1	4.6	4.7
7	7	6	7	7	▬	Construction	3.7	3.9	4.2	4.3	4.3
5	5	8	11	8	↑	Hotels & Restaurants	5.4	5.5	2.8	2.3	3.6
11	11	9	8	9	↓	Information & Communication	2.6	2.6	2.7	2.7	2.6
10	10	12	12	10	↑	Other Services	2.8	3.0	2.4	2.3	2.6
13	13	10	9	11	↓	Education Services	2.3	2.4	2.5	2.6	2.6
9	9	13	13	12	↑	Transport & Storage	3.4	3.4	2.2	1.9	2.5
12	12	11	10	13	↓	Administrative & Support Service Activities	2.5	2.5	2.5	2.5	2.5
14	14	14	14	14	▬	Electricity, Gas & Air Conditioning Supply	1.4	1.4	1.5	1.4	1.4
15	15	15	16	15	↑	Water Supply, Sewerage & Waste Management	0.9	0.9	0.9	0.9	0.9
16	16	16	15	16	↓	Manufacturing	0.9	0.9	0.9	0.9	0.8
17	17	17	17	17	▬	Agriculture & Fishing	0.4	0.4	0.4	0.4	0.4
18	18	18	18	18	▬	Mining & Quarrying	0.2	0.2	0.3	0.3	0.3
GDP at Constant Basic (2015) Prices							93.9	94.3	95.1	94.1	94.3
<i>Add: Taxes Less Subsidies on Products</i>							6.1	5.7	4.9	5.9	5.7
GDP at Constant Purchasers' (2015) Prices							100.0	100.0	100.0	100.0	100.0

The share of financial & insurance services fell again in 2022 but still maintained its dominance as the industry with the largest share of real GDP for the Cayman Islands. The share of the industry contracted to 31.2 percent in 2022, down from the 31.9 percent share in 2021. The share of the industry declined in five of the previous six years, posting the largest decline of all industries in 2022 (-0.7).

The share of the professional, scientific & technical activities industry decreased by 0.5 percentage points, moving to 13.9 percent, from 14.4 percent in 2021. Despite the decline in share, the industry maintained its position as the second-largest share of real GDP.

Other notable shares of real GDP in 2022 came from real estate activities, wholesale & retail trade, public administration & defence, human health & social work, and construction. Real estate activities fell to 7.9 percent in 2022, down from 8.3 percent in 2021. There were no changes in the share of wholesale & retail trade, public administration & defence, and construction in 2022 compared to 2021. There was an increase in the share of human health & social work which gained 0.1 percentage point, increasing to 4.7 percent, from 4.6 percent in 2021.

The tourism-dependent industries posted the largest increases in share of real GDP in 2022. The share of hotel & restaurant services increased to 3.6 percent in 2022 from 2.3 percent in 2021. The ranking of hotel & restaurant services rose to 8th in 2022 from 11th in 2021. Transport & storage activities also gained share in 2022, increasing from 1.9 percent in 2021 to 2.5 percent. With the increase, the industry rose one place to 12th in the rankings. Other services also rose in the 2022 rankings, moving two (2) places to 10th place with an improved share of 2.6 percent, compared to the 2.3 percent in 2021.

3.6 Industry GDP at current prices

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN					
TABLE 7: GDP AT CURRENT BASIC & PURCHASERS' PRICES (CI\$'000)					
INDUSTRY	2018	2019	2020^R	2021^R	2022
01 Agriculture & Fishing	18,829.6	20,515.2	20,519.3	22,735.1	25,598.6
02 Mining & Quarrying	10,353.7	11,839.8	12,756.6	14,426.7	15,716.7
03 Manufacturing	41,066.8	44,730.4	43,210.6	50,241.9	53,091.6
04 Electricity, Gas & Air Conditioning Supply	69,149.3	74,568.5	72,654.8	75,919.3	77,825.1
05 Water Supply, Sewerage & Waste Management	40,593.0	42,951.9	38,807.2	39,562.9	41,905.0
06 Construction	180,526.7	207,573.3	215,951.4	242,761.5	262,000.1
07 Wholesale & Retail Trade	278,027.3	297,638.8	280,959.5	311,487.0	345,677.2
08 Transport & Storage	153,723.6	163,773.4	104,402.8	93,580.0	131,692.4
09 Hotels & Restaurants	257,802.7	291,679.7	119,478.0	77,338.4	167,103.9
10 Information & Communication	119,799.7	132,296.5	128,390.1	140,178.8	144,906.3
11 Financial & Insurance Services	1,438,627.6	1,483,668.9	1,507,951.4	1,561,718.9	1,624,282.9
12 Real Estate Activities	369,674.2	429,825.8	427,546.4	448,819.4	480,444.6
13 Professional, Scientific & Technical Activities	601,573.2	646,213.4	692,985.5	765,612.1	799,475.2
14 Administrative & Support Service Activities	115,760.6	122,794.8	114,399.7	121,941.7	137,190.8
15 Public Administration & Defence	241,180.4	267,795.9	291,621.5	312,928.4	337,127.8
16 Education Services	105,707.3	119,928.9	121,285.3	134,730.5	144,800.0
17 Human Health & Social Work	160,414.2	169,261.7	194,162.4	230,692.0	256,951.7
18 Other Services	126,386.3	141,733.3	106,991.0	105,582.1	128,612.8
GDP at Current Basic Prices	4,329,196.2	4,668,790.2	4,494,073.6	4,750,256.6	5,174,402.7
Add: Taxes Less Subsidies on Products	279,267.4	282,770.5	218,705.9	299,745.3	326,278.7
GDP at Current Purchasers' Prices	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3

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3.7 Detailed value added by industry

TABLE 8: DETAILED VALUE ADDED BY INDUSTRY		CURRENT/NOMINAL (CIS\$'000)					CONSTANT/REAL (CIS\$'000)				
INDUSTRY	2018	2019	2020 ^R	2021 ^R	2022	2018	2019	2020 ^R	2021 ^R	2022	
AGRICULTURE & FISHING	18,829.6	20,515.2	20,519.3	22,735.1	25,598.6	16,578.4	17,306.0	16,913.8	18,494.6	18,443.4	
Growing of Agricultural Crops	14,999.6	15,991.1	16,573.2	19,307.7	20,471.1	13,801.7	14,448.4	14,413.4	16,062.7	15,712.3	
Farming of Animals	1,396.9	1,535.3	1,580.7	1,257.4	1,146.2	1,123.1	1,120.9	1,053.5	1,070.5	793.1	
Capture Fishing	2,433.2	2,988.7	2,365.4	2,169.9	3,981.3	1,653.5	1,736.6	1,447.0	1,361.4	1,938.1	
MINING & QUARRYING	10,353.7	11,839.8	12,756.6	14,426.7	15,716.7	9,676.4	10,506.1	10,933.9	12,221.4	12,710.0	
Quarrying incl. Stone, Sand and Gravel	10,353.7	11,839.8	12,756.6	14,426.7	15,716.7	9,676.4	10,506.1	10,933.9	12,221.4	12,710.0	
MANUFACTURING	41,066.8	44,730.4	43,210.6	50,241.9	53,091.6	38,837.7	40,780.5	38,031.7	41,983.7	40,168.7	
Food Products, Beverages and Tobacco Products	10,360.7	11,973.2	12,096.2	12,467.7	14,950.8	9,590.9	11,146.7	10,980.5	11,184.1	11,827.8	
Builders' Carpentry and Joinery, incl. Furniture and Rubber and Plastic Product	3,669.8	4,148.0	3,443.5	5,398.9	5,255.6	3,334.3	3,522.3	2,845.0	4,177.1	3,519.4	
Non-Metallic Mineral Products (incl. Glass and Glass Products, Concrete, Cement)	15,042.7	15,538.4	16,151.7	19,416.6	20,810.0	14,062.7	13,817.9	13,770.3	15,368.1	15,159.4	
Basic Metals, Fabricated Metal Products, Machinery & Equipment	4,735.5	5,126.8	4,770.6	5,670.5	5,111.6	4,341.0	4,342.9	4,022.2	4,646.8	3,767.9	
Other Manufacturing Goods n.e.c.	7,258.2	7,944.1	6,748.6	7,288.1	6,963.6	7,508.9	7,950.7	6,413.6	6,607.6	5,894.2	
ELECTRICITY, GAS & AIR CONDITIONING SUPPLY	69,149.3	74,568.5	72,654.8	75,919.3	77,825.1	60,913.2	65,186.3	62,513.3	64,046.1	65,324.6	
Production, Collection and Distribution of Electricity and the Manufacture of Ice	69,149.3	74,568.5	72,654.8	75,919.3	77,825.1	60,913.2	65,186.3	62,513.3	64,046.1	65,324.6	
WATER SUPPLY, SEWERAGE & WASTE MANAGEMENT	40,593.0	42,951.9	38,807.2	39,562.9	41,905.0	39,697.2	40,817.7	38,787.4	39,155.9	41,905.2	
Water Collection, Treatment and Distribution, Sewerage and Waste Collection	40,593.0	42,951.9	38,807.2	39,562.9	41,905.0	39,697.2	40,817.7	38,787.4	39,155.9	41,905.2	
CONSTRUCTION	180,526.7	207,573.3	215,951.4	242,761.5	262,000.1	160,721.9	176,740.4	179,197.5	193,113.9	202,495.8	
Construction (incl building installation, building completion, etc.)	180,526.7	207,573.3	215,951.4	242,761.5	262,000.1	160,721.9	176,740.4	179,197.5	193,113.9	202,495.8	
WHOLESALE & RETAIL TRADE	278,027.3	297,638.8	280,959.5	311,487.0	345,677.2	275,479.7	291,691.7	287,186.5	294,415.6	307,298.5	
Wholesale & Retail Trade	278,027.3	297,638.8	280,959.5	311,487.0	345,677.2	275,479.7	291,691.7	287,186.5	294,415.6	307,298.5	
TRANSPORT & STORAGE	153,723.6	163,773.4	104,402.8	93,580.0	131,692.4	148,675.4	154,436.6	93,442.8	85,709.9	119,065.4	
Transport	66,737.9	72,540.4	49,600.2	42,722.1	53,861.9	67,061.5	70,584.4	41,742.0	35,272.6	52,151.2	
Supporting Activities for Transport (incl Cargo)	77,782.0	81,745.5	44,746.0	39,736.5	65,414.5	72,708.3	75,034.8	42,128.5	40,295.1	57,009.2	
Post and Courier Activities	9,203.7	9,487.5	10,056.6	11,121.4	12,416.0	8,905.6	8,817.5	9,572.3	10,142.3	9,905.0	
HOTELS & RESTAURANTS	257,802.7	291,679.7	119,478.0	77,338.4	167,103.9	234,936.5	250,968.8	122,407.2	105,585.9	168,566.6	
Hotels & Other Short-Term Accommodations Activities	186,787.2	215,366.1	65,974.1	22,448.3	98,009.6	168,646.2	183,214.8	73,728.4	54,009.3	107,203.3	
Restaurants, Bars & Other Food Service Activities	71,015.5	76,313.7	53,503.9	54,890.1	69,094.3	66,290.3	67,753.9	48,678.8	51,576.6	61,363.3	
INFORMATION & COMMUNICATION	119,799.7	132,296.5	128,390.1	140,178.8	144,906.3	114,145.3	119,906.1	118,007.5	123,108.4	123,465.7	
Motion Picture Projection, Radio & TV Programming and Broadcasting and Telecommunications Activities	91,341.2	101,627.8	98,617.0	108,908.0	110,037.5	85,685.6	90,719.1	91,013.7	95,716.4	95,083.5	
Publishing, Printing and Computer & Data Processing Services	28,458.5	30,668.7	29,773.1	31,270.8	34,868.8	28,459.7	29,187.1	26,993.8	27,392.0	28,382.1	

TABLE 8 cont'd: DETAILED VALUE ADDED BY INDUSTRY	CURRENT/NOMINAL (CIS\$'000)					CONSTANT/REAL (CIS\$'000)				
INDUSTRY	2018	2019	2020 ^R	2021 ^R	2022	2018	2019	2020 ^R	2021 ^R	2022
FINANCIAL & INSURANCE SERVICES	1,438,627.6	1,483,668.9	1,507,951.4	1,561,718.9	1,624,282.9	1,344,684.7	1,378,451.7	1,395,966.9	1,438,992.9	1,480,247.1
Monetary Institutions (incl. CIMA)	708,847.3	716,464.1	724,460.5	748,097.0	759,886.2	641,799.9	636,839.7	644,176.2	655,244.3	654,128.9
Other Financial Institutions & Financial Services	287,285.5	303,339.1	303,638.9	320,542.1	341,586.3	276,804.2	288,049.2	287,311.6	311,279.4	326,558.5
Insurance, Pension Funding (incl. Auxiliary Activities)	442,494.8	463,865.7	479,852.0	493,079.8	522,810.4	426,080.7	453,562.8	464,479.1	472,469.2	499,559.7
REAL ESTATE ACTIVITIES	369,674.2	429,825.8	427,546.4	448,819.4	480,444.6	369,574.2	378,847.0	368,065.2	376,359.1	375,546.2
Operating of Owner-Occupied Dwellings	172,076.7	205,746.8	217,774.1	214,202.2	240,917.1	180,504.6	185,153.1	188,165.5	181,137.3	181,890.2
Renting of Residential Buildings	92,422.9	109,531.7	105,228.6	110,211.7	119,217.1	88,554.8	93,237.1	87,380.8	89,919.2	90,271.1
Renting of Commercial Buildings	58,912.4	66,784.2	60,861.8	65,707.8	67,467.0	56,701.8	58,751.6	54,095.8	57,057.1	57,782.1
Other Real Estate Activities	46,262.1	47,763.1	43,681.9	58,697.7	52,843.4	43,813.1	41,705.2	38,423.1	48,245.5	45,602.8
PROFESSIONAL, SCIENTIFIC & TECHNICAL ACTIVITIES	601,573.2	646,213.4	692,985.5	765,612.1	799,475.2	565,573.3	583,695.6	619,212.1	650,168.1	659,919.3
Legal Activities	295,623.3	315,050.7	330,364.1	359,765.0	356,625.8	279,586.4	291,607.2	300,816.0	312,646.6	308,937.1
Accounting & Auditing Activities	178,915.5	194,403.8	226,537.0	255,479.8	279,443.3	165,071.4	167,328.4	192,672.8	204,268.5	216,795.6
Other Professional, Scientific & Technical Activities	127,034.4	136,758.9	136,084.3	150,367.4	163,406.1	120,915.5	124,760.0	125,723.3	133,253.1	134,186.6
ADMINISTRATIVE & SUPPORT SERVICE ACTIVITIES	115,760.6	122,794.8	114,399.7	121,941.7	137,190.8	110,296.8	114,920.7	108,175.8	112,899.3	118,150.8
Administrative and Support Service to Businesses (incl. Renting of Machinery & Equipment)	115,760.6	122,794.8	114,399.7	121,941.7	137,190.8	110,296.8	114,920.7	108,175.8	112,899.3	118,150.8
PUBLIC ADMINISTRATION & DEFENCE	241,180.4	267,795.9	291,621.5	312,928.4	337,127.8	222,314.6	237,996.9	246,924.3	260,855.4	276,341.7
Public Administration and Defence	241,180.4	267,795.9	291,621.5	312,928.4	337,127.8	222,314.6	237,996.9	246,924.3	260,855.4	276,341.7
EDUCATION SERVICES	105,707.3	119,928.9	121,285.3	134,730.5	144,800.0	101,595.1	109,423.7	108,958.5	116,049.6	121,713.9
Public Education	55,351.1	62,005.7	66,915.7	72,202.2	76,751.4	54,873.7	58,662.1	61,249.3	64,620.1	67,750.2
Private Education	50,356.3	57,923.2	54,369.6	62,528.3	68,048.6	46,721.4	50,761.6	47,709.2	51,429.5	53,963.7
HUMAN HEALTH & SOCIAL WORK	160,414.2	169,261.7	194,162.4	230,692.0	256,951.7	156,669.9	164,377.0	176,429.7	208,521.0	224,548.0
Public Health and Social Services	78,357.7	82,281.0	89,943.8	98,004.5	113,066.6	74,309.4	77,161.0	80,455.9	87,732.8	97,065.1
Private Health & Social Services	82,056.5	86,980.7	104,218.6	132,687.5	143,885.1	82,360.5	87,216.0	95,973.8	120,788.2	127,483.0
OTHER SERVICES	126,386.3	141,733.3	106,991.0	105,582.1	128,612.8	123,741.9	133,803.0	102,340.2	105,332.3	121,989.3
Private Arts, Entertainment & Recreation	46,314.7	49,916.3	24,871.7	19,553.2	32,439.0	45,241.9	46,599.4	24,417.1	19,860.3	28,387.0
Personal & Household Services (incl. Activities of Membership Organization)	43,274.1	45,088.9	41,061.3	45,583.6	49,877.3	41,702.5	40,475.4	36,865.1	41,656.3	43,447.8
Private Households with Employed Persons	36,797.5	46,728.1	41,058.0	40,445.2	46,296.5	36,797.5	46,728.1	41,058.0	43,815.7	50,154.5
VALUE ADDED/GDP AT BASIC PRICES	4,329,196.2	4,668,790.2	4,494,073.6	4,750,256.6	5,174,402.7	4,094,112.4	4,269,855.8	4,093,494.2	4,247,013.2	4,477,900.2
TAXES LESS SUBSIDIES ON PRODUCTS	279,267.4	282,770.5	218,705.9	299,745.3	326,278.7	263,788.3	258,684.4	210,665.5	268,262.5	270,198.1
GROSS DOMESTIC PRODUCTS AT PURCHASERS' PRICES	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3	4,357,900.7	4,528,540.2	4,304,159.8	4,515,275.8	4,748,098.3

R-revised

3.8 Implicit price index by industry

The GDP Implicit Price Index (IPI) is a measure of inflation calculated by dividing the current price GDP (nominal GDP) by the constant price GDP (real GDP). This index measures the implicit prices of all final goods and services produced in the local economy. It is used to gauge inflationary tendencies in the economy, similar to the Consumer Price Index (CPI) and the Producer Price Index (PPI). The IPI is derived indirectly from the estimates of GDP in constant and current prices, unlike the CPI or PPI, which are derived directly from the collected price data for the items included in the index.

