



UHERO FORECAST FOR THE STATE OF HAWAII

SUPPORTER EDITION

WITH OMICRON IN THE REARVIEW MIRROR, A CLEARER ROAD AHEAD?

MARCH 6, 2022





UHERO

THE ECONOMIC RESEARCH ORGANIZATION
AT THE UNIVERSITY OF HAWAII

UHERO FORECAST FOR THE STATE OF HAWAII

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Executive Summary

The COVID-19 waves since last summer caused a pullback in Hawaii tourism and a pause in labor market recovery. With the rapid end of the Omicron wave, visitor arrivals are picking up and broader recovery is resuming. The expected transition of the virus to an endemic disease sets the stage for easing of travel restrictions and the long-awaited return of international visitors. Considerable risks remain, including COVID-19 surprises, Fed tightening, and economic fallout from the Russian invasion of Ukraine.

- The Omicron wave of the COVID-19 pandemic dealt a blow to global growth. The rapid retreat of this wave and likely evolution to endemic status are good news. Still, lingering struggles with the virus, the weight of fiscal retrenchment, and ongoing supply and price pressures have moderated the outlook for 2022. Russia's invasion of Ukraine—and the resulting international sanctions—add new uncertainty to the US and global outlook.
- Hawaii's visitor industry recovery was halted by last summer's Delta wave, and Omicron caused another setback at year end. Bookings by US visitors have now bounced back to their pre-pandemic pace, although bookings by Asian visitors remain essentially zero. While we are concerned by the recent surge of COVID-19 in some Asian countries, we expect travel restrictions to ease in coming months, permitting a significant return of international visitors.
- The pandemic has had unusual effects in labor markets, including record rates of business formation and a surge in worker absences. Job recovery in Hawaii, which had proceeded at a healthy clip, paused after the Delta wave hit. Employment gains will resume this year, although a reduced labor force and lagging tourism will delay a full recovery.
- Hawaii home prices surged 18% last year, roughly in line with the US overall. Higher prices and rising mortgage rates will further erode housing affordability in the Islands. Initiatives to address affordability are ongoing at the state and local levels.
- Robust construction activity continues. Federal spending under Hawaii's share of a massive \$8 billion Navy contract and the Infrastructure Investment and Jobs Act will support the industry in coming years. The possibility of a moratorium on new water meters because of the Red Hill water crisis is a concern for new residential development.
- Our outlook for Hawaii is relatively upbeat. The anticipated retreat of COVID-19 will clear the way for a more complete visitor industry recovery. After a weak start to the year, arrivals will surpass last summer's peak by the second quarter and reach 90% of their pre-pandemic level by the year's end. Visitor numbers will reach 9.5 million in 2023.
- The easing of COVID-related restrictions, and of public concern about infection risk, will also support recovery. The state's payroll base will see increasing gains as the year progresses and expand by 4.5% for the year as a whole. By 2023, job growth will have absorbed most of the slack in the labor market, driving the unemployment rate down to 3.3%.
- Income growth in Hawaii, which has been supported by extensive federal stimulus, will take a hit this year as the direct support to families ends. Real personal income will drop 4.7% this year. Gains in employment and wages will enable the beginning of income recovery as the year progresses.
- The path ahead appears clearer, but there remain big risks. Despite gains, COVID-19 still has the capacity to be very disruptive. Federal Reserve interest rate hikes could cause more slowing than desired. Russia's invasion of Ukraine could cause higher energy costs and slower global growth, which would impact Hawaii tourism and local inflation.

Forecast Summary

MAJOR ECONOMIC INDICATORS BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
STATE OF HAWAII						
Nonfarm Payrolls (Thou)	658.7	561.9	583.0	609.4	631.7	641.8
% Change	0.1	-14.7	3.7	4.5	3.7	1.6
Unemployment Rate (%)	2.5	11.8	7.2	5.1	3.3	2.7
Real Personal Income (Mil 2021\$)	82,839.8	85,727.2	86,800.6	82,719.6	84,380.6	85,948.3
% Change	1.4	3.5	1.3	-4.7	2.0	1.9
Real GDP (Mil 2021\$)	96,834.9	86,108.9	89,541.9	92,953.6	95,998.8	97,705.8
% Change	0.0	-11.1	4.0	3.8	3.3	1.8
Total Visitor Arrivals by Air (Thou)	10,385.8	2,708.3	6,777.1	8,746.1	9,455.2	9,615.1
% Change	5.0	-73.9	150.2	29.1	8.1	1.7
Visitor Days (Thou)	89,690.4	28,515.8	65,341.3	79,470.5	83,998.2	84,810.1
% Change	2.2	-68.2	129.1	21.6	5.7	1.0
Real Visitor Expenditures (Mil 2021\$)	18,692.1	4,989.5	12,995.7	17,124.8	19,029.8	18,662.5
% Change	-0.4	-73.3	160.5	31.8	11.1	-1.9
HONOLULU COUNTY						
Nonfarm Payrolls (Thou)	473.8	413.1	422.6	439.8	456.3	463.0
% Change	0.1	-12.8	2.3	4.1	3.7	1.5
Unemployment Rate (%)	2.3	10.3	6.5	4.8	2.9	2.4
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2021\$)	60,937.5	62,867.9	63,432.7	60,588.0	61,826.4	62,970.7
% Change	0.8	3.2	0.9	-4.5	2.0	1.9
Total Visitor Arrivals by Air (Thou)	6,153.9	1,506.2	3,330.9	4,709.0	5,533.2	5,668.2
% Change	5.0	-75.5	121.1	41.4	17.5	2.4
HAWAII COUNTY						
Nonfarm Payrolls (Thou)	70.9	61.0	64.5	66.5	68.3	69.3
% Change	-0.2	-14.0	5.8	3.2	2.6	1.5
Unemployment Rate (%)	3.1	11.5	7.1	5.5	4.1	3.4
Real Personal Income (Mil 2021\$)	9,076.2	9,775.6	10,055.8	9,435.6	9,552.7	9,712.1
% Change	2.3	7.7	2.9	-6.2	1.2	1.7
Total Visitor Arrivals by Air (Thou)	1,763.9	493.6	1,184.1	1,552.4	1,656.4	1,692.8
% Change	3.4	-72.0	139.9	31.1	6.7	2.2
MAUI COUNTY						
Nonfarm Payrolls (Thou)	80.7	61.8	68.9	73.7	76.6	78.2
% Change	0.2	-23.4	11.6	6.9	3.9	2.0
Unemployment Rate (%)	2.4	18.1	9.8	5.9	4.0	3.3
Real Personal Income (Mil 2021\$)	8,945.3	9,045.8	9,188.5	8,790.6	9,029.4	9,243.4
% Change	4.0	1.1	1.6	-4.3	2.7	2.4
Total Visitor Arrivals by Air (Thou)	3,111.1	807.3	2,336.1	2,938.8	3,037.2	3,100.9
% Change	5.0	-74.1	189.4	25.8	3.3	2.1
KAUAI COUNTY						
Nonfarm Payrolls (Thou)	33.3	26.1	27.0	29.4	30.5	31.3
% Change	1.6	-21.7	3.6	8.9	3.8	2.6
Unemployment Rate (%)	2.4	16.3	10.3	6.6	4.3	3.2
Real Personal Income (Mil 2021\$)	3,882.0	4,037.0	4,123.6	3,905.4	3,972.1	4,022.1
% Change	3.3	4.0	2.1	-5.3	1.7	1.3
Total Visitor Arrivals by Air (Thou)	1,370.0	330.3	812.6	1,138.0	1,251.4	1,286.0
% Change	-1.3	-75.9	146.0	40.0	10.0	2.8