Table 9 below shows the IPI by industry for the Cayman Islands for the period 2015-2022. The IPI by industry provides information on the inflationary tendency at the industry level. The IPI for the base year (in this case, 2015) is equal to 100.

Economy-wide inflation (as measured by the purchasers' price GDP IPI) increased by 3.6 percent in 2022, an acceleration of 2.1 percent in 2021. Inflation (as measured by the CPI) increased by 9.5 percent in 2022.

CAYMAN ISLANDS GROSS DOMESTIC (GDP) TABLES								
TABLE 9: GDP IMPLICIT PRICE INDEX (IPI), 2015=100								
INDUSTRY	2015	2016	2017	2018	2019	2020	2021	2022
01 Agriculture & Fishing	100.0	107.2	109.7	113.6	118.5	121.3	122.9	138.8
02 Mining & Quarrying	100.0	107.8	106.8	107.0	112.7	116.7	118.0	123.7
03 Manufacturing	100.0	99.8	101.2	105.7	109.7	113.6	119.7	132.2
04 Electricity, Gas & Air Conditioning Supply	100.0	108.1	103.1	113.5	114.4	116.2	118.5	119.1
05 Water Supply, Sewerage & Waste Management	100.0	100.7	101.8	102.3	105.2	100.1	101.0	100.0
06 Construction	100.0	103.4	107.4	112.3	117.4	120.5	125.7	129.4
07 Wholesale & Retail Trade	100.0	98.5	100.1	100.9	102.0	97.8	105.8	112.5
08 Transport & Storage	100.0	100.9	102.3	103.4	106.0	111.7	109.2	110.6
09 Hotels & Restaurants	100.0	104.0	106.0	109.7	116.2	97.6	73.2	99.1
10 Information & Communication	100.0	102.5	105.6	105.0	110.3	108.8	113.9	117.4
11 Financial & Insurance Services	100.0	100.4	103.5	107.0	107.6	108.0	108.5	109.7
12 Real Estate Activities	100.0	100.1	101.2	100.0	113.5	116.2	119.3	127.9
13 Professional, Scientific & Technical Activities	100.0	101.6	103.8	106.4	110.7	111.9	117.8	121.1
14 Administrative & Support Service Activities	100.0	101.3	102.7	105.0	106.9	105.8	108.0	116.1
15 Public Administration & Defence	100.0	102.7	105.7	108.5	112.5	118.1	120.0	122.0
16 Education Services	100.0	101.2	101.7	104.0	109.6	111.3	116.1	119.0
17 Human Health & Social Work	100.0	100.4	99.7	102.4	103.0	110.1	110.6	114.4
18 Other Services	100.0	100.3	100.7	102.1	105.9	104.5	100.2	105.4
GDP Implicit Deflator at Basic Prices	100.0	101.1	103.2	105.7	109.3	109.8	111.8	115.6
Add: Taxes Less Subsidies on Products	100.0	99.3	99.5	105.9	109.3	103.8	111.7	120.8
GDP Implicit Deflator at Purchasers' Prices	100.0	101.0	103.0	105.7	109.3	109.5	111.8	115.9
GDP IPI (Basic Prices) percentage change	0.4%	1.1%	2.1%	2.5%	3.4%	0.4%	1.9%	3.3%
GDP IPI (Purchasers' Prices) percentage change	0.3%	1.0%	2.0%	2.7%	3.4%	0.1%	2.1%	3.6%
CPI percentage change	-2.3%	-0.7%	2.0%	3.0%	6.0%	1.0%	3.3%	9.5%

3.9 Production and cost components of value-added by industry

Table 10 below shows the production components (i.e. gross value added, gross output, and intermediate consumption) and cost/income components (i.e. compensation of employees, consumption of fixed capital, operating surplus, and other net taxes on production) by industry. Gross output is defined as the total value of goods and services produced by an establishment (in essence, sales). Gross output can be used by businesses to gauge their market share in a particular industry. Intermediate consumption refers to the goods and services used up in the production process, excluding fixed assets whose consumption is recorded as consumption of fixed capital. The gross value added is the excess of the gross output over the intermediate consumption. GDP via the production approach is the sum of the value-added of all entities operating in the economy. GDP via the income approach is calculated as the sum of the compensation of employees, operating surplus/mixed-income, consumption of fixed capital, and taxes on production and imports less subsidies on production and imports.

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN							
TABLE 10: PRODUCTION AND COST COMPONENTS OF VALUE ADDED AT CURRENT BASIC & PURCHASERS' PRICES 2022 (CI\$'000)							
INDUSTRY	Production Components			Cost/Income Components			
	Gross Value Added ^{1, 1a, 1b}	Gross Output	Intermediate Consumption	Compensation of Employees	Operating Surplus/Mixed Income	Consumption of Fixed Capital ²	Taxes less Subsidies on Production
01 Agriculture & Fishing	25,598.6	34,681.1	9,082.6	8,691.5	15,647.0	778.7	481.4
02 Mining & Quarrying	15,716.7	34,904.2	19,187.5	9,723.3	3,770.4	1,755.3	467.7
03 Manufacturing	53,091.6	131,309.8	78,218.2	27,487.9	21,408.5	2,922.9	1,272.4
04 Electricity, Gas & Air Conditioning Supply	77,825.1	237,490.6	159,665.5	18,143.5	24,399.4	32,750.9	2,531.3
05 Water Supply, Sewerage & Waste Management	41,905.0	73,940.6	32,035.6	20,766.5	12,674.6	7,651.7	812.2
06 Construction	262,000.1	960,883.1	698,883.0	184,191.1	54,552.1	6,644.2	16,612.7
07 Wholesale & Retail Trade	345,677.2	546,664.7	200,987.5	156,212.0	143,904.1	28,829.3	16,731.7
08 Transport & Storage	131,692.4	261,790.2	130,097.8	98,801.5	11,071.4	19,182.3	2,637.3
09 Hotels & Restaurants	167,103.9	452,754.6	285,650.7	120,785.2	31,283.1	7,799.9	7,235.8
10 Information & Communication	144,906.3	229,353.8	84,447.5	59,141.0	53,917.1	15,853.9	15,994.4
11 Financial & Insurance Services	1,624,282.9	3,141,968.0	1,517,685.1	441,434.8	806,338.5	40,681.3	335,828.2
12 Real Estate Activities	480,444.6	809,677.7	329,233.1	64,784.2	360,336.7	52,605.8	2,718.0
13 Professional, Scientific & Technical Activities	799,475.2	1,115,077.5	315,602.3	529,543.1	164,658.8	9,531.0	95,742.3
14 Administrative & Support Service Activities	137,190.8	187,958.1	50,767.3	95,432.6	28,796.7	7,519.4	5,442.1
15 Public Administration & Defence	337,127.8	482,556.1	145,428.3	311,329.0	0.0	25,579.0	219.9
16 Education Services	144,800.0	187,483.7	42,683.8	122,204.8	6,531.1	15,489.0	575.1
17 Human Health & Social Work	256,951.7	379,613.9	122,662.2	182,917.4	56,730.0	12,449.2	4,855.1
18 Other Services	128,612.8	201,243.2	72,630.5	62,565.9	57,719.7	4,772.9	3,554.3
Total	5,174,402.7	9,469,351.0	4,294,948.4	2,514,155.2	1,853,739.2	292,796.5	513,711.7
GDP at Current Basic Prices/Total	5,174,402.7						
Add: Taxes Less Subsidies on Products	326,278.7						
GDP at Current Purchasers' Prices	5,500,681.3						

Notes

1. Discrepancies between the total and the sum of the components are due to rounding

1a. Gross Value Added (Production) = Gross Output - Intermediate Consumption

1b. Gross Value Added (Income) = Compensation of Employees+Operating Surplus/Mixed income+Consumption of Fixed Capital+Taxes less Subsidies on Production

2. Accounting depreciation is used as a proxy for Consumption of Fixed Capital

3.10 GDP Cross-Classified by Industry and Institutional Sectors

Institutional sectors group economic agents by their main function and the nature of their activity, i.e. their principal functions, behaviours and objectives. All local economic agents are grouped into one (and only one) of the following five institutional sectors: i) financial companies; ii) non-financial companies; iii) general government; iv) non-profit institutions serving households; and v) households.

Table 11 below shows GDP cross-classified by industry and institutional sectors as detailed as the available data would allow. Corporations (financial & non-financial) accounted for CI\$4,252.2 million (82.2%) of nominal (current) basic price GDP for the Cayman Islands in 2022. The activities of general government contributed CI\$634.9 million (12.3%), and households added CI\$287.2 million (5.5%).

CAYMAN ISLANDS GDP BY INDUSTRIAL ORIGIN					
TABLE 11: GDP CROSS-CLASSIFIED BY INDUSTRY AND INSTITUTIONAL SECTORS AT CURRENT PRICES 2022 (CI\$'000)					
INDUSTRY	INSTITUTIONAL SECTORS				
	Total Value Added ¹	Non-Financial Corporations ²	Financial Corporations	General Government	Households
01 Agriculture & Fishing	25,598.6	25,598.6	-	-	-
02 Mining & Quarrying	15,716.7	15,716.7	-	-	-
03 Manufacturing	53,091.6	53,091.6	-	-	-
04 Electricity, Gas & Air Conditioning Supply	77,825.1	77,825.1	-	-	-
05 Water Supply, Sewerage & Waste Management ³	41,905.0	4,319.0	-	37,586.0	-
06 Construction	262,000.1	250,727.0	-	11,273.1	-
07 Wholesale & Retail Trade	345,677.2	345,677.2	-	-	-
08 Transport & Storage	131,692.4	72,549.1	-	59,143.3	-
09 Hotels & Restaurants	167,103.9	167,103.9	-	-	-
10 Information & Communication	144,906.3	144,906.3	-	-	-
11 Financial & Insurance Services	1,624,282.9	-	1,624,282.9	-	-
12 Real Estate Activities	480,444.6	239,527.5	-	-	240,917.1
13 Professional, Scientific & Technical Activities	799,475.2	799,475.2	-	-	-
14 Administrative & Support Service Activities	137,190.8	137,190.8	-	-	-
15 Public Administration & Defence ⁴	337,127.8	-	-	337,127.8	-
16 Education Services	144,800.0	68,048.6	-	76,751.4	-
17 Human Health & Social Work	256,951.7	143,885.1	-	113,066.6	-
18 Other Services ⁵	128,612.8	82,316.3	-	-	46,296.5
GDP at Current Basic Prices/Total	5,174,402.7	2,627,958.0	1,624,282.9	634,948.2	287,213.6
Add: Taxes Less Subsidies on Products	326,278.7				
GDP at Current Purchasers' Prices	5,500,681.3				

Notes

1. Discrepancies between the total and the sum of the components are due to rounding
2. Data for non-profit institutions serving households (NPISH) included here due to level of disaggregation and to protect confidentiality.
3. The figure for water supply for general government includes some private activity as it is not disaggregated during compilation. Waste management for general government is included in Public Administration.
4. Includes public arts, entertainment and recreation
5. Other services include Arts, entertainment & recreation, Other services, and Activities of households as employers.

3.11 Gross National Product (GNP)

Gross National Product (GNP) refers to the total value of all goods and services produced by a country's residents and businesses, regardless of where production occurs. Most of the production of resident entities normally takes place in the jurisdiction; however, some production may take place abroad. In addition, some primary income generated within the country may go to non-residents. Whereas GDP accounts for the value of goods and services produced within the country, GNP estimates the total output of a country's residents regardless of their location. It is calculated by adjusting the GDP for the net flows (inflows minus outflows) in investment income. GNP is derived as GDP plus any income earned by residents from foreign investments (income received from the rest of the world), minus the income earned inside the country by foreign residents (income paid to the rest of the world).

GNP for the Cayman Islands decreased by 6.1 percent in 2022 to CI\$3,670.4 million from CI\$3,909.1 million in 2021. GNP declined as the 8.9 percent increase in nominal GDP was eclipsed by the 60.4 percent change in net outflows of property income. The increase in outflows of net property income resulted from increases in both property income received from the rest of the world (52.0%) and income paid to the rest of the world (54.9%).

CAYMAN ISLANDS SYSTEM OF NATIONAL ACCOUNTS AGGREGATES						
TABLE 12: GROSS NATIONAL PRODUCT AT CURRENT PURCHASERS' PRICES (CI\$'000)						
Item Description	2017	2018	2019	2020 ^R	2021 ^R	2022
GROSS DOMESTIC PRODUCT (GDP)¹	4,305,217.2	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3
Plus Property Income from the rest of the world:	2,148,393.6	3,544,331.4	3,588,896.7	1,817,215.7	2,197,190.3	3,340,649.4
Foreign direct investment income received ²	72,996.9	32,258.1	28,321.3	-483.9	19,452.5	31,682.6
Portfolio & other investment income received ³	2,075,396.6	3,512,073.3	3,560,575.4	1,817,699.6	2,177,737.7	3,308,966.7
Less Property Income paid to the rest of the world:	3,549,899.5	4,896,078.6	4,828,365.2	3,272,982.8	3,338,099.2	5,170,968.5
Foreign direct investment income paid	1,168,988.9	2,214,466.3	2,182,394.1	1,620,524.6	2,088,495.3	3,489,203.6
Portfolio & other investment income paid	2,380,910.6	2,681,612.3	2,645,971.1	1,652,458.3	1,249,603.9	1,681,764.9
GROSS NATIONAL PRODUCT (GNP)¹	2,903,711.2	3,256,716.5	3,712,092.2	3,257,012.3	3,909,093.0	3,670,362.2

R-revised

Notes:

1. GDP & GNP at current purchasers' prices.
2. Foreign direct investment represents investments holdings or ownership of 10% or more.
3. Portfolio investment represents investments holdings or ownership of less than 10%.

3.12 GNI, GNDI, Gross National Savings & Net Lending¹¹

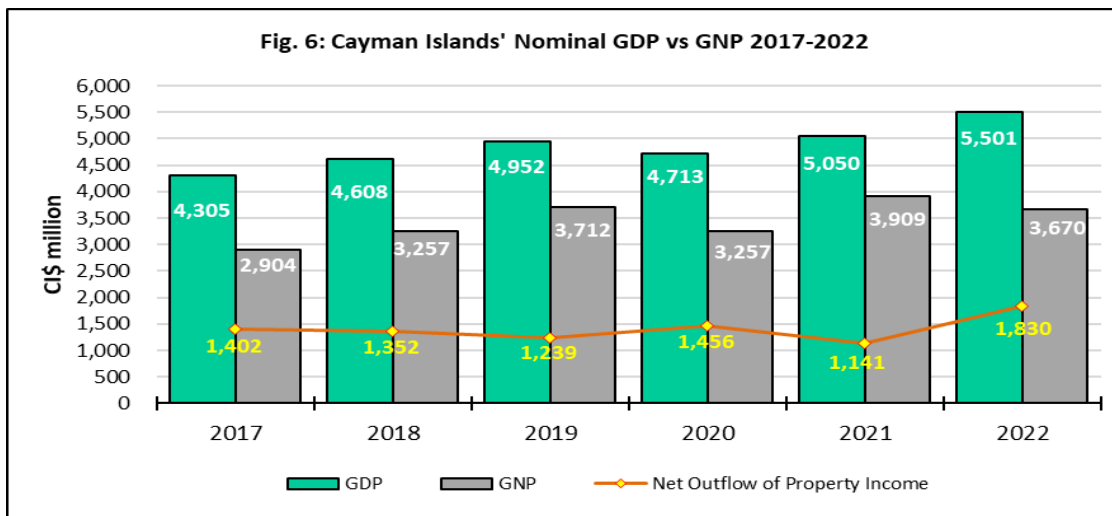
Gross National Income (GNI) is the aggregate value of the gross balances of primary income for all economic sectors. GNI is derived by adjusting the GNP for the net compensation of employees (COE). Net compensation of employees is income earned from abroad by Cayman residents minus compensation paid by Cayman-resident entities to workers abroad. Gross National Disposable Income (GNDI) measures income available for final consumption and gross savings. GNDI is derived as GNI plus the inflow of current transfers minus outflows of current transfers (e.g. remittances). Gross saving is the excess of current income over current expenditure. It comprises households, businesses, and government savings and is derived by subtracting final consumption expenditure from GNDI. Net lending represents the net resources that the total economy makes available to the rest of the world (if positive) or receives from the rest of the world (if negative).