Note: Source is UHERO. Nonfarm Payrolls for 2020-2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts.

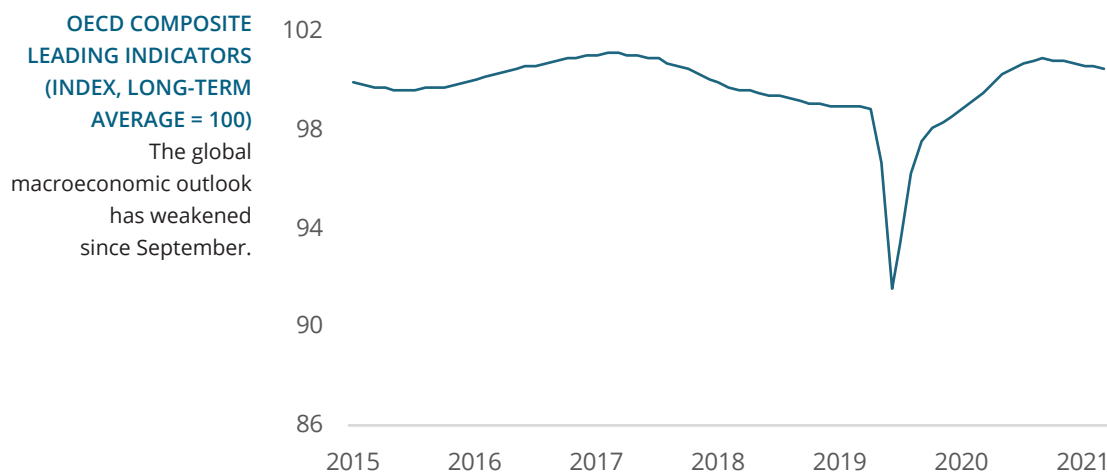
First Quarter Hawaii Forecast

The COVID-19 waves of the second half of last year caused global slowing. They also led to a pullback in Hawaii tourism and a pause in local labor market recovery. With the rapid end of the Omicron wave, visitor arrivals have picked back up and broader recovery is resuming. While recent pandemic surges in Asia are a concern, the expected transition of the virus to an endemic status sets the stage for the easing of travel restrictions in coming months and the long-awaited return of international visitors to Hawaii.

The pandemic has had important impacts on the Hawaii economy. The healthy recovery of our North American markets in the face of supply constraints has pushed room rates up sharply. At the same time, global supply chain disruptions, shifts in spending patterns, and a stimulus-induced increase in aggregate demand have caused a sharp pickup in overall inflation. In housing markets, home prices have soared, mirroring a national trend. Together with higher mortgage rates, this will further erode housing affordability. In labor markets, the pandemic sparked a surge in new business formation, and the Omicron wave brought a spike in absences that has worsened labor shortages.

The outlook is for renewed economic growth, touching nearly all sectors of the economy. Industries linked to tourism, which have lagged the broader economy, stand to make the largest gains. As the economy approaches its sustainable long-run path, growth will slow over the next several years. At this stage of the pandemic, the road ahead looks somewhat more secure, even if there is an array of risks that could yet cause setbacks in Hawaii's recovery.

At the time we are completing this report, Russia has launched a full-scale invasion of Ukraine, and the US and other countries have responded with a range of economic sanctions. Further sanctions may be forthcoming. The biggest risk from the Ukraine crisis is a potential surge in oil and gas prices and a hit to the European and global macroeconomy. While at present these events appear unlikely to derail Hawaii's recovery, we will of course be tracking them closely in coming weeks.



Omicron pulled down global growth

The Omicron wave of the COVID-19 pandemic dealt a blow to US and global growth at year's end. The surge in case counts beginning in November led to renewed shutdowns in some countries and disruptions to labor supply in many. Early on, the most severe effects were in developed economies, but many low- and middle-income countries, such as in South America, also experienced severe outbreaks. China, while seeing very few cases, cracked down hard. More recently, there have been surges in other Asian countries.