CAYMAN ISLANDS SYSTEM OF NATIONAL ACCOUNTS AGGREGATES						
TABLE 13: NATIONAL INCOME, NATIONAL DISPOSABLE INCOME, SAVINGS & NET LENDING (CIS\$'000)						
Item Description	2017	2018	2019	2020 ^R	2021 ^R	2022
GROSS DOMESTIC PRODUCT (GDP)	4,305,217.2	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3
Plus Net Property Income from/to the rest of the world:	-1,401,506.0	-1,351,747.2	-1,239,468.5	-1,455,767.2	-1,140,908.9	-1,830,319.2
<i>plus</i> Property income received from the rest of the world	2,148,393.6	3,544,331.4	3,588,896.7	1,817,215.7	2,197,190.3	3,340,649.4
<i>less</i> Property income paid to the rest of the world	3,549,899.5	4,896,078.6	4,828,365.2	3,272,982.8	3,338,099.2	5,170,968.5
Plus Net Compensation of Employees from/to the rest of the world:	-20,007.2	-39,595.6	-42,223.3	-40,803.2	-19,127.0	-39,720.5
<i>plus</i> Compensation of employees received from the rest of the world	3,739.4	5,176.4	5,020.2	2,196.3	713.5	2,314.8
<i>less</i> Compensation of employees paid to the rest of the world	23,746.6	44,772.0	47,243.5	42,999.5	19,840.5	42,035.4
GROSS NATIONAL INCOME (GNI)	2,883,704.0	3,217,120.9	3,669,868.9	3,216,209.1	3,889,966.0	3,630,641.6
Plus Net Current Transfers from/to the rest of the world:	-622,461.4	-582,623.9	-476,023.1	-395,742.8	-611,166.9	-104,441.6
<i>plus</i> Current transfers received from the rest of the world	1,811,186.7	1,321,538.5	1,374,397.7	1,321,288.6	3,139,626.5	3,749,612.3
<i>less</i> Current transfers paid to the rest of the world	2,433,648.0	1,904,162.3	1,850,420.7	1,717,031.5	3,750,793.4	3,854,053.9
GROSS NATIONAL DISPOSABLE INCOME (GNDI)	2,261,242.7	2,634,497.0	3,193,845.8	2,820,466.2	3,278,799.1	3,526,200.1
Final Consumption Expenditures	2,688,409.7	2,874,677.6	3,168,133.1	3,088,388.8	3,388,246.0	3,693,680.1
GROSS NATIONAL SAVINGS	-427,167.0	-240,180.6	25,712.8	-267,922.5	-109,446.9	-167,480.0
Plus Net Capital Transfers from/to the rest of the world:	-1,261.1	615.7	-370.3	-1,106.3	-1,182.2	767.8
<i>plus</i> Capital transfers received from the rest of the world	20.3	1,972.7	928.3	40.3	7.5	924.4
<i>less</i> Capital transfers paid to the rest of the world	1,281.3	1,357.0	1,298.6	1,146.6	1,189.7	156.6
Less Gross Capital Formation:	617,585.5	735,296.3	802,618.6	902,940.7	1,041,888.1	1,113,883.1
Gross fixed capital formation	606,110.3	729,523.2	797,216.1	891,088.0	1,039,374.7	1,112,300.6
Changes in inventories	11,475.2	5,773.1	5,402.5	11,852.7	2,513.4	1,582.5
NET LENDING(+)/NET BORROWING(-)	-1,046,013.6	-974,861.2	-777,276.1	-1,171,969.5	-1,152,517.2	-1,280,595.4

R-revised

¹¹ GNI-Gross National Income = GDP + Net Property Income + Net Compensation from abroad.
GNDI-Gross National Disposable Income = GNI + Net Current Transfers

GNI decreased by 6.7 percent in 2022 to reach CI\$3,630.6 million, reversing the 20.9 percent increase posted for 2021. The net flow of property income (i.e. income received from the rest of the world less income paid to the rest of the world) moved to -CI\$1,830.3 million in 2022, from -CI\$1,140.9 million in 2021. Compensation of employees received from the rest of the world less that paid to the rest of the world (i.e. net compensation) moved to -CI\$39.7 million in 2022, from -CI\$19.1 million in 2021.¹² The excess of the outflow of property income over the inflows (i.e. net outflows) increased in 2022 after declining in 2021. Compensation from the rest of the world rebounded in 2022, growing by 224.4 percent to reach CI\$2.3 million after declining to CI\$0.7 million in 2021. Compensation paid to employees abroad grew by 111.9 percent in 2022 to CI\$42.0 million, after declining to CI\$19.8 million in 2021.



Gross National Disposable Income (GNDI) for the Cayman Islands was estimated at CI\$ 3,526.2 million in 2022, after increasing by 7.5 percent. This represents an increase in the income available to fund final consumption and savings. Inflows of current transfers grew by 19.4 percent to reach CI\$3,749.6 million in 2022. Outflows of current transfers also increased in 2022, increasing by 2.8 percent to reach CI\$3,854.1 million.¹³ Gross national savings reached -CI\$167.5 million in 2022. To date, 2019 is the only year where gross national savings has been positive.

Net borrowing moved to CI\$1,280.6 million in 2022, up from CI\$1,152.6 million in 2021. The Cayman Islands remains a net borrower, primarily due to the funding of capital investments, which bode well for the long-term growth of the economy.

¹²The negative figures for net property income and net compensation of employees means that the outflows are greater than the inflows.

¹³Current transfers are transactions where the originator does not receive something of economic value in return, e.g. workers' remittances, donations, tax payments, foreign aid, and grants.

4. GROSS DOMESTIC PRODUCT ESTIMATES-THE INCOME APPROACH

4.1 GDP and rate of growth of GDP at purchasers' prices by income

Cayman Islands' GDP at current purchasers' prices for 2022 increased to CI\$5,500.7 million, growing by 8.9 percent when compared to the CI\$5,050.0 million posted for 2021. The positive outturn in 2022 continues the rebound started in 2021 after the 4.8 percent decline recorded in 2020. The decline in 2020 followed 9 consecutive years of growth (in nominal terms) since the economy last declined in 2010, when it contracted by 2.9 percent. The components of GDP by income and their rates of growth are shown in Tables 14a and 14b below. Table 14b reveals that all four income components increased in 2022, led by compensation of employees (10.0%), followed by taxes less subsidies (net taxes) on production and imports (8.9%), operating surplus/mixed-income (8.5%), and consumption of fixed capital (3.2%).

TABLE 14a: GROSS DOMESTIC PRODUCT (GDP) BY INCOME AT CURRENT PRICES (CI\$'000)

Type of Income	2017	2018	2019	2020 ^R	2021 ^R	2022
Compensation of Employees (COE)	1,973,139.2	2,065,128.7	2,168,720.7	2,162,438.6	2,286,020.2	2,514,155.2
Operating Surplus\Mixed Income	1,487,089.5	1,634,742.6	1,832,540.6	1,668,215.3	1,709,100.3	1,853,739.2
Consumption of Fixed Capital	246,251.9	251,726.6	266,056.1	279,896.5	283,763.4	292,796.5
Taxes less Subsidies on Production and Imports	598,736.5	656,865.8	684,243.2	602,229.0	771,118.0	839,990.4
Gross Domestic Product at Purchasers' Prices	4,305,217.2	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3

R-revised

TABLE 14b: PERCENTAGE GROWTH of GDP BY INCOME AT CURRENT PURCHASERS' PRICES

Type of Income	Percentage Growth					
	2017	2018	2019	2020 ^R	2021 ^R	2022
Compensation of Employees (COE)	3.6	4.7	5.0	(0.3)	5.7	10.0
Operating Surplus\Mixed Income	7.7	9.9	12.1	(9.0)	2.5	8.5
Consumption of Fixed Capital	6.9	2.2	5.7	5.2	1.4	3.2
Taxes less Subsidies on Production and Imports	4.2	9.7	4.2	(12.0)	28.0	8.9
Gross Domestic Product at Purchasers' Prices	5.2	7.0	7.4	(4.8)	7.2	8.9

R-revised

Total compensation of employees (COE)¹⁴ increased to CI\$2,514.2 million in 2022, from CI\$2,286.0 in 2021. The 10.0 percent increase in 2022 is an acceleration on the 5.7 percent posted in 2021 and a continuation of the growth trajectory after the decline in 2020. The

¹⁴COE is defined as the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period.

continued recovery in total compensation in 2022 was driven by the 26.8 percent increase in the number of employed persons, which moved to 56,355 from 44,441 in 2021.¹⁵ All industries recorded increases in total compensation. The most significant increase in total compensation was experienced in hotel & restaurant services as the activity bounced back from the effects of the global pandemic.

Operating surplus/mixed-income¹⁶ grew by 8.5 percent in 2022 after increasing by 2.5 percent in 2021. The growth in 2022 continued the claw back of the value lost in 2020 as the 2022 levels now exceed the pre-pandemic levels.

Consumption of fixed capital¹⁷ posted the smallest increase of the income components in 2022, growing by 3.2 percent. This adds to the 1.4 percent and 5.2 percent growth posted in 2021 and 2020, respectively.

Taxes (less subsidies) on production and imports¹⁸ registered the second most significant increase in 2022, growing by 8.9 percent after increasing by 28.0 percent in 2021. The performance in 2022 was due primarily to the growth in taxes, coupled with the decreases in subsidies.

4.2 Income Share of GDP at purchasers' prices

TABLE 15: PERCENTAGE SHARE OF GDP BY INCOME AT CURRENT PRICES

Type of Income	2017	2018	2019	2020	2021 ^R	2022
Compensation of Employees (COE)	45.8	44.8	43.8	45.9	45.3	45.7
Operating Surplus\Mixed Income	34.5	35.5	37.0	35.4	33.8	33.7
Consumption of Fixed Capital	5.7	5.5	5.4	5.9	5.6	5.3
Taxes less Subsidies on Production and Imports	13.9	14.3	13.8	12.8	15.3	15.3
Gross Domestic Product at Purchasers' Prices	100.0	100.0	100.0	100.0	100.0	100.0

R-revised

The share of COE increased in 2022 to 45.7 percent, after declining to 45.3 percent in 2021. The increase in share in 2022 results (in part) from the growth in the employed labour force.

¹⁵Table 10.01b Compendium of Statistics 2022 (pg. 97)

¹⁶Operating Surplus is the measure of the surplus accruing from production. Mixed-income is a combination of operating surplus and implicit remuneration for work done by owner.

¹⁷Consumption of fixed capital is the decline, during the course of the accounting period, in the current value of the stock of fixed and intangible assets owned and used by a producer as a result of physical deterioration, normal obsolescence or normal accidental damage.

¹⁸This includes import duties, hotel occupancy tax, business and professional licences, building permit fees, property tax, stamp duties, etc.

The share of operating surplus/mixed-income posted a third consecutive year of decline, contracting to 33.7 percent of GDP in 2022, from 33.8 percent in 2021 and 35.4 percent in 2020. Notwithstanding the decline in share, the component grew to CI\$1,853.7 million in 2022 from CI\$1,709.1 million in 2021 (see Table 14a).

The share of net taxes remained unchanged in 2022 at 15.3 percent compared to 2021. Net taxes on production and imports reached CI\$840.0 million in 2022, from CI\$771.1 million in 2021.

Consumption of fixed capital (the smallest of the income components) recorded a decline in share in 2022 to 5.3 percent, from 5.6 percent in 2021. Despite the decline in share, consumption of fixed capital increased to CI\$292.8 million in 2022, from CI\$283.8 million in 2021.

4.3 Income components of GDP at purchasers' prices

4.3.1 Compensation of employees (COE)

Table 16 below shows the breakdown of total compensation by industry in the Cayman Islands for the period 2017-2022.

TABLE 16: COMPENSATION OF EMPLOYEES (CI\$'000)						
INDUSTRY	2017	2018	2019	2020 ^R	2021 ^R	2022
Agriculture & Fishing	7,464.6	7,707.6	8,161.5	7,984.1	8,360.2	8,691.5
Mining & Quarrying	6,777.0	7,252.2	7,720.4	7,850.3	9,107.5	9,723.3
Manufacturing	21,406.8	22,928.5	24,635.6	23,285.1	25,100.1	27,487.9
Electricity, Gas & Air Conditioning Supply	12,405.3	16,342.3	16,967.2	15,402.7	17,040.2	18,143.5
Water Supply, Sewerage & Waste Management	14,868.8	16,116.0	16,992.2	18,393.5	19,553.8	20,766.5
Construction	126,616.4	133,238.2	152,652.5	154,358.8	165,245.2	184,191.1
Wholesale & Retail Trade	129,781.2	136,936.6	143,688.9	144,382.6	145,467.9	156,212.0
Transport & Storage	94,588.7	96,216.2	99,803.6	95,201.9	91,050.5	98,801.5
Hotels & Restaurants	138,794.4	153,094.1	161,828.7	108,882.8	89,099.6	120,785.2
Information & Communication	52,881.7	51,088.8	53,306.7	51,798.9	55,743.6	59,141.0
Financial & Insurance Services	358,936.1	372,076.1	381,410.8	395,894.0	409,518.3	441,434.8
Real Estate Activities	51,364.0	53,365.8	55,617.9	53,982.4	63,268.9	64,784.2
Professional, Scientific & Technical Activities	400,715.7	405,266.2	405,809.8	427,774.5	479,778.9	529,543.1
Administrative & Support Service Activities	78,591.8	82,433.0	85,768.4	82,389.4	87,807.6	95,432.6
Public Administration & Defence	209,815.9	223,652.9	248,319.2	269,676.5	290,020.9	311,329.0
Education Services	88,026.6	93,727.4	103,995.7	107,701.9	114,043.9	122,204.8
Health and Social Work	119,348.0	129,937.1	135,536.3	144,617.9	160,673.1	182,917.4
Other Services	60,756.3	63,749.8	66,505.6	52,861.3	55,140.0	62,565.9
TOTAL	1,973,139.2	2,065,128.7	2,168,720.7	2,162,438.6	2,286,020.2	2,514,155.2

R-revised

The three dominant industries as it relates to the distribution of total compensation in the Cayman Islands in 2022 are:

- Professional, scientific & technical activities (mainly legal and accounting services) with CI\$529.5 million or 21.1 percent of total compensation, an increase on the 21.0 percent in 2021;
- Financial & insurance services with CI\$441.4 million or 17.6 percent of the total compensation, down from 17.9 percent in 2021 and 18.3 percent posted in 2020; and
- Public administration & defence with CI\$311.3 million or 12.4 percent of total compensation. This represents a decline in share from 12.7 percent in 2021 and 12.5 percent in 2020.

The aggregate share of the three above-mentioned industries of the total compensation generated in the Cayman Islands in 2022 declined to 51.0 percent, from 51.6 percent in 2021. This decline in share resulted from declines in the share of financial & insurance services and public administration. Overall, hotel & restaurant services registered the largest gain in share, moving to 4.8 percent in 2022 from 3.9 percent in 2021. Financial & insurance services recorded the most significant decline in share, contracting to 17.6 percent in 2022 from 17.9 percent in 2021.