The good news is that Omicron is now in rapid retreat in many countries. In the US, case counts have fallen back to roughly pre-Omicron levels in major cities where the wave hit first, and aggregate US cases have also dropped sharply. Still, lingering struggles with the virus, the weight of fiscal retrenchment, and ongoing supply and price pressures have moderated the outlook for 2022. The OECD aggregate index of leading economic indicators has turned down since September, the first period of decline since the pandemic recovery began.

Energy prices have surged in recent months, with oil pushing to its highest level since 2014. Russia's invasion of Ukraine—and the potential scale of international sanctions—adds considerable uncertainty to the energy picture. Combined with ongoing supply disruptions due to periodically-closed ports (and bridges!) and pandemic induced shifts in demand toward merchandise, this has pushed global inflation to its highest level in many years.

In the US, some cities reimposed tighter restrictions as Omicron took hold, but these were not widespread. This time, the biggest economic toll has come from disruptions to the labor market as children, parents, and teachers test positive for the virus, leading to rolling worker absences. To a larger extent than during the Delta wave, people also voluntarily pulled back from some types of activity, such as in-person retail, restaurant visits, and the use of mass transit. As Omicron has retreated, activity has picked back up, and these issues will weigh less heavily on economic growth going forward.

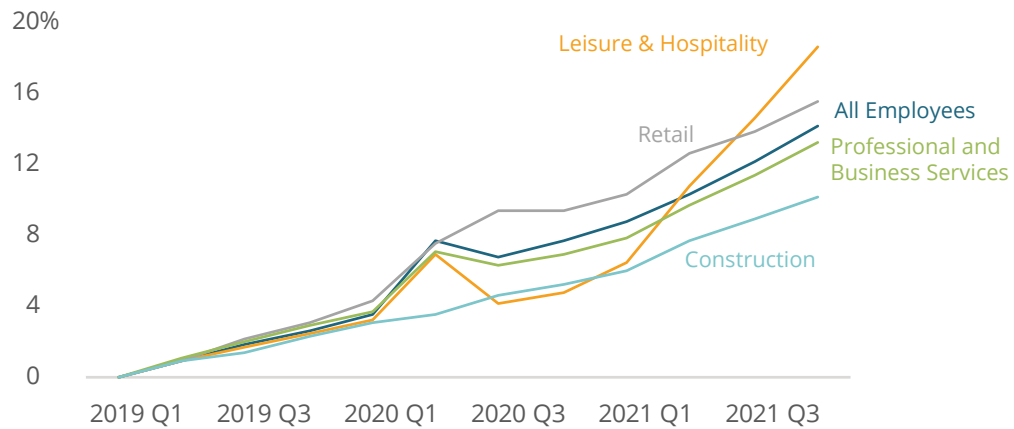
Labor markets have tightened considerably over the past year, with the US unemployment rate standing at 4% in January. An unusually high rate of retirements, reconsideration of career tracks, and lingering COVID-19 concerns have kept labor force participation well below its pre-pandemic

OIL PRICE, BRENT CRUDE

Oil prices have surged, with Ukraine risk pushing them still higher.



**CHANGE IN US
NOMINAL WAGES SINCE
THE START OF 2019**
Wages have risen where
they are needed most.



level. As a result, there has been substantial upward pressure on wages, especially in traditionally low-paying occupations. (New minimum wage laws are also playing a role.) Aggregate wages have risen 14% since the beginning of 2019 and 16-18% in the retail trade, and leisure and hospitality sectors. The recent surge in inflation cuts into the purchasing power of these wage gains.

Labor costs for firms are therefore on the rise. Last year, employment cost growth accelerated from the roughly 3% rate it had averaged since 2018 to 5% by year end. Combined with energy and other raw material cost pressures, this will keep near-term inflation above normal. Supply-side issues are expected to ease over the coming year, returning overall US inflation to the 3% range by 2023, converging back to 2% thereafter.

Fed tightening will be tricky

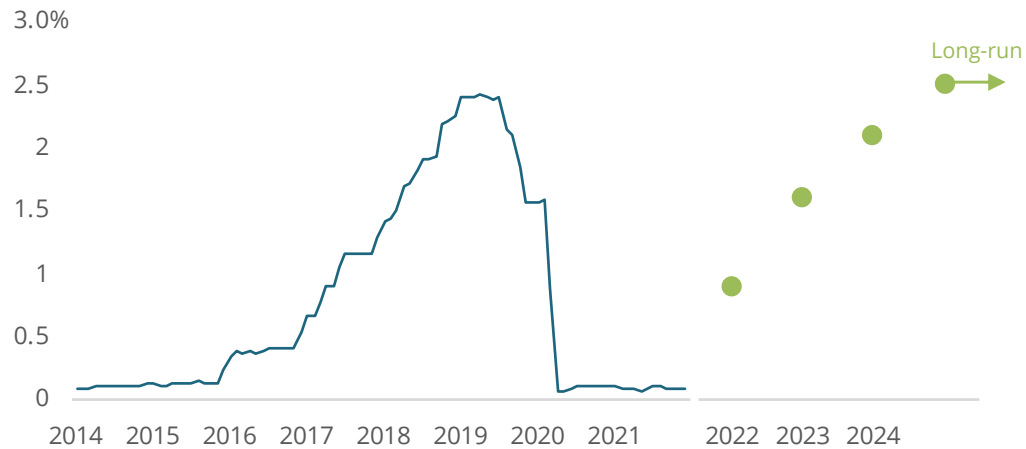
Higher and more persistent inflation has led to an abrupt shift in monetary policy away from employment support to maintaining price stability. In December, Federal Reserve policymakers increased their projections for interest rate hikes over the coming year. Federal Open Market Committee (FOMC) members on average now expect three quarter-point rate hikes in 2022, and Wall Street firms expect four-to-seven hikes. The Fed will also soon halt the extraordinary bond purchases that it has used to support the economy during the pandemic. It is unclear how quickly it will move to work down its accumulated bond holdings. While headline inflation has surged, it is encouraging that medium-term inflation expectations remain moderate, making it less likely that inflation will become entrenched.

While COVID-19 may still have surprises in store, monetary tightening may now be the biggest risk to ongoing recovery and growth. Fed rate hikes will have their intended effect of discouraging interest sensitive aggregate demand, taking pressure off inflation. But history tells us that getting the pace and magnitude of tightening right is very difficult. A too-rapid shift to monetary contraction could derail an economy that is really just now moving back toward normal.

And the monetary shift will not be the only policy drag. Federal fiscal policy saw a dramatic tightening late last year, as the temporary pandemic support programs were phased out. The federal spending boom equal to roughly 11% of GDP during 2020-2021 is now ending, although there remains some authorized funds that states have yet to expend. The Infrastructure Investment and Jobs Act passed by Congress will provide a small offset, but the more-significant Build Back Better Act is now dead in the water, even if some elements eventually get adopted in smaller bills.

**FEDERAL FUNDS
INTEREST RATE AND
DECEMBER 2021 MEDIAN
FOMC PROJECTIONS**

The Federal Reserve will raise rates considerably, beginning soon.



**Mixed but mostly
upbeat outlook
for post-COVID
US growth**

Household finances will be adversely affected by the end of federal support, particularly for those of limited means. These families had benefited from extended and expanded unemployment programs and particularly the large temporary child tax credits. And US residents are increasingly pessimistic about the economic outlook. The Michigan consumer sentiment index has fallen to its lowest level of the pandemic. Consumer spending turned down in December. Even so, the job market showed healthy gains at year end, and households are flush with cash accumulated during the period of generous fiscal support. Because of this, there is reason to think that consumers will return to relatively healthy spending patterns as the Omicron wave comes to an end.

Forward-looking “nowcasts” show significant slowing in the US economy in the current quarter, related to the impact of the Omicron variant surge. After that, we expect that US real gross domestic product will average 3.7% for the year as a whole. This is a roughly half-percent downgrade from our previous US forecast. As the recovery cycle edges toward full employment and production, the rate of growth will slow to a 1.7-1.8% trend pace by 2024.

As we noted above, the situation in Ukraine presents a further, and at this point unknown, risk to the global growth outlook. How the invasion and international sanctions play out will have implications for global energy prices, financial markets, and European and global growth. Western European countries are very exposed to the crisis, because they rely on Russian natural gas. A number of Asian economies, including Japan and Korea, import much of their oil from Russia.

Looking briefly at major economies of interest to Hawaii, Canada is in much the same position as the US. Healthy labor markets are supporting consumer spending, but inflationary pressures and supply constraints are hampering growth. COVID-19 case counts have fallen more than 80% from their mid-January peak. Japan’s Omicron surge was delayed until early January, and case counts have only recently begun to recede. They remain well above the levels seen in previous Japanese COVID-19 waves. The country continues to ban nearly all visitors from abroad, and late outbreaks in other Asian countries could slow reopening. Heading into 2022, Japan will benefit from supportive fiscal and monetary policies. Severe problems in China’s property market and its Zero COVID policy will make it hard to reach the 5% growth target this year, with adverse spillovers abroad, especially for Asian developing country exporters to China and developed country importers of

Chinese components. In Australia, COVID-19 cases surged in December, but relying on high vaccination rates, policymakers chose to keep the economy largely open for business. Case counts have fallen sharply in recent weeks, and borders have reopened for inbound tourism. This year, accumulated savings and policy support should enable continued consumer recovery, and rising commodity demand will aid the export sector. Here, a slower China poses some risk. (See our fourth quarter report for more discussion of global trends.)

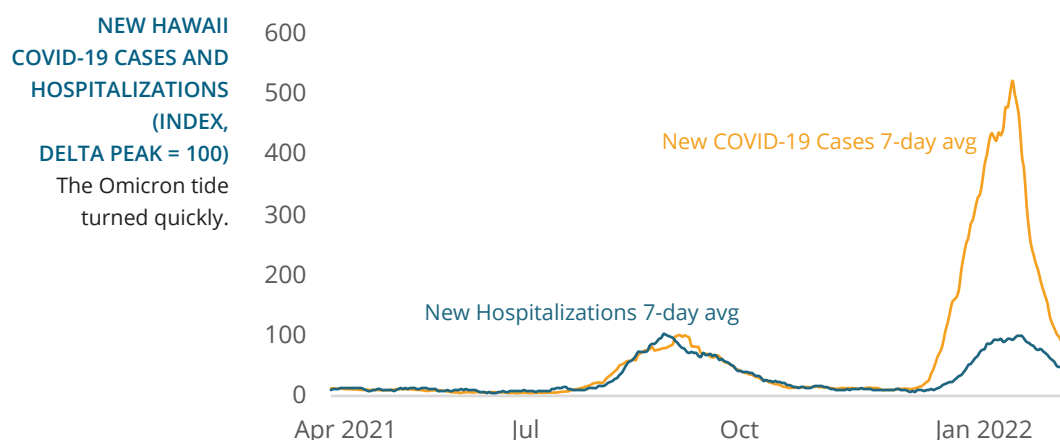
Overall, conditions in the US and global economy are looking up as Omicron heads down. But there remain impediments to full recovery that will mean somewhat slower growth this year than we have anticipated in past reports.