4.3.2 Operating surplus/mixed-income

TABLE 17: OPERATING SURPLUS AND MIXED INCOME (CI\$'000)						
INDUSTRY	2017	2018	2019	2020^R	2021^R	2022
Agriculture & Fishing	9,464.9	9,999.9	11,130.9	11,321.2	13,115.5	15,647.0
Mining & Quarrying	964.3	1,048.0	2,174.3	2,658.4	3,096.0	3,770.4
Manufacturing	11,662.2	14,631.7	16,266.6	16,094.7	21,001.5	21,408.5
Electricity, Gas & Air Conditioning Supply	21,633.8	21,585.6	24,001.0	21,921.7	23,522.6	24,399.4
Water Supply, Sewerage & Waste Management	15,477.2	16,351.2	16,974.7	11,807.4	11,355.7	12,674.6
Construction	21,547.9	30,631.2	36,364.3	43,679.5	56,502.3	54,552.1
Wholesale & Retail Trade	93,832.9	102,958.3	115,102.7	96,447.7	123,830.2	143,904.1
Transport & Storage	36,684.1	39,036.2	43,861.5	(12,929.9)	(17,132.6)	11,071.4
Hotels & Restaurants	74,897.3	91,639.7	112,485.2	(2,202.4)	(25,192.6)	31,283.1
Information & Communication	33,818.9	37,467.8	46,328.2	46,031.0	52,442.1	53,917.1
Financial & Insurance Services	731,891.0	793,991.4	817,340.8	829,646.0	796,800.0	806,338.5
Real Estate Activities	258,999.2	261,187.6	318,156.7	316,487.8	331,593.9	360,336.7
Professional, Scientific & Technical Activities	89,811.3	118,800.9	154,608.9	181,118.9	193,086.4	164,658.8
Administrative & Support Service Activities	18,586.9	21,365.1	24,807.1	20,062.6	21,846.1	28,796.7
Public Administration & Defence	-	-	-	-	-	-
Education Services	1,385.7	1,381.7	4,669.6	2,222.8	5,993.6	6,531.1
Health and Social Work	17,046.0	19,112.6	22,090.6	37,467.5	54,702.0	56,730.0
Other Services	49,385.9	53,553.8	66,177.7	46,380.6	42,537.5	57,719.7
TOTAL	1,487,089.5	1,634,742.6	1,832,540.6	1,668,215.3	1,709,100.3	1,853,739.2

R-revised

The operating surplus/mixed-income for financial & insurance services increased in 2022 to consolidate its position as the largest share of the total at CI\$806.3 million. The second-largest share was posted by real estate activities (CI\$360.3 million), followed by professional, scientific & technical activities (CI\$164.7 million). Hotel & restaurant services and transport & storage services both reversed two consecutive years of negative operating surplus as these industries continued to recover from the effects of the global pandemic on tourism expenditure. Total operating surplus increased to CI\$1,853.7 million in 2022, surpassing the pre-pandemic level of CI\$1,832.5 million posted in 2019.

4.3.3 Consumption of fixed capital

TABLE 18: CONSUMPTION OF FIXED CAPITAL (CI\$'000)						
INDUSTRY	2017	2018	2019	2020^R	2021^R	2022
Agriculture & Fishing	685.1	706.5	788.2	786.7	782.6	778.7
Mining & Quarrying	1,633.3	1,647.8	1,578.0	1,882.5	1,757.0	1,755.3
Manufacturing	2,535.5	2,500.6	2,648.3	2,816.0	2,976.9	2,922.9
Electricity, Gas & Air Conditioning Supply	26,226.4	29,060.9	31,088.7	32,838.0	32,844.3	32,750.9
Water Supply, Sewerage & Waste Management	7,452.0	7,543.7	8,289.1	7,928.6	7,907.1	7,651.7
Construction	4,044.5	4,506.1	5,014.9	5,717.6	6,463.3	6,644.2
Wholesale & Retail Trade	24,280.7	24,567.6	24,899.4	26,564.7	27,153.6	28,829.3
Transport & Storage	13,314.5	15,766.8	17,093.9	19,831.5	17,431.9	19,182.3
Hotels & Restaurants	5,568.4	5,550.4	10,478.3	7,270.6	7,109.7	7,799.9
Information & Communication	20,812.8	19,654.3	19,488.6	18,747.5	17,647.5	15,853.9
Financial & Insurance Services	29,857.9	31,360.7	31,720.3	38,517.9	41,149.3	40,681.3
Real Estate Activities	54,328.6	53,357.0	54,295.6	55,081.9	51,534.7	52,605.8
Professional, Scientific & Technical Activities	8,653.7	7,235.0	7,569.2	8,227.5	8,892.2	9,531.0
Administrative & Support Service Activities	6,450.6	6,789.8	7,111.4	7,665.9	7,467.7	7,519.4
Public Administration & Defence	17,197.0	17,274.0	19,245.3	21,673.7	22,698.1	25,579.0
Education Services	9,343.5	10,106.4	10,765.8	10,832.8	14,109.6	15,489.0
Health and Social Work	7,909.7	8,098.1	8,082.1	8,494.0	10,924.2	12,449.2
Other Services	5,958.0	6,001.0	5,899.2	5,019.4	4,914.0	4,772.9
TOTAL	246,251.9	251,726.6	266,056.1	279,896.5	283,763.4	292,796.5

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As presented in Table 18 above, the largest share of consumption of fixed capital (i.e. depreciation) in 2022 occurred in real estate services (CI\$52.6 million) due to the level of fixed assets involved in the activity. This is followed by financial & insurance services (CI\$40.7 million), electricity, gas & air conditioning supply services (CI\$32.8 million), wholesale and retail trade activities (CI\$28.8 million), and public administration & defence activities (CI\$25.6 million). The share of depreciation for electricity services and information and communication services is disproportionately large relative to their share of GDP because of the capital-intensive nature of these activities.

4.3.4 Taxes less subsidies on production and imports

TABLE 19: TAXES less SUBSIDIES ON PRODUCTION AND IMPORTS (CI\$'000)						
INDUSTRY	2017	2018	2019	2020^R	2021^R	2022
Other Taxes less Subsidies on Production	371,265.9	377,598.3	401,472.7	383,523.1	471,372.7	513,711.7
Agriculture & Fishing	394.9	415.7	434.5	427.3	476.8	481.4
Mining & Quarrying	426.1	405.9	367.2	365.3	466.1	467.7
Manufacturing	952.3	1,006.1	1,179.9	1,014.8	1,163.3	1,272.4
Electricity, Gas & Air Conditioning Supply	1,745.6	2,160.5	2,511.6	2,492.5	2,512.3	2,531.3
Water Supply, Sewerage & Waste Management	651.0	582.1	696.0	677.7	746.3	812.2
Construction	10,683.3	12,151.2	13,541.6	12,195.6	14,550.8	16,612.7
Wholesale & Retail Trade	13,696.8	13,564.9	13,947.9	13,564.5	15,035.3	16,731.7
Transport & Storage	2,363.7	2,704.3	3,014.5	2,299.3	2,230.2	2,637.3
Hotels & Restaurants	7,637.3	7,518.4	6,887.6	5,527.1	6,321.7	7,235.8
Information & Communication	13,238.3	11,588.7	13,173.1	11,812.7	14,345.6	15,994.4
Financial & Insurance Services	237,568.8	241,199.5	253,197.0	243,893.6	314,251.3	335,828.2
Real Estate Activities	1,655.8	1,763.8	1,755.6	1,994.3	2,421.9	2,718.0
Professional, Scientific & Technical Activities	67,732.0	70,271.2	78,225.5	75,864.6	83,854.7	95,742.3
Administrative & Support Service Activities	5,331.5	5,172.7	5,108.0	4,281.7	4,820.3	5,442.1
Public Administration & Defence	198.4	253.5	231.5	271.4	209.4	219.9
Education Services	447.3	491.8	497.8	527.9	583.3	575.1
Health and Social Work	3,366.6	3,266.3	3,552.8	3,583.0	4,392.7	4,855.1
Other Services	3,176.4	3,081.9	3,150.7	2,729.7	2,990.6	3,554.3
Taxes less Subsidies on Products	227,470.6	279,267.4	282,770.5	218,705.9	299,745.3	326,278.7
TOTAL	598,736.5	656,865.8	684,243.2	602,229.0	771,118.0	839,990.4

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Table 19 shows two data sets:

1. Other taxes on production net of other subsidies on production charged to industries; and
2. Taxes net of subsidies charged to buyers of products and imports.

There was a marginal increase in the share of taxes less subsidies on production in total taxes in 2022, resulting from a larger increase in this component (9.0%) than that posted for net other taxes less subsidies on products (8.9%). The share of net taxes on products decreased to 38.8 percent of the total in 2022 from 38.9 percent in 2021. The share of net taxes less subsidies on production (i.e. net other taxes on production) increased to 61.2 percent in 2022 from 61.1 percent in 2021. The value of net taxes on production increased to CI\$513.7 million in 2022 from CI\$471.4 million in 2021. This increase is due

in part to higher revenue generated from financial service licences and fees, and work permit fees.

The share of financial and insurance services in total net taxes on production posted the most significant decrease in 2022, moving to 65.4 percent, from 66.7 percent in 2021. The largest increase in share was posted by professional, scientific & technical activities, moving to 18.6 percent in 2022 from 17.8 percent in 2021.

5. GROSS DOMESTIC PRODUCT ESTIMATES-THE EXPENDITURE APPROACH

5.1 Introduction

GDP by expenditure (GDPE) constitutes all final expenditures by households and government, investments, and exports minus imports. In other words, GDPE measures GDP as the sum of the final purchases of goods and services. Added to final purchases is the value of exports, which represents goods and services produced domestically and sold to non-resident households and businesses. Imports are subtracted as they represent goods and services produced by other economies. GDPE represents the third approach to calculating GDP in the Cayman Islands, adding to the other two approaches, i.e. GDP by the production approach (GDPP) and GDP by the income approach (GDPI), as presented earlier in Chapters 3 and 4. See Appendix A1.5 for a more detailed explanation of GDPE and the compilation methodology.

5.2 GDP by expenditure (GDPE)

The estimated nominal GDP (calculated using the expenditure approach) for the Cayman Islands grew to CI\$5,501.5 million in 2022 from the CI\$4,993.2 million recorded for 2021. This represents the second consecutive year of increase after the 3.7 percent decline in 2020. The performance in 2022 resulted from growth in three of the four components of GDPE, namely final consumption expenditure (FCE) (9.0%), gross fixed capital formation (GFCF) (7.0%), and net exports (23.3%). Changes in inventories was the only GDPE component to have declined in 2022, contracting by 37.0 percent.

Table 20 below presents a detailed disaggregation of the components of nominal GDPE. The largest expenditure component - Household Final Consumption Expenditure (HFCE) - contributed CI\$3,012.2 million to nominal GDPE in 2022. Gross fixed capital formation contributed the second-largest share (CI\$1,112.3 million), followed by net exports (CI\$694.0 million), final consumption expenditure of general government (CI\$642.9 million), final consumption expenditure of non-profit institutions serving households (CI\$38.6 million), and changes in inventories (CI\$1.6 million).

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE
TABLE 20: GDP BY EXPENDITURE AT CURRENT PURCHASERS' PRICES (CI\$'000)

Expenditure Components	2017	2018	2019	2020 ^R	2021 ^R	2022
Final Consumption Expenditure:	2,688,409.7	2,874,677.6	3,168,133.1	3,088,388.8	3,388,246.0	3,693,680.1
Households (HFCE)	2,244,417.5	2,406,560.0	2,641,864.3	2,527,621.7	2,766,386.8	3,012,157.2
General Government	411,664.5	434,072.9	493,065.2	528,137.0	585,861.4	642,882.8
Non-Profit Institutions Serving Households	32,327.6	34,044.8	33,203.5	32,630.0	35,997.8	38,640.1
Gross Fixed Capital Formation (GFCF):	606,110.3	729,523.2	797,216.1	891,088.0	1,039,374.7	1,112,300.6
Buildings and Infrastructure	319,145.2	358,863.1	405,780.6	454,591.9	536,411.8	611,327.1
Machinery and Equipment	111,054.1	128,435.8	125,804.4	129,437.6	165,735.7	175,465.9
Transport Equipment	39,436.7	49,429.8	63,176.2	73,620.4	88,767.6	82,541.3
Office and Computing Machinery	27,807.0	44,417.2	36,784.9	41,864.4	44,126.2	39,061.3
Other Capital Goods ¹	108,667.4	148,377.3	165,670.1	191,573.7	204,333.4	203,905.0
Changes in Inventories	11,475.2	5,773.1	5,402.5	11,852.7	2,513.4	1,582.5
Net Exports:	1,041,258.7	979,261.8	933,246.7	730,690.6	563,057.6	693,973.4
Exports of Goods and Services ²	2,910,309.1	3,077,415.5	3,185,765.1	2,800,790.2	2,882,164.9	3,403,139.8
Less Imports of Goods and Services	1,869,050.4	2,098,153.7	2,252,518.4	2,070,099.5	2,319,107.3	2,709,166.4
GDP by Expenditure at Purchasers' Prices	4,347,253.9	4,589,235.7	4,903,998.4	4,722,020.1	4,993,191.7	5,501,536.7
Statistical Discrepancy	(42,036.7)	19,228.0	47,562.3	(9,240.7)	56,810.2	(855.3)
GDP by Production at Purchasers' Prices	4,305,217.2	4,608,463.6	4,951,560.7	4,712,779.5	5,050,001.9	5,500,681.3

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Notes:

1. Other capital goods include cultivated biological assets, intellectual property products, cost of ownership transfer on non-produced assets and acquisitions less disposal of valuables.
2. Total exports here deviates from the total exports published in the BOP report as the figure here excludes goods under merchanting which is currently excluded from the GDP (by production) estimates as the data was not available during the 2015 base year estimates.

The table above also shows a comparison of GDP calculated using the production approach, which is the reference methodology used to compile GDP for the Cayman Islands. The table shows the discrepancy between GDPE and the reference methodology (GDPP).

Table 21 below shows the estimated values of expenditure on real (inflation-adjusted) GDP, which grew to CI\$4,753.0 million in 2022 from CI\$4,459.2 million in 2021, CI\$4,298.4

million in 2020, CI\$4,485.8 million in 2019, CI\$4,334.9 million in 2018, and CI\$4,159.7 million in 2017. Inflation-adjusted household final consumption expenditure reached CI\$2,604.1 million in 2022. This was followed by real gross fixed capital formation (CI\$898.2 million), real net exports (CI\$682.6 million), final consumption expenditure of general government (CI\$535.1 million), final consumption expenditure of NPISH (CI\$31.4 million), and changes in inventories (CI\$1.5 million).

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE						
TABLE 21: GDP BY EXPENDITURE AT CONSTANT PURCHASERS' PRICES, 2015=100 (CI\$'000)						
Expenditure Components	2017	2018	2019	2020 ^R	2021 ^R	2022
Final Consumption Expenditure:	2,646,232.0	2,773,398.5	2,924,750.5	2,802,895.6	3,011,236.4	3,170,701.0
Households (HFCE)	2,217,221.0	2,339,796.6	2,452,998.6	2,314,796.8	2,474,290.6	2,604,130.8
General Government	397,150.5	401,934.2	441,926.4	458,747.2	505,836.3	535,128.7
Non-Profit Institutions Serving Households	31,860.5	31,667.7	29,825.4	29,351.5	31,109.5	31,441.4
Gross Fixed Capital Formation (GFCF):	596,672.6	701,743.1	733,837.1	793,515.3	893,390.9	898,182.8
Buildings and Infrastructure	309,162.5	332,367.1	358,651.4	392,331.9	416,717.8	438,224.2
Machinery and Equipment	112,783.6	128,513.9	125,394.3	128,348.9	162,783.9	164,762.4
Transport Equipment	39,734.4	49,380.7	63,025.1	73,508.5	87,649.8	78,364.6
Office and Computing Machinery	32,934.9	53,745.3	46,224.5	55,672.7	59,817.3	51,392.4
Other Capital Goods ¹	102,057.3	137,736.1	140,541.7	143,653.3	166,422.2	165,439.2
Changes in Inventories	10,814.4	5,430.8	4,319.9	9,493.6	1,998.3	1,516.4
Net Exports:	905,983.8	854,317.9	822,912.7	692,483.9	552,608.6	682,640.9
Exports of Goods and Services	2,715,148.6	2,837,400.2	2,889,214.0	2,553,771.3	2,606,095.2	2,934,372.8
Less Imports of Goods and Services	1,809,164.8	1,983,082.3	2,066,301.3	1,861,287.4	2,053,486.6	2,251,732.0
GDP by Expenditure at Purchasers' Prices	4,159,702.9	4,334,890.3	4,485,820.2	4,298,388.4	4,459,234.3	4,753,041.1
Statistical Discrepancy	19,845.3	23,010.3	42,720.1	5,771.3	56,041.5	(4,942.8)
GDP by Production at Purchasers' Prices	4,179,548.2	4,357,900.7	4,528,540.2	4,304,159.8	4,515,275.8	4,748,098.3

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Notes:

1. Other capital goods include cultivated biological assets, intellectual property products, cost of ownership transfer on non produced assets and acquisitions less disposal of valuables.

5.3 GDPE rates of growth by component

Table 22 shows the growth in the nominal values of the expenditure components of GDP. All components posted positive performances in 2022 except for changes in inventories.

The performance in 2022 resulted from growth in HFCE (8.9%), final consumption expenditure of general government (9.7%), final consumption expenditure of NPISH (7.3%), GFCF (7.0%), and net exports (23.3%). The improved performance was tempered by the decline in changes in inventories (-37.0%).

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE							
TABLE 22: RATE OF GROWTH OF GDP BY EXPENDITURE AT CURRENT PRICES (CI\$'000)							
Expenditure Components	Percentage Growth						
	2016	2017	2018	2019	2020 ^R	2021 ^R	2022
Final Consumption Expenditure:	4.8	3.2	6.9	10.2	(2.5)	9.7	9.0
Households (HFCE)	4.3	3.0	7.2	9.8	(4.3)	9.4	8.9
General Government	8.0	4.4	5.4	13.6	7.1	10.9	9.7
Non-Profit Institutions Serving Households	1.7	7.2	5.3	(2.5)	(1.7)	10.3	7.3
Gross Fixed Capital Formation (GFCF)	4.1	8.2	20.4	9.3	11.8	16.6	7.0
Changes in Inventories	34.4	300.6	(49.7)	(6.4)	119.4	(78.8)	(37.0)
Net Exports	3.8	11.6	(6.0)	(4.7)	(21.7)	(22.9)	23.3
Exports of Goods and Services	3.9	11.0	5.7	3.5	(12.1)	2.9	18.1
Less Imports of Goods and Services	4.0	10.7	12.3	7.4	(8.1)	12.0	16.8

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The growth rates of the expenditure component of GDP in real (inflation-adjusted) terms are shown in Table 23. There was growth posted for HFCE (5.2%), final consumption expenditure of general government (5.8%), final consumption expenditure of NPISH (1.1%), GFCF (0.5%), and net exports (23.5%). The growth was lowered by the decline in changes in inventories (-24.1%).

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE							
TABLE 23: RATE OF GROWTH OF GDP BY EXPENDITURE AT CONSTANT PRICES, 2015=100 (CI\$'000)							
Expenditure Components	Percentage Growth						
	2016	2017	2018	2019	2020 ^R	2021 ^R	2022
Final Consumption Expenditure:	4.7	1.7	4.8	5.5	(4.2)	7.4	5.3
Households (HFCE)	4.5	1.6	5.5	4.8	(5.6)	6.9	5.2
General Government	6.4	2.2	1.2	9.9	3.8	10.3	5.8
Non-Profit Institutions Serving Households	1.3	6.1	(0.6)	(5.8)	(1.6)	6.0	1.1
Gross Fixed Capital Formation (GFCF)	5.7	4.9	17.6	4.6	8.1	12.6	0.5
Changes in Inventories	29.7	291.1	(49.8)	(20.5)	119.8	(79.0)	(24.1)
Net Exports	(2.2)	3.0	(5.7)	(3.7)	(15.8)	(20.2)	23.5
Exports of Goods and Services	1.3	6.2	4.5	1.8	(11.6)	2.0	12.6
Less Imports of Goods and Services	3.3	7.9	9.6	4.2	(9.9)	10.3	9.7

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5.4 Contribution to GDPE by component

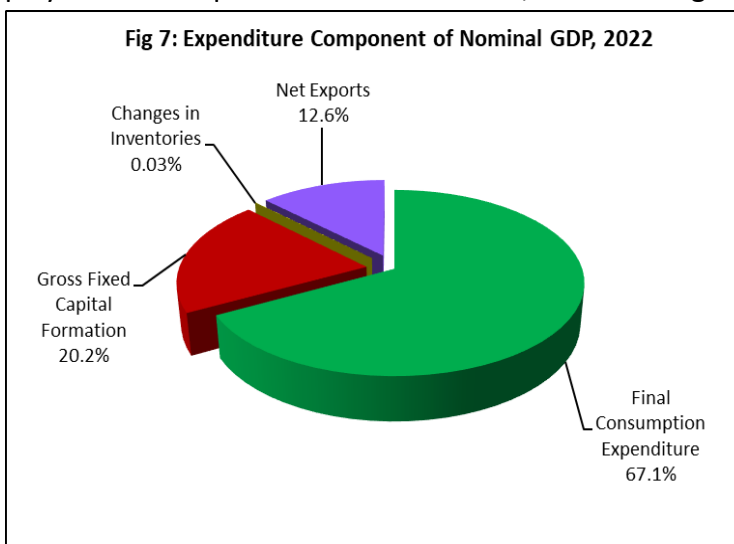
Table 24 shows the contributions of the individual expenditure components to the overall nominal GDPE.

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE							
TABLE 24: PERCENTAGE SHARE OF GDPE AT CURRENT PRICES (CI\$'000)							
Expenditure Components	2016	2017	2018	2019	2020 ^R	2021 ^R	2022
Final Consumption Expenditure:	63.5	61.8	62.6	64.6	65.4	67.9	67.1
Households (HFCE)	53.2	51.6	52.4	53.9	53.5	55.4	54.8
General Government and NPISH	10.4	10.2	10.2	10.7	11.9	12.5	12.4
Gross Fixed Capital Formation (GFCF)	13.7	13.9	15.9	16.3	18.9	20.8	20.2
Changes in Inventories	0.1	0.3	0.1	0.1	0.3	0.1	0.0
Net Exports	22.8	24.0	21.3	19.0	15.5	11.3	12.6
GDP by Expenditure at Purchasers' Price	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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The table shows the dominance of HFCE as the main contributor to nominal GDPE. This is highlighted in the graphical display of the component shares for 2022, shown in Figure 7.¹⁹

For the first time since 2017, FCE decreased its share of GDPE to 67.1 percent in 2022 from 67.9 percent in 2021. Despite the reduction in share, the value for 2022 represents the second-highest share ever recorded for this component over the review period. The lowest share over the period (61.8%) was posted in 2017. GFCF also registered a reduction in share in 2022 to (20.2%) from its previous high (20.8%) which was posted in 2021. Despite the smaller share, GFCF maintained its relative ranking as the second-largest. This also represents the first year over the review period that GFCF is posting a decline in share. Net Exports reversed four consecutive years of decline after increasing its share in 2022 to 12.6%. This follows decline in the share in 2021 to 11.3 percent (which is the lowest share recorded to date), from 15.5 percent in 2020, 19.0 percent in 2019, 21.3 percent in 2018, and 24.0 percent



from 15.5 percent in 2020, 19.0 percent in 2019, 21.3 percent in 2018, and 24.0 percent

¹⁹ Figure 7 provides a graphical display of the share of the expenditure components of nominal GDP for 2022.

in 2017. Net exports was the only expenditure component to post an increase in share in 2022. The contribution of the aggregate final consumption expenditure of general government and NPISH declined to 12.4 percent in 2022 from 12.5 in 2021.

5.5 Expenditure components of GDP

This section provides a detailed examination of the performance of the individual expenditure components on GDP.

5.5.1 Household final consumption expenditure (HFCE)

HFCE consists of expenditures incurred by resident households on the consumption of goods and services, whether that expenditure is incurred within the economic territory or abroad.

Table 25 shows total nominal HFCE disaggregated by expenditure division. Household expenditure (as measured by HFCE) increased by 8.9 percent in 2022 to reach CI\$3,012.2 million, from CI\$2,766.4 million in 2021. This represents a second consecutive year of increase following the 9.4 percent increase recorded in 2021, after declining by 4.3 percent in 2020. The decline in 2020 followed four consecutive years of increase since 2019 (9.8%), 2018 (7.2%), 2017 (3.0%), and 2016 (4.3%).

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE								
TABLE 25: Nominal Household Final Consumption Expenditure (HFCE) by COICOP Division (CI\$'000) ¹								
Expenditure (COICOP) Division:	2015	2016	2017	2018	2019	2020	2021	2022
Food and non-alcoholic beverages	151,602.0	156,259.8	170,748.8	209,036.8	236,486.4	247,071.2	253,965.3	301,786.6
Alcoholic beverages and tobacco	40,211.7	44,840.2	46,122.2	56,935.5	56,743.9	46,730.6	50,726.1	62,999.9
Clothing and footwear	59,621.7	67,826.1	68,944.7	75,076.8	120,818.1	137,299.3	164,588.3	183,938.6
Housing, water, electricity, gas and other fuels	534,069.2	533,649.8	545,724.6	562,256.8	631,833.4	628,202.4	641,463.1	726,732.7
Furnishings, household equipment and routine household maintenance	95,942.4	102,758.0	110,290.2	123,894.4	147,669.7	143,650.0	148,989.3	162,199.5
Health	190,911.3	194,041.7	169,852.9	188,639.0	202,074.5	200,652.2	252,430.1	268,027.7
Transport	256,723.9	286,840.5	309,397.4	304,587.2	308,016.6	200,075.7	245,219.8	270,394.2
Communication	67,573.2	70,149.7	73,805.5	76,886.1	81,141.0	81,060.5	83,558.9	85,569.3
Recreation and culture	94,486.7	99,973.3	103,383.1	117,953.8	126,904.6	124,218.0	138,853.6	130,546.9
Education	70,975.4	75,545.7	78,396.3	81,596.6	88,201.3	82,748.0	92,892.6	100,661.8
Restaurant and hotels	158,150.0	163,152.0	171,804.7	183,650.3	194,656.7	169,205.0	194,816.9	188,209.0
Miscellaneous goods & services	368,847.4	384,234.9	395,947.2	426,046.7	447,318.1	466,708.8	498,882.7	531,091.0
Grand Total	2,089,115.0	2,179,271.8	2,244,417.5	2,406,560.0	2,641,864.3	2,527,621.7	2,766,386.8	3,012,157.2

Notes:

1. The Classification of Individual Consumption According to purpose (COICOP), is an international classification system used to classify individual consumption expenditures incurred by households. It includes categories such as food, clothing and footwear, housing, water, electricity, and gas and other fuels, etc.

Table 26 shows the share of each expenditure division in total nominal HFCE.

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE								
TABLE 26: Share of Nominal Household Consumption Expenditure (HFCE) by COICOP Division (CI\$'000)								
Expenditure (COICOP) Division:	2015	2016	2017	2018	2019	2020	2021	2022
Food and non-alcoholic beverages	7.3%	7.2%	7.6%	8.7%	9.0%	9.8%	9.2%	10.0%
Alcoholic beverages and tobacco	1.9%	2.1%	2.1%	2.4%	2.1%	1.8%	1.8%	2.1%
Clothing and footwear	2.9%	3.1%	3.1%	3.1%	4.6%	5.4%	5.9%	6.1%
Housing, water, electricity, gas and other fuels	25.6%	24.5%	24.3%	23.4%	23.9%	24.9%	23.2%	24.1%
Furnishings, household equipment and routine household maintenance	4.6%	4.7%	4.9%	5.1%	5.6%	5.7%	5.4%	5.4%
Health	9.1%	8.9%	7.6%	7.8%	7.6%	7.9%	9.1%	8.9%
Transport	12.3%	13.2%	13.8%	12.7%	11.7%	7.9%	8.9%	9.0%
Communication	3.2%	3.2%	3.3%	3.2%	3.1%	3.2%	3.0%	2.8%
Recreation and culture	4.5%	4.6%	4.6%	4.9%	4.8%	4.9%	5.0%	4.3%
Education	3.4%	3.5%	3.5%	3.4%	3.3%	3.3%	3.4%	3.3%
Restaurant and hotels	7.6%	7.5%	7.7%	7.6%	7.4%	6.7%	7.0%	6.2%
Miscellaneous goods & services	17.7%	17.6%	17.6%	17.7%	16.9%	18.5%	18.0%	17.6%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

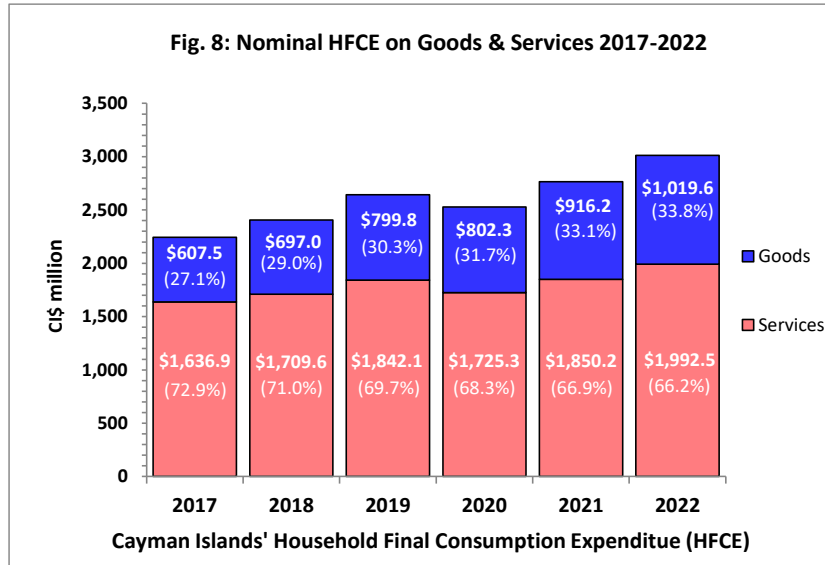
The division with the largest share of HFCE is housing, water, electricity, gas and other fuels, with a share of CI\$726.7 million or 24.1%.²⁰ Making up the top six divisions are miscellaneous goods and services (CI\$531.1million or 17.6%), food and non-alcoholic beverages (CI\$301.8 million or 10.0%), transport (CI\$270.4 million or 9.0%), health (CI\$268.0 million or 8.9%), and restaurant & hotels (CI\$188.2 million or 6.2%). The top six divisions accounted for 75.9 percent of the total nominal HFCE.

The remaining 24.1 percent of nominal HFCE was accounted for by clothing and footwear (CI\$183.9 million or 6.1%), furnishings, household equipment & routine household maintenance (CI\$162.2 million or 5.4%), recreation and culture (CI\$130.5 million or 4.3%), education (CI\$100.7 million or 3.3%), communication (CI\$85.6 million or 2.8%), and alcohol beverages and tobacco (CI\$63.0 million or 2.1%)

²⁰ This division includes actual rent for housing, imputed rent (for owner-occupied housing), utilities & related services, gas and other fuels.

Figure 8 shows a disaggregation of nominal HFCE into goods and services. The graph

shows the ongoing increase in the share of goods in HFCE and the decline in that for services. For 2022, Cayman resident households purchased a total of CI\$1,019.6 million in goods. This represents an increase on the CI\$916.2 million in 2021, CI\$802.3 million in 2020, CI\$799.8 million in 2019, CI\$697.0 million in 2018, and CI\$607.5 million in 2017. The purchase of food & non-alcoholic beverages continued to dominate household expenditure on goods, followed by clothing & footwear, and transport.



The purchase of food & non-alcoholic beverages continued to dominate household expenditure on goods, followed by clothing & footwear, and transport.

The share of expenditure on goods increased for a seventh consecutive year to reach 33.8 percent of total HFCE in 2022. The growth in 2022 adds to the shares posted in 2021 (33.1%), 2020 (31.7%), 2019 (30.3%), 2018 (29.0%), and 2017 (27.1%).

In terms of the expenditure on services, Cayman residents consumed CI\$1,992.5 million in services in 2022 when compared to CI\$1,850.2 million in 2021. This follows the CI\$1,725.3 million in 2020, CI\$1,842.1 million in 2019, CI\$1,709.6 million in 2018, and CI\$1,636.9 million in 2017. Expenditure on services was dominated by actual & imputed rent, financial & insurance services, medical services, hotel & restaurant services, and transport services.

Despite the increase in the amount of services purchased by households in 2022, its share of nominal HFCE declined for the seventh consecutive year moving to 66.2 percent from 66.9 percent in 2021. This follows on the 68.3 percent in 2020, 69.7 percent in 2019, 71.0 percent in 2018, and 72.9 percent in 2017.

5.5.2 Government final consumption expenditure (GFCE)

GFCE is derived as the output of general government less any sales of goods and services by the government. It includes government purchases of goods and services from businesses and distributed as social transfers to households.

In nominal terms, GFCE continues its year-on-year increase to reach CI\$642.9 million in 2022. This adds to the CI\$585.9 million in 2021, CI\$528.1 million in 2020, CI\$493.1 million in 2019, CI\$434.1 million in 2018 and CI\$411.7 million in 2017.²¹

5.5.3 Final consumption expenditure of NPISH

Non-profit institutions serving households (NPISH) are private, voluntary, non-market producers who provide goods or services to households for free or at prices below market prices. Similar to GFCE, the FCE of NPISH is derived as the output of these entities less any market sales of goods and services and is compiled from their production accounts from the GDPP compilation.