Omicron hit Hawaii tourism, but better prospects lie ahead

Last year Hawaii welcomed nearly 6.8 million visitors, about two-thirds of the number seen at the 2019 peak. US visitor arrivals reached an all-time high in July. But the Delta wave brought the recovery to a halt in mid-August. Subsiding case numbers and hospitalizations provided support for a modest return to growth during the fall shoulder season, only to be followed by another setback with the arrival of the Omicron variant at year end. Seasonally adjusted airline passenger counts dropped nearly 15% from December to January.

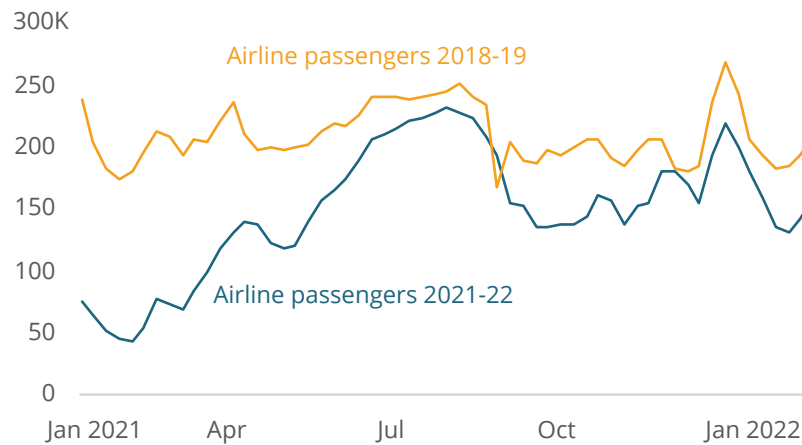
Omicron has turned out to be far more transmissible than Delta, but it is much less likely to cause severe illness. Despite Hawaii's high vaccination rate, case counts soared and reached 500% of the Delta peak, before they began to subside in late January. Because of the sheer number of cases, peak hospitalizations matched previous COVID-19 waves. After the dramatic rise, recent weeks have seen a sharp decline in both new cases and new hospitalizations, mirroring developments in mainland locales.

After a slow start, Hawaii has been making progress on booster shots, with 56% of the eligible population having received one. Children remain a primary concern, with only 36% of 5-11 year olds fully vaccinated. While Omicron has demonstrated that even highly vaccinated regions are not immune to new outbreaks, Hawaii's rising vaccination and booster rates, together with accumulated past infections, should provide better protection against future COVID-19 infections and severe illness.



**WEEKLY AIRLINE
PASSENGERS COMPARED
WITH THEIR LEVEL
THREE YEARS AGO**

The Delta and Omicron waves dealt a setback to the tourism recovery.



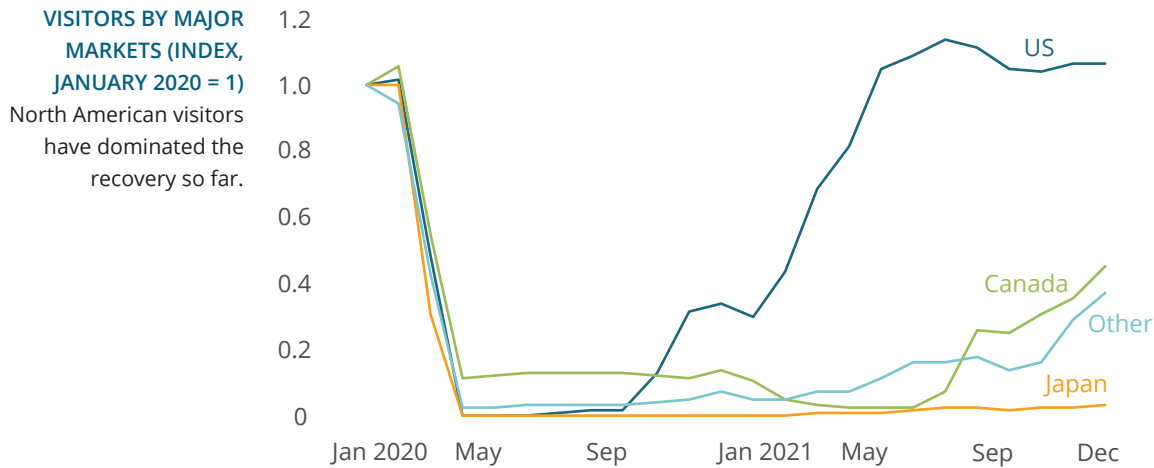
Although last year's visitor recovery had its share of fits and starts, total arrivals ended the year at nearly 80% of their pre-pandemic level. However, the Omicron surge dented the momentum, with airline passenger counts at the beginning of this year dropping to 70% of the level two years ago. Other high frequency indicators also demonstrated weakness. Travel agency bookings began slowing in early December. While bookings by US visitors bounced back and approached their pre-pandemic pace in early February, net bookings by Japanese and Korean visitors have remained essentially zero so far in 2022.

The visitor mix has been heavily skewed towards the North-American market throughout the recovery. In December, US visitors represented nearly 90% of Hawaii tourists. The number of visitors from Canada has improved since the summer, reaching 5% of all visitors in December and 45% of their pre-pandemic level. Visitors from other international markets remain negligible so far. Visitor arrivals from Japan lingered at less than 5% of their 2019 levels throughout the year. At the beginning of March, Japan will reduce quarantine requirements for returning residents to three days, but due to the late Omicron wave in the country, we do not expect Japanese visitor numbers to pick up significantly before the second quarter. South Korea is now seeing a sharp spike in Omicron numbers, which could lead to a re-tightening of quarantine requirements. Until COVID-19 travel restrictions are relaxed we expect little recovery in these key international markets.

The absence of higher-spending Japanese and other international visitors has weighed on spending. Even so, inflation-adjusted visitor spending in December rose to within 12% of its 2019 level. The recovery is primarily driven by the rising cost of accommodations, which account for nearly half of all visitor expenditures.

The statewide tourism numbers obscure large county differences, with Honolulu lagging behind the Neighbor Island counties in the recovery of both visitor spending and arrivals. International visitors accounted for nearly 30% of all arrivals in 2019, and the dearth of Asian visitors has held back recovery on Oahu. Meanwhile, the complete recovery of the US market has disproportionately benefited the Neighbor Islands. By the second half of last year, inflation-adjusted per-person daily spending by US visitors had fully recovered to its pre-pandemic level.

On January 3, the State reduced the mandatory quarantine period for unvaccinated travelers without a negative COVID-19 test from ten days to five, in line with CDC guidelines. Given that the majority of travelers are



exempt from quarantine by virtue of a negative test or vaccination status, these changes are unlikely to impact travel in any meaningful way. More importantly, Governor Ige recently ruled out requiring a booster to be considered fully vaccinated, and barring another COVID-19 surge, it is likely that the *Safe Travels* requirements will be wound down over the next couple of months.

Accommodation costs have surged

Hotels and other accommodations in Hawaii suffered a tremendous blow during the early days of the pandemic. While many are still struggling, recovering demand and surging room prices have lifted revenue per available room (RevPAR), with the biggest gains on the Neighbor Islands. The average daily rate for transient vacation rentals also ended the year on a record high. To be sure, hotel and other accommodation purveyors also face rising costs, but the gains in revenue are nonetheless encouraging signs of the recovery.

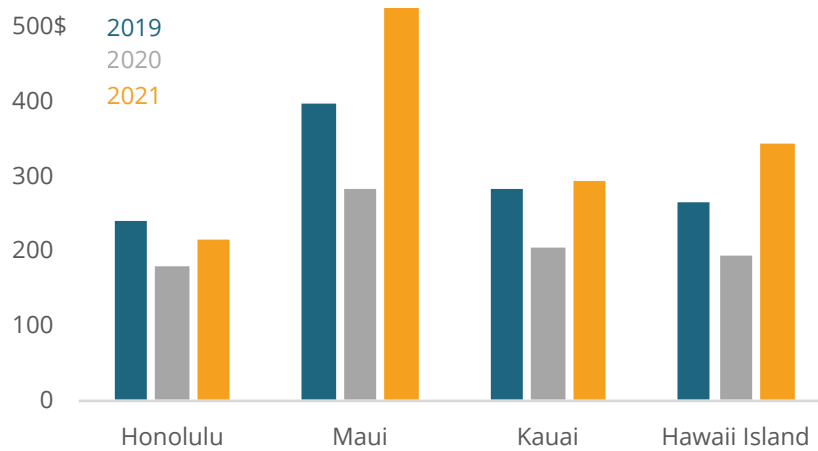
In December, the seasonally-adjusted hotel occupancy rate jumped to 71%, up from less than 60% in the September-November period. All Islands saw significant gains. On Oahu, more than half of the increase was due to the relocation of about 3,000 military personnel and their families to temporary housing in hotels in the wake of a November leak at the Navy's Red Hill Bulk Fuel Storage Facility. The leak of petroleum from the aging facility has contaminated the water supply for 93,000 people in neighborhoods surrounding Pearl Harbor and is adjacent to the Halawa shaft, which provides drinking water for 400,000 residents on Oahu. The Hawaii Hotel Alliance made 1,825 of the nearly 30,000 Oahu hotel rooms available for people displaced due to the contaminated water. The hotels that are serving impacted military families include the Hilton Hawaiian Village, the Hilton Waikiki, five Outrigger hotels, The Hyatt Waikiki, Kyoya Hotels, and the Double Tree Waikiki.

Hotel bookings for upcoming stays still lag somewhat behind pre-pandemic levels, but the rapid retreat of the Omicron wave bodes well for the future. We expect a rise in occupancy rates for both hotels and TVRs in the next few months.

The battle over TVR operations continues. Honolulu's Bill 41 would ban TVRs from operating in residential-zoned areas; new permits would be issued only in or adjacent to resort-zoned areas such as Kuilima, Ko Olina and Waikiki.

HOTEL ROOM PRICES

Hotel room prices have pushed past their 2019 levels on the Neighbor Islands.



The general move to enforce stricter regulations statewide will constrain the TVR supply and in turn the overall capacity to accommodate future visitor growth.

The transient accommodations tax (TAT) is levied by both hotels and legally-operating TVRs. In the past, the tax was fully administered by the State, with a portion of revenues distributed to the counties. In 2021, the Hawaii State Legislature changed the allocation of tourism funds by taking away each county's share of the State TAT, but allowing the counties to create a corresponding local tax on transient accommodations of up to 3%. Each of Hawaii's four counties has now enacted this local TAT, which is in addition to the 10.25% State TAT. The revenue from the new county levy is expected to exceed the old State allocation to the counties. Honolulu county plans to allocate 58% of the TAT revenue to the General Fund, 33% to rail, and about 8% to the Natural Resources Fund.