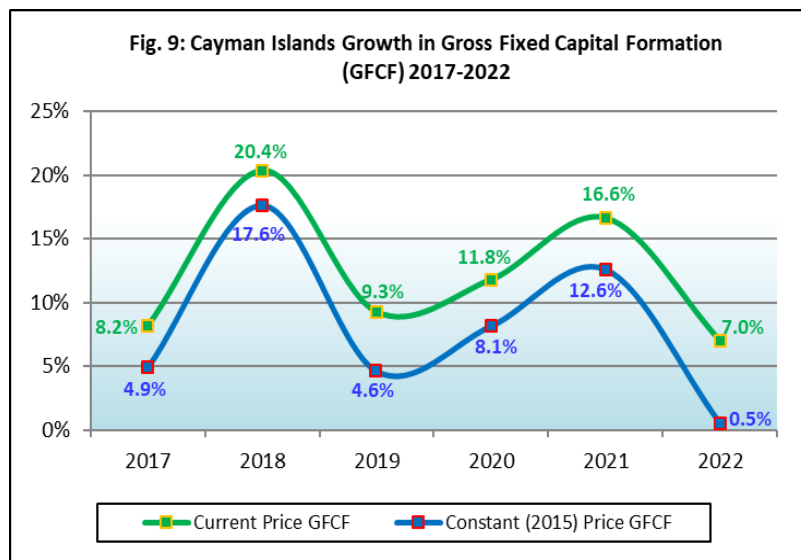
In 2022, the final consumption expenditure of NPISH increased to CI\$38.6 million from CI\$36.0 million in 2021, CI\$32.6 million in 2020, CI\$33.2 million in 2019, CI\$34.0 million in 2018, and CI\$32.3 million in 2017.

5.5.4 Gross fixed capital formation (GFCF)

Gross fixed capital formation (GFCF) relates to the addition less disposal of fixed assets. For businesses and the government, fixed assets are those assets used repeatedly or continuously in the production process over multiple accounting periods. For households, fixed assets relate to additions to the stock of residential buildings and major improvements to the existing stock.

Figure 9 presents the growth in GFCF in both nominal and real terms for 2017 to 2022.

The graph shows the current price of GFCF increasing year-on-year, albeit at varying rates of increase. Current price GFCF grew by 7.0 percent in 2022, a slowing of the 16.6 percent growth posted in 2021. This follows growths of 11.8 percent, 9.3 percent, 20.4 percent, and 8.2 percent, in 2020, 2019, 2018, and 2017, respectively. Constant (2015) price GFCF grew by 0.5 percent in 2022, a slowing of the 12.6 percent growth posted in 2021. This follows growths of 8.1 percent, 4.6 percent, 17.6 percent, and 4.9 percent, in 2020, 2019, 2018, and 2017, respectively.



²¹See Table 20

2018, and 2017 respectively. The positive performance increased the current price GFCF to CI\$1,112.3 million in 2022, from CI\$1,039.4 million in 2021.

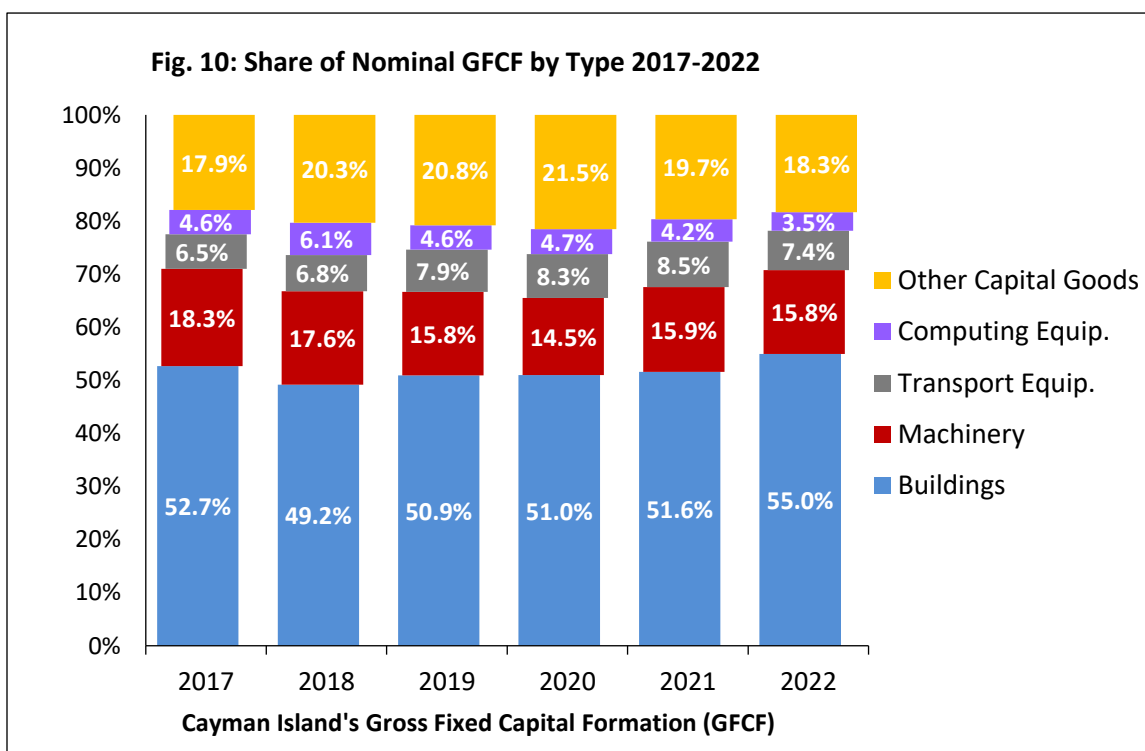
Table 27 and Figure 10 provide a disaggregation of GFCF by type and show the value of the components and their contribution to total GFCF. GFCF is disaggregated into buildings & other infrastructure, machinery & equipment, transport equipment, office & computing machinery, and other capital goods.

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE						
TABLE 27: GROSS FIXED CAPITAL FORMATION BY TYPE AT CURRENT PRICES (CI\$'000)						
Expenditure Component	2017	2018	2019	2020	2021 ^R	2022
Gross Fixed Capital Formation (GFCF):	606,110.3	729,523.2	797,216.1	891,088.0	1,039,374.7	1,112,300.6
Buildings and Infrastructure	319,145.2	358,863.1	405,780.6	454,591.9	536,411.8	611,327.1
Machinery and Equipment	111,054.1	128,435.8	125,804.4	129,437.6	165,735.7	175,465.9
Transport Equipment	39,436.7	49,429.8	63,176.2	73,620.4	88,767.6	82,541.3
Office and Computing Machinery	27,807.0	44,417.2	36,784.9	41,864.4	44,126.2	39,061.3
Other Capital Goods ¹	108,667.4	148,377.3	165,670.1	191,573.7	204,333.4	203,905.0

R-revised

Notes:

1. Other capital goods include cultivated biological assets, intellectual property products, cost of ownership transfer on non produced assets and acquisitions less disposal of valuables.



Buildings & infrastructure reinforced its position as the largest component of GFCF. The share of the addition to the stock of buildings & infrastructure jumped to 55.0 percent in 2022 (CI\$611.3 million) from 51.6 percent (CI\$536.4 million) in 2021, 51.0 percent (CI\$454.6 million) in 2020, 50.9 percent (CI\$405.8 million) in 2019, 49.2 percent (CI\$358.9 million) in 2018, and 52.7 percent (CI\$319.1 million) in 2017.

The value of the addition to the stock of machinery & equipment (compiled from merchandise import data) amounted to CI\$175.5 million in 2022 from CI\$165.7 million in 2021. This adds to the CI\$129.4 million in 2020, CI\$125.8 million in 2019, CI\$128.4 million in 2018, and CI\$111.1 million in 2017. Machinery and equipment maintained its third place in the ranking in 2022 despite the marginal decline in share. The share of machinery & equipment declined to 15.8 percent in 2022, from 15.9 percent in 2021, following on its lowest share of 14.5 percent in 2020. This follows shares of 15.8 percent in 2019, 17.6 percent in 2018, and 18.3 percent in 2017.

The value of transport equipment in GFCF represents expenditure by businesses (i.e. non-households) on this type of asset. The component maintained its fourth-place ranking in 2022, posting a value of CI\$82.5 million (7.4%). This follows the CI\$88.8 million (8.5%) in 2021, CI\$73.6 million (8.3%) in 2020, CI\$63.2 million (7.9%) in 2019, CI\$49.4 million (6.8%) in 2018, and CI\$39.4 million (6.5%) in 2017.

The share of GFCF for office & computing machinery remained in fifth place in 2022 with an even lower share (3.5%) when compared to 2021 (4.2%). The contraction in share resulted from the decrease in value to CI\$ 39.1 million in 2022 from CI\$44.1 million in 2021. This follows CI\$41.9 million in 2020 (4.7%), 36.8 million in 2019 (4.6%), CI\$44.4 million in 2018 (6.1%), and CI\$27.8 million (4.6%) in 2017. The value in 2018 remains the highest over the past seven years for the office and machinery component.

Other capital goods decreased their relative share to 18.3 percent (CI\$203.9 million) in 2022 compared to 19.7 percent (CI\$204.3 million) in 2021. This is the second consecutive year of declining share following 21.5 percent (CI\$191.6 million) in 2020, 20.8 percent (CI\$165.7 million) in 2019, 20.3 percent (CI\$148.4 million) in 2018, and 17.9 percent (CI\$108.7 million) in 2017.

5.5.5 Changes in inventories

The derivation of the value of changes in inventories is based on estimates of stock changes (of goods produced or purchased) reported by businesses on the annual business survey. The nominal value of changes in inventories was estimated at CI\$1.6 million in

2022 from CI\$2.5 million in 2021, CI\$11.9 million in 2020, CI\$5.4 million in 2019, CI\$5.8 million in 2018, and CI\$11.5 million in 2017.²²

5.5.6 Net export of goods and services (X-M)

Net export refers to export less import of goods and services. Imports and exports have opposite effects on GDPE; exports add to GDPE, and imports subtract from GDPE.

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE						
TABLE 28: EXPORT & IMPORTS AT CURRENT PRICES (CI\$'000)						
Expenditure Components	2017	2018	2019	2020 ^R	2021 ^R	2022
Net Exports:	1,041,258.7	979,261.8	933,246.7	730,690.6	563,057.6	693,973.4
Exports of Goods and Services	2,910,309.1	3,077,415.5	3,185,765.1	2,800,790.2	2,882,164.9	3,403,139.8
Exports of Goods ¹	167,016.4	184,267.5	199,610.8	59,292.9	19,065.6	133,796.1
Exports of Services	2,743,292.8	2,893,147.9	2,986,154.3	2,741,497.2	2,863,099.3	3,269,343.7
Imports of Goods and Services	1,869,050.4	2,098,153.7	2,252,518.4	2,070,099.5	2,319,107.3	2,709,166.4
Imports of Goods	914,762.1	1,042,810.2	1,189,705.1	1,114,978.7	1,276,453.0	1,498,704.8
Imports of Services	954,288.4	1,055,343.5	1,062,813.2	955,120.8	1,042,654.3	1,210,461.6

R-revised

Notes:

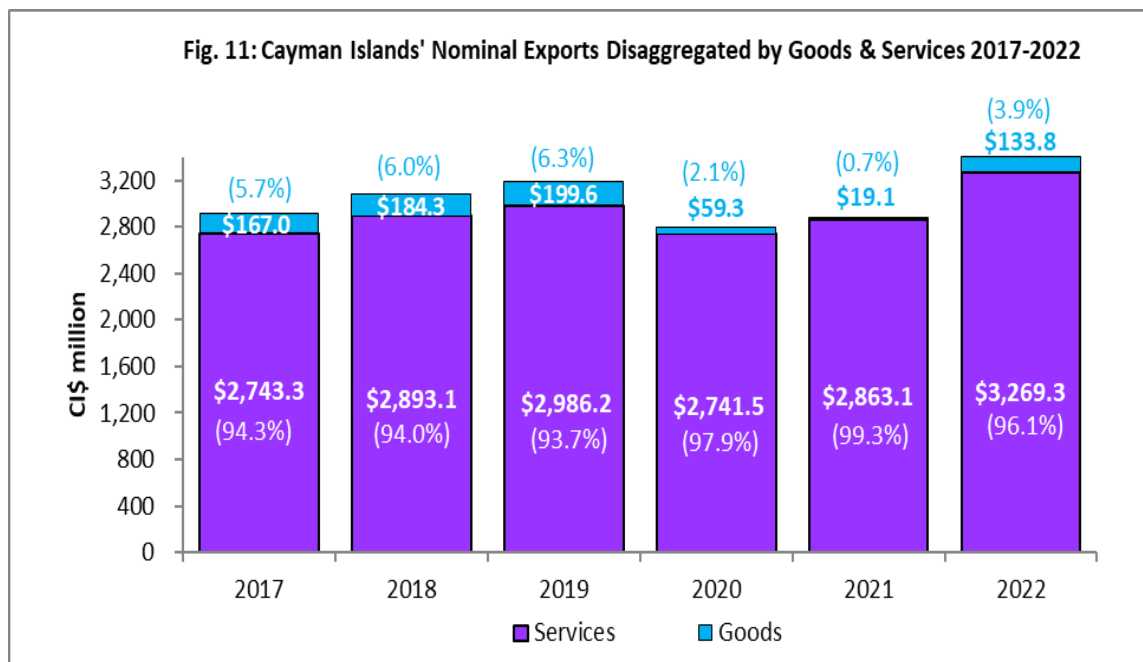
1. Exports of goods here deviate from the figure published in the BOP report as the figure here excludes goods under merchanting which is currently excluded from the GDP by production estimates as the data was not included in the 2015 base year estimates due to the data being unavailable at the time.

Net exports of goods and services at current prices for 2022 was CI\$694.0 million, resulting from exports of CI\$3,403.1 million and imports of CI\$2,709.2 million. Net exports reversed the declines over the last four years, posting a 23.3 percent increase in 2022, a turnaround from the declines posted in 2021 (-22.9%), 2020 (-21.7%), 2019 (-4.7%), and 2018 (-6.0%). Total exports and imports increased in 2022 with the rate of increase in total exports outpacing that for imports hence an overall increase in net exports. This occurred as the general impact on aggregate demand of the global pandemic abated both locally and internationally.

Figure 11 shows the disaggregation of total exports into goods and services in terms of value and share. Export of services for 2022 reached CI\$3,269.3 million, increasing from CI\$2,863.1 million in 2021, CI\$2,741.5 million in 2020, CI\$2,986.2 million in 2019, CI\$2,893.1 million in 2018, and CI\$2,743.3 million in 2017. The bar graph shows the clear domination of services in total exports as the domestic economy is primarily service-

²²See Table 20

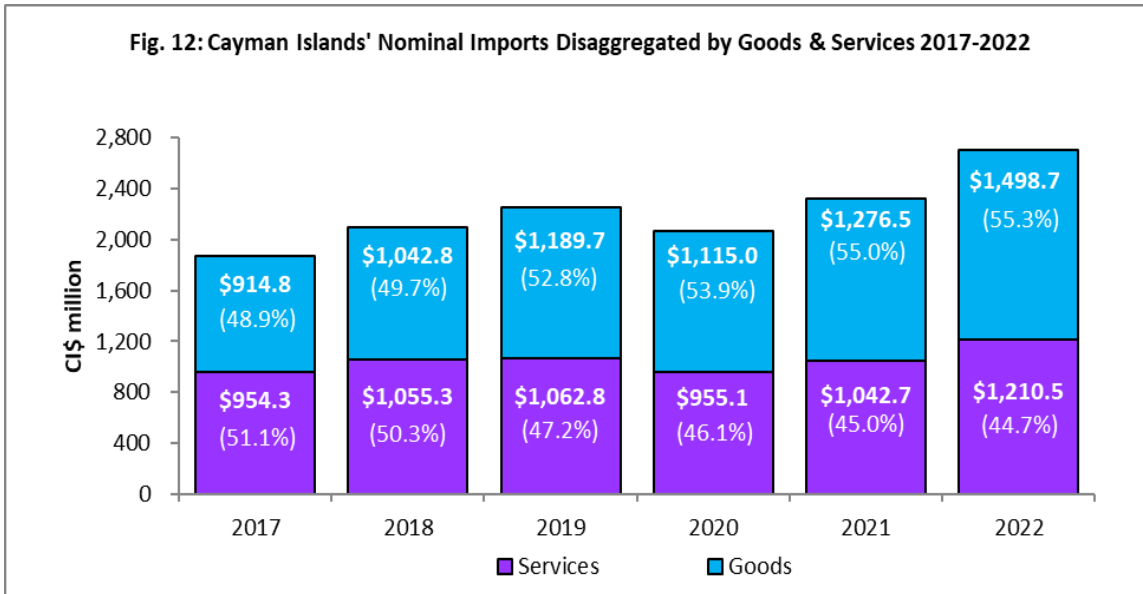
based in terms of GDP. Services declined its share for the first time in three years as it posted a share of (96.1%) in 2022. This follows the high of 99.3 percent in 2021, 97.9 percent in 2020, 93.7 percent in 2019, 94.0 percent in 2018, and 94.3 percent in 2017.