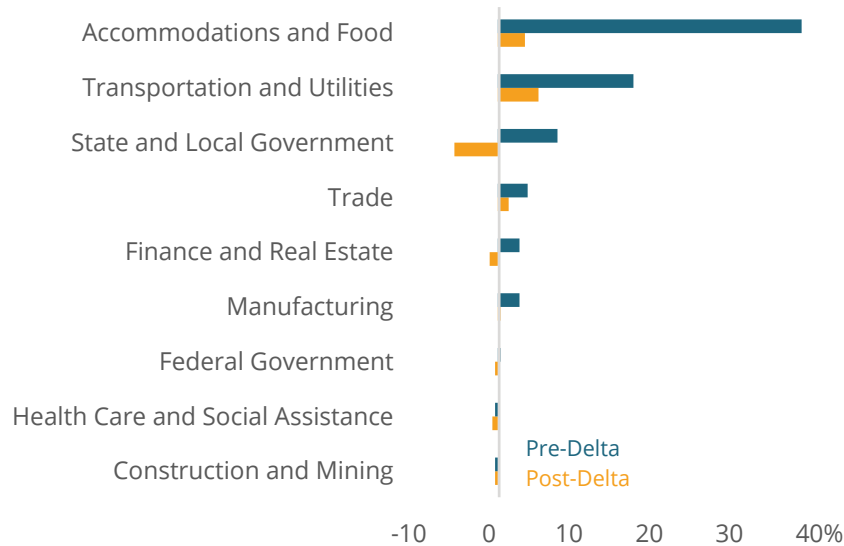
The rapid decline in COVID-19 case counts and hospitalizations in recent weeks will drive a renewed pickup in domestic tourism over the next month or so. As the virus is brought under control abroad, the Japanese and other key international markets will also begin to make strides, gradually contributing the remaining missing piece of the visitor industry recovery. As in other industries, ongoing labor shortages and rising costs will weigh on the hospitality industry.

Hawaii's job recovery resumes after a summer pause

While the labor market recovered steadily during the first half of 2021, back-to-back COVID-19 waves in the Islands stunted growth in payrolls in the second half of the year. Prior to the Delta wave, Hawaii was outpacing job growth at the national level. This partially reflects the larger drop that tourism-related sectors saw during the depths of the pandemic and the rebound that followed. Total nonfarm jobs saw a 1% month-to-month increase on average in the first half of 2021. However, the Delta wave led to a dip in payrolls in August and a flat path through the remainder of the year. This stands in contrast to developments at the national level, where the job base continued to increase at a steady rate of about 0.4% month-to-month. By December 2021, the US had recovered nearly 86% of jobs lost during the pandemic, while Hawaii had recovered just 57% of lost jobs.

Prior to the Delta and Omicron waves, recovery was especially strong in industries that had been hit hardest by the pandemic. During the first seven months of 2021—prior to the Delta wave—the accommodations and food

**JOB GROWTH, JANUARY-
JULY 2021 (PRE-DELTA)
AND AUGUST-DECEMBER
2021 (POST-DELTA)**
Industry jobs gains
slowed or reversed
with the onset
of the Delta wave.

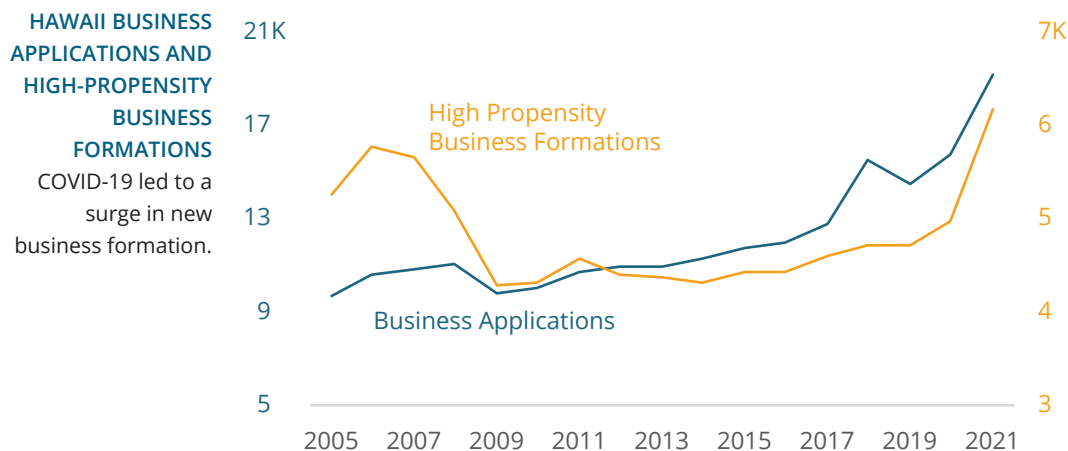


sector saw nearly a 40% increase in jobs, and transportation and utilities payrolls climbed by 17%. Payrolls in industries that had seen more modest job losses during the pandemic increased by 3-7% over the same time period. However, job recovery slowed or halted in most industries with the arrival of the Delta wave in late July. For the August-December period, the accommodations and food industry and the transportation and utilities sector saw just 3% and 5% growth in payrolls, respectively. Some industries saw small net job losses, including finance and real estate, construction, and health care. The slowing of job recovery left the accommodations and food sector still 16% below pre-pandemic employment levels at year end. Other industries heavily impacted by the pandemic, such as manufacturing, trade, and transportation and utilities, are now roughly 10-15% below pre-COVID-19 levels. Employment in the Federal Government and the construction and mining industries, relatively unaffected by the pandemic, have continued at or near their pre-pandemic levels.

COVID-19 prompted a surge in new business formation

Following the onset of the 2008 recession, there was a dearth of new business formation in the US for several years. In contrast, the COVID-19 downturn saw a boom in business startups. In 2020 Hawaii's *high propensity* businesses (that is, new businesses deemed likely to hire employees if and when they become operational) saw the largest increase since the mid-2000s. There was an even larger increase in startups in 2021, bringing both high propensity business formation and total business applications to their highest levels on record. Increasing entrepreneurship is not unique to Hawaii, but rather follows developments at the national level. In 2020, the US as a whole saw 70,000 more new business applications than in 2019, the largest increase on record, and there were nearly 85,000 more applications in 2021 than in 2020. In Hawaii, *Mana Up*, a local accelerator, received 130 applications in 2021, and a third were for new companies.