Total export of goods from the Cayman Islands rebounded to CI\$133.8 million in 2022 after two consecutive years of decline, increasing from its lowest value of CI\$19.1 million in 2021 and CI\$59.3 million in 2020. This follows its highest value of CI\$199.6 million in 2019, CI\$184.3 million in 2018, and CI\$167.0 million in 2017. The share of goods in total export increased to 3.9 percent, rebounding from its lowest level of 0.7 percent in 2021 and 2.1 percent in 2020. This was on the back of the 6.3 percent share in 2019, 6.0 percent in 2018, and 5.7 percent in 2017. The export of goods is dominated by the on-island purchases of visitors, i.e. tourist expenditure on goods. Goods exported would also include the purchase of aviation fuel (from local suppliers) by foreign airlines. The improvement in total exports of goods is attributed to the increase in visitor arrivals as tourist activity continued to recover from the impact of the global pandemic.

The disaggregation of total imports into goods and services reflects the ongoing increase in the share of goods and the decline in the share of services in total imports. Total imports grew by 16.8 percent in 2022 to reach CI\$2,709.2 million, from CI\$2,319.1 million in 2021. The increase in imports in 2022 was due to the growth in both goods (17.4%) and services (16.1%).

Services accounted for 44.7 percent of imports in 2022 after declining in share for the fifth consecutive year, following the 45.0 percent in 2021, 46.1 percent in 2020, 47.2 percent in 2019, 50.3 percent in 2018, and 51.1 percent in 2017. There was CI\$1,210.5 million in services imported by Cayman Islands’ resident individuals and companies in 2022, an increase from the CI\$1,042.7 million in 2021. This follows from the CI\$955.1 million in 2020, CI\$1,062.8 million in 2019, CI\$1,055.3 million in 2018, and CI\$954.3 million in 2017.



The share of goods in total imports increased to its highest level in 2022 (55.3%), marginally higher than the 55.0 percent posted for 2021. This represents the fifth consecutive increase in share after moving to 53.9 percent in 2020, 52.8 percent in 2019, and 49.7 percent in 2018. Total goods imported reached CI\$1,498.7 million in 2022, from CI\$1,276.5 million in 2021, CI\$1,115.0 million in 2020, CI\$1,189.7 million in 2019, CI\$1,042.8 in 2018, and CI\$914.8 in 2017.

5.6 Implicit price index by expenditure components

The GDPE Implicit Price Index (IPI) is a measure of the implicit price of the expenditure components of GDP. This index is derived by dividing the current price GDPE (i.e. nominal GDPE) by the constant price GDPE (i.e. real GDPE). The GDPE IPI indirectly measures inflationary tendency in the economy based on the expenditure components of GDP.

Table 29 below shows the IPI by expenditure component for the Cayman Islands for the period 2015-2022. The IPI by final expenditure provides information on the inflationary

tendency by expenditure component. The IPI for the base year (in this case, 2015) is equal to 100.

CAYMAN ISLANDS GROSS DOMESTIC PRODUCT BY EXPENDITURE								
TABLE 29: GDP BY EXPENDITURE IMPLICIT PRICE INDEX (IPI), 2015=100								
Expenditure Component	2015	2016	2017	2018	2019	2020	2021	2022
Final Consumption Expenditure:	100.0	100.1	101.6	103.7	108.3	110.2	112.5	116.5
Households	100.0	99.8	101.2	102.9	107.7	109.2	111.8	115.7
General Government	100.0	101.5	103.7	108.0	111.6	115.1	115.8	120.1
Non-Profit Institutions Serving Households	100.0	100.4	101.5	107.5	111.3	111.2	115.7	122.9
Gross Fixed Capital Formation:	100.0	98.5	101.6	104.0	108.6	112.3	116.3	123.8
Buildings and Infrastructure	100.0	100.4	103.2	108.0	113.1	115.9	128.7	139.5
Machinery and Equipment	100.0	98.5	98.5	99.9	100.3	100.8	101.8	106.5
Transport Equipment	100.0	99.2	99.3	100.1	100.2	100.2	101.3	105.3
Office and Computing Machinery	100.0	90.7	84.4	82.6	79.6	75.2	73.8	76.0
Other Capital Goods	100.0	94.8	106.5	107.7	117.9	133.4	122.8	123.3
Changes in Inventories	100.0	103.6	106.1	106.3	125.1	124.8	125.8	104.4
Net Exports:	100.0	106.1	114.9	114.6	113.4	105.5	101.9	101.7
Exports of Goods and Services	100.0	102.5	107.2	108.5	110.3	109.7	110.6	116.0
Imports of Goods and Services	100.0	100.6	103.3	105.8	109.0	111.2	112.9	120.3
GDPE Implicit Deflator at Purchasers' Prices	100.0	101.2	104.5	105.9	109.3	109.9	112.0	115.7
GDPP Implicit Deflator at Purchasers' Prices	100.0	101.0	103.0	105.7	109.3	109.5	111.8	115.9
GDPE IPI (Purchasers' Prices) percentage change		1.2%	3.3%	1.3%	3.3%	0.5%	1.9%	3.4%
GDPP IPI (Purchasers' Prices) percentage change		1.0%	2.0%	2.7%	3.4%	0.1%	2.1%	3.6%
CPI percentage change		-0.7%	2.0%	3.0%	6.0%	1.0%	3.3%	9.5%

APPENDIX 1: KEY CONCEPTS AND DEFINITIONS

A1.1 Classifications in the National Accounts

The main building blocks in the system of national accounts are classifications. These are used in different ways and situations throughout the system. The system of national accounts involves a large number of economic transactions in goods and services that are undertaken by a number of economic agents. The function of the national accounts is to organize and group the basic units of transactions to provide meaningful information. The classification system also guarantees comparability over time and internationally.

The Cayman Islands' national accounts use the International Standard Industrial Classification of all Economic Activities (ISIC) for the classifications of industries, as follows (see also Appendix 3):

- i. Agriculture, Forestry and Fishing
- ii. Mining and Quarrying
- iii. Manufacturing
- iv. Electricity, Gas, Steam and Air Conditioning Supply
- v. Water Supply; Sewerage, Waste Management and Remediation Activities
- vi. Construction
- vii. Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles
- viii. Transport and Storage
- ix. Accommodation and Food Service Activities
- x. Information and Communication
- xi. Financial and Insurance Activities
- xii. Real Estate Activities
- xiii. Professional, Scientific and Technical Activities
- xiv. Administrative and Support Service Activities
- xv. Public Administration and Defence; Compulsory Social Security
- xvi. Education
- xvii. Health and Social Work
- xviii. Other Services

It should be noted that establishments owned or controlled by the government are excluded from the industry "Public Administration and Defence" using the following criteria:

- (a) if the prices they charge for the goods and services they produce are economically significant;
- (b) if they are operated and managed like a corporation; and

- (c) if they have a complete set of accounts such that their operating surplus, savings, assets and liabilities can be separately identified and measured. These establishments are included in the industries in which their principal activity falls.

A1.2 Measuring Gross Domestic Product (GDP) using the Production Approach

This approach calculates GDP as the sum of the value added of all industries in the economy. This is the difference between gross output (essentially sales) of producers and the value of their intermediate inputs. Intermediate inputs refer to goods and services that are used up in the production process, excluding fixed assets whose consumption is recorded as consumption of fixed capital, i.e. purchases of commodities that are used up in the production of other commodities:

$$\text{Gross Output} - \text{Intermediate Input} = \text{Value Added}$$

The production account for industries allows for the compilation of GDP using the production approach. It records the production of goods and services as defined by the production boundary. The output generated from the production process is recorded as a resource on the left-hand side of the 'T' account, and the inputs used up in the production process is recorded as a use on the right-hand side of the account. The value added is the balancing item for this account.

Production Account of a Producer

Uses (Debit)		Resources (Credit)	
Intermediate consumption	30	Gross Output	100
		<i>Market</i>	95
		<i>For own final use</i>	5
		<i>Other non-market</i>	0
Gross Value Added	70		

A1.2.1 Valuation of output, intermediate consumption and value added

Output can be valued at either basic or producers' prices. The SNA 2008 recommends basic prices for the valuation of output; intermediate consumption should be valued at purchasers' price.

GDP estimates in this report are presented in both basic prices and purchaser's (market) prices. The main difference between basic and purchasers' price is the taxes less subsidies (or net taxes) on products. A tax on a product is a tax that is payable per unit of some good or service. The tax may be a specific amount of money per unit or a specified percentage of the value of the goods or services. In the Cayman Islands, taxes on products

are primarily taxes and duties on imports, stamp duty and other taxes on product, excluding taxes and duties on imports (e.g. hotel occupancy tax).

Basic price is defined as the amount receivable by the producer from the purchase of a unit of good or service less any tax payable, plus any subsidy receivable as a consequence of its production or sale. Separately invoiced transport charges by the producer are excluded.

Producer's price (net of all valued tax (VAT)) is the amount receivable by the producer from the purchase of a unit of good or service less any VAT invoiced to the purchaser. Separately invoiced transport charges by the producer are excluded.

Purchaser's value is the amount paid by the purchaser, excluding any deductible VAT but includes any transport charges paid separately by the purchaser for the delivery of the goods.

The above three concepts are related as follows:

- Basic Price
 - plus* taxes on product excluding VAT
 - less* subsidies on product
- Equals Producer's Price
 - plus* trade and transport margins
 - plus* non- deductible VAT
- Equals Purchaser's Price

It should be noted that in the Cayman Islands, there is no VAT; hence, producers' prices is the same as purchasers' price if there are no trade and transport margins.

A1.3 Measuring Gross Domestic Product at Constant Prices

The change in GDP results from the contribution of (i) the quantity of goods and services produced and (ii) the price at which these goods and services are sold. GDP at current prices reflects both these contributions as the production of the period is measured at the prices of that period. GDP at constant prices, on the other hand, reflects only the change in quantities produced. This indicator measures the production of the period at the prices of another period referred to as the base year.

GDP at constant price is a measure of the real growth which takes place within an economy. The rate of change of GDP at constant prices from period to period is often used to assess the economic performance of a country as it shows only the change in the volume of goods and services produced as the price effect is removed. In theory,

correcting for inflation refers to the process of revaluing current production using the average prices prevailing in the base year as follows:

$$\text{GDP at current prices} = \text{Quantity}_t \times \text{Price}_t$$

(Current quantities of goods and services produced multiplied by their current prices)

$$\text{GDP at constant prices} = \text{Quantity}_t \times \text{Price}_0$$

(Current quantities of goods and services produced multiplied by their prices in a year chosen as the base year)²³.

Movement in GDP at constant prices over time indicates whether the economy is growing or is in decline. An increase in GDP at constant prices means that output is growing faster than the rate of inflation, and hence the economy is considered to be growing. The reverse would be true for a fall in GDP at constant prices.

The explanation given above is an oversimplification of the actual computation but is necessary to convey what the process is intended to accomplish. The final estimates of GDP contain different components, which all have to be adjusted for inflation. Even though the process of deflation varies depending on the industry, the process always entails the compilation of indices. The deflation process can be effected by either directly deflating the current price estimates with a price index (usually the CPI) or by extrapolating the base year estimates by a volume index.²⁴ The two approaches might also be used simultaneously.

The process recommended by the SNA to estimate GDP at constant prices is to deflate both gross output and intermediate consumption separately and then subtract the latter from the former. The recommendation is that estimations be made for both gross output and intermediate consumption at constant prices; taking the difference would yield GDP at constant prices. This is referred to as double deflation, though intuitively appealing, it is difficult to apply in practice as it requires detailed data of good quality on price indicators for both gross output and intermediate inputs.

The alternative to double deflation is the use of a single indicator to extrapolate the GDP at constant prices or deflate GDP at current prices. Although single indicators are unsuitable in industries where the relationship between value-added, gross output, and intermediate consumption vary significantly from one year to the other, they are less

²³ The current base year for the Cayman Islands System of National Accounts is 2015.

²⁴ In the base year the current and constant estimates are the same.

sensitive to errors in other industries and hence extensively used.²⁵ The single indicator method was the method of choice for the Cayman Islands and hence is discussed below in more detail.

The single indicator method used in the Cayman Islands is the extrapolation of base year value added by a volume index of gross output. Where relevant quantity data were available, the volume index was calculated directly. In the absence of quantity data, the volume index was calculated indirectly by deflating gross output at current prices by the appropriate price index from the CPI. This approach tends to be the most frequently used single indicator and is based on the assumption that the ratio of value added to gross output in current prices remains unchanged at constant prices. This assumption might hold in the short run but becomes progressively less relevant in the long run; hence periodic rebasing of the constant price estimates is recommended.

Another single indicator approach is the deflation of current value added by a price index of gross output. SNA defines a price index as “an average of the proportionate changes in the prices of a specified set of goods or services between two periods of time.” This approach is referred to as single deflation because only the current value added is deflated and not the gross output and the intermediate consumption. The ideal price index for this approach would be one based on wholesale or producer prices. However, these types of indices are not always available; as a result, indices based on retail or consumer prices (e.g. CPI) are used. The disadvantage of using the CPI (in this case) is that the CPI relates specifically to price movements of goods and services purchased by households for consumption and should not be used as a deflator for gross output destined for non-household consumption.

Extrapolation of value added by a volume index of employment is another single-indicator method employed in the Cayman Islands System of National Accounts. This method entails the use of proxy indicators of gross output, such as hours worked or numbers employed, to extrapolate gross value added in the base year. These proxy indicators are most often used in services industries where it is challenging to specify direct volume measures. The weakness of this method is that it assumes constant labour productivity between the base year and subsequent years. This assumption inevitably leads to mismatches between employment and gross output, hence frequent revisions are necessary. According to the accepted convention, where this method is employed, an explicit assumption should be made about growth in labour productivity of about 1% per year.

²⁵The agriculture industry is one such industry where the relationship between gross output, intermediate consumption and valued added vary significantly from one year to another due to disease, weather conditions, etc.

Material input is another proxy indicator that can be used to extrapolate base year gross value added. This volume index should comprise the most important material inputs to the production process. This method is usually employed in industries with heterogeneous output (e.g. construction, garment manufacturing, manufacturing of bakery products, etc.). This method also necessitates frequent rebasing to account for changes in the ratio of gross output to value added and inputs.

A1.4 Measuring Gross Domestic Product (GDP) using the Income Approach

The income approach measures GDP as the sum of all income accruing to the factors of production. With this approach, GDP is calculated as the sum of the compensation of employees, operating surplus/mixed-income, consumption of fixed capital, and taxes on production and imports less subsidies on production and imports.

$$\begin{aligned}
 \text{GDP} &= \text{Compensation of Employees} \\
 &+ \text{Consumption of Fixed Capital} \\
 &+ \text{Operating Surplus} \\
 &+ \text{Taxes on production and imports} \\
 &- \text{Subsidies on production and imports}
 \end{aligned}$$

The definitions employed in the calculation of each of the above components are discussed below.

A1.4.1 Compensation of employees (COE)

This is defined as the total remuneration (in cash and kind) paid by employers to employees for work done during the accounting period. Compensation consists of two components:

1. Gross wages and salaries
2. Employers' social contributions

A1.4.1a Gross wages and salaries

This is defined to include all payments that employees receive in respect of their work. Included are:

- (a) Commissions, tips, bonuses, and gratuities;
- (b) Allowances such as housing, uniform, and travelling;
- (c) Wages paid during vacation and sick leave;
- (d) Overtime payments; and
- (e) Wages and salaries in kind.

The following items are among the consumption goods and services provided by the employer to the employee without charge or at a markedly reduced cost, which are of clear and direct benefit to the employees as consumers and are therefore included as part of wages and salaries:

- (a) Meal and drinks;
- (b) Housing services that can be used by all members of the household;
- (c) Uniforms that employees choose to wear frequently outside of the workplace as well as at work;
- (d) Sports, recreation, and holiday facilities for employees and their families;
- (e) Transportation to and from work, car parking; and
- (f) Nurseries for the children of employees.

A1.4.1b Employers' social contribution

This includes contributions paid by employers on behalf of their employees to social security schemes, private pension funds, and insurance schemes. These are geared towards providing benefits for the employees if circumstances affect their ability to earn income, such as sickness, accidents, redundancy, retirement, etc. These social contributions may be actual or imputed.

- Employers' actual social contributions - These consist of social contributions paid directly by employers for the benefit of their employees to social security funds, insurance enterprises or other instituted units responsible for the administration and management of social insurance schemes.
- Employers' imputed social contributions - Some employers provide social benefits directly to their employees or dependents out of their resources without the use of an insurance enterprise or special pension fund. In this case, an amount equal in value to the amount of social contributions that would be needed to secure the entitlement should, therefore, be imputed.

A1.4.2 Consumption of fixed capital

This is the cost of production associated with the decline in the value of fixed assets used in the production process. It can be viewed in general terms as the replacement cost of the fixed assets used up in the process of production.

The SNA recommends that this be valued using the actual or estimated prices of fixed assets prevailing at the time the production takes place but not the prices at the time the fixed asset was originally acquired. However, in the case of the Cayman Islands, depreciation is used as a proxy for the consumption of fixed capital.

A1.4.3 Taxes on production and imports

Taxes are compulsory, unrequited payments made to the government by other institutional units. Taxes are said to be unrequited because the government does not directly provide a specific good or service in return for the payments made. There are two types of taxes on production and imports:

1. Taxes on products are taxes on goods and services that become payable when the goods are produced, sold, imported or otherwise disposed of by their producers. The following are categories of this type of tax:
 - a) Taxes and duties on import
 - b) Other taxes on products excluding taxes and duties on imports (e.g. hotel occupancy tax).

2. Other taxes on production are all taxes excluding taxes on products that establishments incur as a result of engaging in production (e.g. business and professional licences, property tax, building permit fees, etc.).

A1.4.4 Subsidies on production and imports

Subsidies are current unrequited transfers that government makes to resident producers and importers. These transfers or payments are based on the levels of production and/or the quantity and value of goods and services produced, imported or sold. Subsidies are seen as negative taxation as producers receive them rather than pay them. There are two types of subsidies on production and imports:

1. Subsidies on products - subsidies payable per unit of a good or service, e.g. fertilizer sold to farmers;
2. Other subsidies on production - subsidies excluding subsidies on products that are paid to resident establishments as a result of engaging in production.

A1.4.5 Operating surplus/mixed-income

Operating surplus/mixed-income is the income accruing to the production process before deducting interest charges, rent, or property incomes payable. It is equivalent to the excess of the value added over the sum of the compensation of employees, net taxes on production, and allowances for the consumption of fixed capital, i.e.:

Operating Surplus = Gross Value Added – (Compensation of Employees + net Taxes on Production and Imports + allowance for the Consumption of Fixed Capital)

A1.5 Measuring Gross Domestic Product (GDP) using the Expenditure Approach

GDP by expenditure (GDPE) is the third approach to calculating GDP in the Cayman Islands, along with the Production and Income approach. GDPE measures GDP as the sum of the final purchases of goods and services. Added to final purchases is the value of exports as they represent goods and services produced domestically and sold to non-resident households and businesses. Imports are subtracted as they represent goods and services produced by other economies.

The expenditure approach is a method of measuring GDP by calculating all spending throughout the economy. A more detailed explanation shows GDPE as the sum of (a) household and government spending on goods and services; (b) investment in fixed capital (construction of buildings & other infrastructure, machinery, and equipment); (c) changes in inventories; and (d) exports less imports of goods and services following the economic formula: $GDPE = C + G + I + (X - M)$, where C represents the consumption expenditure by households (HFCE), G is the consumption expenditure by government (GFCE), "I" represents gross capital formation plus changes in inventories (GCF), X is the value of exports, and M is the value of Imports. The individual components/subgroups comprising GDPE are Final Consumption Expenditure, Gross Fixed Capital Formation, Changes in Inventory, and Net Exports.

A1.5.1 Household final consumption expenditure (HFCE)

HFCE consists of expenditures incurred by resident households on the consumption of goods and services, whether that expenditure is incurred within the economic territory or abroad. Technically, this includes purchases of consumer goods and services, the value of barter transactions, goods and services received in kind, and goods and services produced and consumed by the same household (e.g. a farmer consuming some of the agricultural products he produced or a dressmaker making a dress for herself). HFCE excludes expenditure on fixed assets in the form of dwellings and valuables, as these are included in capital formation.²⁶

For the Cayman Islands, HFCE is estimated using data from a combination of Import data and domestic data collected through the annual business survey. Data collected through the sources mentioned above are used to extrapolate the 2015 benchmark estimates, which were compiled from the Household Budget Survey (HBS) in 2015. The HBS was conducted over 12 months, from January to December 2015. The data from this survey

²⁶Valuables are produced goods of considerable value that are not used primarily for purposes of production or consumption but are held as stores of value over time. HFCE includes household expenditure on other fixed assets (other than dwelling and valuables) like motor vehicles, furniture, major appliances, etc.

were classified according to the Classification of Individual Consumption According to Purpose (COICOP).

A1.5.2 Government final consumption expenditure (GFCE)

GFCE is derived as the output of general government less any sales of goods and services by government. It includes government purchases of goods and services from businesses and distributed as social transfers to households. GFCE includes both collective and individual consumption expenditure by government. Individual consumption expenditure includes goods and services provided by government where the benefits can be assigned to individual households or units (e.g. education, health, etc.). Collective consumption refers to goods and services whose benefits are not easily assigned to individual units (e.g. public security, street lighting, etc.). GFCE is derived (with some adjustments) from the production accounts of general government from the compilation of GDPP.

A1.5.3 Final consumption expenditure of NPISH

Non-profit institutions serving households (NPISH) are private, voluntary, non-market producers who provide goods or services to households for free or at prices below market prices. These are separate legal entities with their main resources (apart from those derived from occasional sales) being derived from voluntary contributions in cash or in-kind from households in their capacity as consumers, from payments made by general governments, etc. Examples include churches and religious societies, sports and other clubs, trade unions, etc. Similar to GFCE, the FCE of NPISH is derived as the output of these entities less any sales of goods and services and is compiled from their production accounts from the GDPP compilation.

A1.5.4 Gross fixed capital formation (GFCF)

GFCF is measured by the total value of the producers' acquisitions, less disposals of fixed assets. It includes investment in fixed capital by households, businesses, and government. GFCF relates to the addition to the available stock of fixed assets and not the change in ownership of the existing stock. That is, the value of buildings & infrastructure in GFCF represents the addition (in the reporting period) to the existing stock and is not the actual value of the total stock of buildings & infrastructure as of the end of the period. Business GFCF includes the construction of new commercial buildings, major improvements to the existing stock, acquisition less disposal of machinery & equipment, and investment in intangible fixed assets (e.g. computer software, research & development, etc.). GFCF for government includes investment in assets such as roads, schools, hospitals, etc. The machinery & equipment portion of GFCF is compiled using imports of these types of goods

as there is no domestic production. For households, GFCF relates to any addition to the stock of residential buildings and major improvements to the existing stock.

A1.5.5 Changes in inventories

Simply put, the change in inventory is the amount companies add to the inventories of the goods they plan to sell and materials used in the production process. It is calculated as the difference between the closing stocks and opening stocks during the accounting period. Positive changes in inventories add to GDP, while negative changes reduce GDP. The underlining concept is that businesses will increase inventories to address an increase in the demand for a certain good. That increase in demand positively contributes to GDP. On the other hand, businesses will reduce inventories when the demand for goods declines; the decline in demand reduces GDP. The change in inventories for the Cayman Islands is based on estimates of stock changes reported by businesses in the annual business survey.

A1.5.6 Net export of goods and services (X-M)

Net export refers to exports less imports of goods and services. Imports and exports have opposite effects on GDP. Exports add to GDP, and imports subtract from GDP. Exports consist of sales of domestically produced goods and services to non-residents (e.g. expenditure on goods & services by visitors to the Cayman Islands). Imports consist of the purchase of goods and services by residents from non-resident producers. Data on the export and import of goods is derived from external trade statistics, while the data on the export and import of services is gleaned from the BOP data produced by the ESO.

APPENDIX 2: IMPLEMENTATION OF THE CAYMAN ISLANDS' SNA

A2.1 Introduction

This section provides an overview of the work done in developing the System of National Accounts for the Cayman Islands. It examines the classification system employed in delineating institutional units into specific industries. This is fundamental to the measurement of output and value added by industry. The section also examines the main sources of data used in compiling the estimates. The Annual National Accounts Survey was the main data source and was supplemented by data from government accounts and other administrative sources. The section concludes by examining the estimation techniques employed in deriving gross value added by industry at current and constant prices.

A2.2 Coverage of industries

As indicated in Appendix 1, all active business units were classified according to the International Standard Industrial Classification (ISIC) Revision 4, which is the industrial classification scheme recommended by the SNA 2008 manual.²⁷ In accordance with SNA 2008 and ISIC guidelines, business units were assigned codes based on their principal economic activity.²⁸ The ISIC Revision 4 was adapted to accommodate a more detailed dis-aggregation of economic activity. For the most part, estimation and analysis were done at the product group level (5-digit ISIC code). However, some estimation had to be done at the class level (4-digit code) due to data constraints.

The concept of GDP for the economy as a whole is that it should measure the total GVA for all producers resident in the economy. The overall estimate of Cayman Islands' GDP comprises the value added of 18 industries as classified using ISIC Rev. 4. The data shown are the most recent estimates of GDP and include any revisions (to previously published data) due to revised figures obtained from businesses during the most recent Annual National Accounts Survey. In general, figures for the most recent year are to be regarded as preliminary.

²⁷The System of National Accounts Manual 2008 (SNA 2008) is the manual that guides the compilation of GDP estimates. It outlines the internationally accepted methodologies and rules that govern the derivation of estimates of GDP. Relevant aspects of SNA 2008 have been incorporated in the Cayman Islands' National Accounts.

²⁸The principal activity of a business is the activity whose value added exceeds that of any other activity carried out by the business.

A2.3 Data sources

Gross value added at current and constant prices was compiled using data from a variety of primary and/or secondary sources. Primary sources relate to data collected and compiled by the Economics and Statistics Office (ESO). The main source of primary data was the Annual National Accounts Survey. Other primary data sources were the consumer price index (CPI), Labour Force Survey (LFS), Survey of Living Conditions (SLC), and the Household Budget Survey (HBS). Secondary data sources (i.e. sources external to the ESO) consist mostly of administrative records and data generated as by-products of the administrative process. Revenue and expenditure accounts of government and statutory agencies, merchandise trade data, and specified data from the Cayman Islands Monetary Authority (CIMA) comprised the main secondary data sources.

The Annual National Accounts Survey is designed primarily to collect information on income and expenditure from active business units. Questionnaires are hand-delivered to business units on Grand Cayman (entities for whom a physical address was available) and mailed to those in Cayman Brac and Little Cayman. The survey was administered to all relevant establishments in ESO's Business Register. Data on government ministries and departments were obtained from government accounting reports.

The consumer price index (CPI) was predominantly used in computing gross value added at constant 2015 prices. The CPI is used in two ways: (1) gross output (at current prices) of some industries is deflated by a relevant price index of CPI items, or groups of items to derive the inflation-adjusted gross output (gross output at constant prices). The series of gross output constant is then used to formulate a volume index which is then used to extrapolate base year gross value added to derive gross value added (at constant prices). (2) The gross value added (at current prices) of some activities are deflated directly by a relevant price index of CPI items, or groups of items to derive gross value added (at constant prices). This method is utilized in the absence of relevant volume indicators. The CPI was also used in estimating the current price gross value added of owner-occupied dwellings and fishing industries.

The government accounts comprise a voluminous amount of data that had to be classified, partitioned and adjusted to suit national accounts purposes. Revenue and expenditure data were gathered from the government database and then exported to Excel, where it was adjusted for national accounts purposes. The database allows for the generation of reports based on cost centres. Through this process, public administration was identified. Additionally, revenue was classified into three groups: taxes (customs duties, property tax, hotel occupancy tax, cruise ship departure tax, stamp duty, etc.), sales of goods and services (work permits, departmental sales, etc.) and other revenue (interest, fines and forfeitures, etc.).

A2.4 Revision policy

Revisions are undertaken periodically to improve the System of National Accounts. New and revised data from regular surveys, administrative records, audited financial statements from companies, public sector accounts, etc., are incorporated into the system as they become available. The previous two year's estimates are revised (as necessary) when current-year estimates are being generated, except at the completion of a rebasing process where the entire GDP series might be revised.

APPENDIX 3: INTERNATIONAL STANDARD INDUSTRIAL CLASSIFICATION OF ALL ECONOMIC ACTIVITIES (REVISION 4)

A - Agriculture, Forestry and Fishing

- 01-Crop and animal production, hunting and related service activities
- 02-Forestry and logging
- 03-Fishing and aquaculture

B - Mining and Quarrying

- 05-Mining of coal and ignite
- 06-Extraction of crude petroleum and natural gas
- 07-Mining of metal ores
- 08-Other mining and quarrying
- 09-Mining support service activities

C - Manufacturing

- 10-Manufacture of food products
- 11-Manufacture of beverages
- 12-Manufacture of tobacco products
- 13-Manufacture of textiles
- 14-Manufacture of wearing apparel
- 15-Manufacture of leather and related products
- 16-Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
- 17-Manufacture of paper and paper products
- 18-Printing and reproduction of recorded media
- 19-Manufacture of coke and refined petroleum products
- 20-Manufacture of chemicals and chemical products
- 21-Manufacture of pharmaceuticals, medicinal chemical and botanical products
- 22-Manufacture of rubber and plastics products
- 23-Manufacture of other non-metallic mineral products
- 24-Manufacture of basic metals
- 25-Manufacture of fabricated metal products, except machinery and equipment
- 26-Manufacture of computer, electronic and optical products
- 27-Manufacture of electrical equipment
- 28-Manufacture of machinery and equipment n.e.c.
- 29-Manufacture of motor vehicles, trailers and semi-trailers
- 30-Manufacture of other transport equipment
- 31-Manufacture of furniture
- 32-Other manufacturing
- 33-Repair and installation of machinery and equipment

D - Electricity, Gas, Steam and Air Conditioning Supply

- 35-Electricity, gas, steam and air conditioning supply

E - Water Supply; Sewerage, Waste Management and Remediation Activities

- 36-Water collection, treatment and supply
- 37-Sewerage
- 38-Waste collection, treatment and disposal activities; materials recovery
- 39-Remediation activities and other waste management services

F - Construction

- 41-Construction of buildings
- 42-Civil engineering
- 43-Specialized construction activities

G - Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles

- 45-Wholesale and retail trade and repair of motor vehicles and motorcycles
- 46-Wholesale trade, except of motor vehicles and motorcycles
- 47-Retail trade, except of motor vehicles and motorcycles

H - Transportation and storage

- 49-Land transport and transport via pipelines
- 50-Water transport
- 51-Air transport
- 52-Warehousing and support activities for transportation
- 53-Postal and courier activities

I - Accommodation and Food Service Activities

- 55-Accommodation
- 56-Food and beverage service activities

J - Information and Communication

- 58-Publishing activities
- 59-Motion picture, video and television programme production, sound recording and music publishing activities
- 60-Programming and broadcasting activities
- 61-Telecommunications
- 62-Computer programming, consultancy and related activities
- 63-Information service activities

K - Financial and Insurance Activities

- 64-Financial service activities, except insurance and pension funding
- 65-Insurance, reinsurance and pension funding, except compulsory social security
- 66-Activities auxiliary to financial service and insurance activities

L - Real Estate Activities

- 68-Real estate activities

M - Professional, Scientific and Technical Activities

- 69-Legal and accounting activities
- 70-Activities of head offices; management consultancy activities
- 71-Architectural and engineering activities; technical testing and analysis
- 72-Scientific research and development
- 73-Advertising and market research
- 74-Other professional, scientific and technical activities
- 75-Veterinary activities

N - Administrative and Support Service Activities

- 77-Rental and leasing activities
- 78-Employment activities
- 79-Travel agency, tour operator, reservation service and related activities
- 80-Security and investigation activities
- 81-Services to buildings and landscape activities
- 82-Office administrative, office support and other business support activities

O - Public Administration and Defence; Compulsory Social Security

- 84-Public administration and defence; compulsory social security

P - Education

- 85-Education

Q - Human Health and Social Work Activities

- 86-Human health activities
- 87-Residential care activities
- 88-Social work activities without accommodation

R - Arts, Entertainment and Recreation

- 90-Creative, arts and entertainment activities
- 91-Libraries, archives, museums and other cultural activities
- 92-Gambling and betting activities
- 93-Sports activities and amusement and recreation activities

S - Other Service Activities

- 94-Activities of membership organizations
- 95-Repair of computers and personal and household goods
- 96-Other personal service activities

T - Activities of Households as Employers; Undifferentiated Goods-and Services-Producing Activities of Households for Own Use

- 97-Activities of households as employers of domestic personnel
- 98-Undifferentiated goods- and services-producing activities of private households for own use

U - Activities of Extraterritorial Organizations and Bodies

- 99-Activities of extraterritorial organizations and bodies