There are several possible explanations for the increase in startups during the pandemic. COVID-19 caused some newly-unemployed persons to turn to independent business activity to make ends meet. Others were opportunists, who used available time and federal support to start their own small businesses. Technology such as online platforms and social media has made it easier for entrepreneurs to start a business by reducing startup costs and creating a range of new online business opportunities.



Omicron has caused record worker absences

Across the United States, the Omicron surge has led to record-high absenteeism. The CDC recommends that all people receiving positive tests should isolate for five days, even if asymptomatic, and wear a mask for an additional five. The CDC makes similar recommendations for *exposure* to COVID-19 for unvaccinated people and those who are more than six months out from their second mRNA vaccine shot and have not yet received a booster shot. Even with the reduced isolation period, the massive increase in case numbers during the Omicron wave means that hundreds of thousands of workers have had to isolate themselves each week.

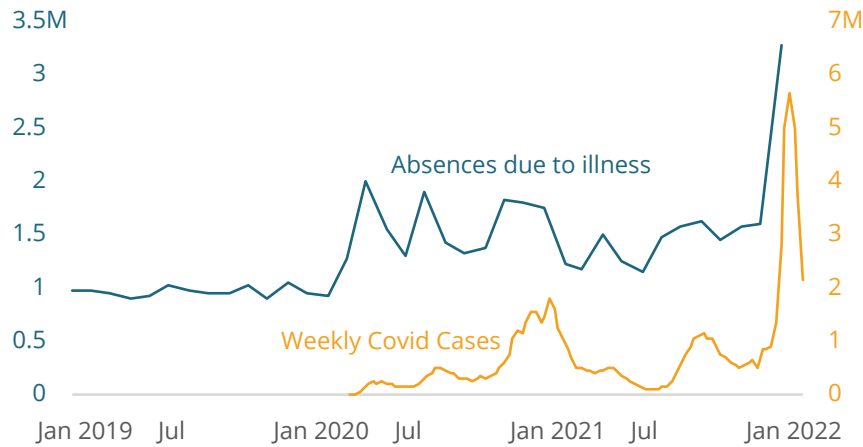
The large number of people who have needed to isolate themselves has led to a significant reduction in total reported hours at work and a huge spike in worker absences. The US Bureau of Labor Statistics reported that a record 7.6 million full-time workers nationwide were absent from work during the survey week of January 9 to 15; 3.6 million were absent for illness and 72 thousand absent for childcare issues. This survey evidence is consistent with the widespread reports of businesses strained due to worker absenteeism from COVID-19.

In previous surges, restrictions on workplaces and/or their customers often reduced a business's output below their capacity, so that worker absences may have had less adverse impact. But the increased transmissibility of the Omicron variant has led to such high worker absenteeism that it will be an important drag on measured US economic activity during the first quarter of the year.

Here in Hawaii, there are also widespread reports of worker absences. The Hawaii Department of Education noted that 800 teachers were calling in sick daily when schools returned in January. Including other absences, about 12% of the state's teachers were absent each day during the week that schools reopened after the New Year. A week later, Hawaii public school teacher absences hit 2,159 or 17% of teachers, and the DoE reported being short 472 substitute teachers. Some campuses went temporarily to distance learning. Together with infections among their children, school closures affected the ability to work for many parents.

Despite the recent decline in case numbers, COVID-19 symptoms may persist for some people. While many with *Long COVID* will return to work despite lingering symptoms, they may not be as productive as before their illness. Some will be absent from work for significantly longer, and others will have

**NATIONAL ABSENCES
FROM WORK AND
NEW COVID-19 CASES**
The Omicron wave has
caused an exceptional
spike in worker absences.



reduced their hours. Based on findings from a number of studies, in January the Brookings Institution estimated that reduced work due to *Long COVID* could account for about 15% of the nation's 10.6 million unfilled jobs.

Home prices have reached record levels

Hawaii home prices surged last year, mirroring a similar trend on the mainland. Oahu single-family home prices rose by 20%, comparable to a 17% rise for the US overall. As elsewhere, a low supply of homes on the market explains part of this rise, with attractive interest rates, recovering employment, and buoyant income supporting the demand side. International buyers, who always play a relatively limited role in the local housing market—they represented just 540 home purchases in 2019—have been largely absent during the pandemic. As travel restrictions recede, international home buyers will return, particularly from Japan and Canada, further supporting housing demand.

However, prospects for further home price appreciation have cooled as mortgage interest rates have begun to rise. Nationally, the average interest rate on a conventional 30-year fixed rate mortgage has risen from a low of 2.7% at the beginning of last year to 3.9% recently. Rates will rise further over the next two years as the Federal Reserve lifts its policy interest rate and removes its extraordinary support for mortgage-backed securities. Rising mortgage interest rates and high prevailing home prices will restrain local demand over the next few years. Meanwhile, new homes remain in short supply. Home builders report a steady pace of well-qualified buyers for the limited supply of new housing.

Housing affordability, which had improved over the past several years as mortgage rates fell and incomes rose, will deteriorate in coming years. The combination of high home prices and rising interest rates will drive a wedge between the median price of homes on the market and the mortgages local residents can afford.

State and county governments in Hawaii continue to propose initiatives to help meet the shortage of housing and the affordability squeeze. Central to the current State Legislative agenda is a proposed \$600 million investment to support the Native Hawaiian homesteading programs through the Department of Hawaiian Homelands. This would mark a massive investment in the program, more than seven times larger than the total funding devoted to the department last year. Two bills introduced in the State Legislature propose large-scale housing construction at the Aloha Stadium site. As we



noted above, the City and County of Honolulu is looking at tighter regulation of vacation rentals, with the goal of returning illegal vacation rentals back to the long-term rental market.

There has been renewed focus on affordable housing units. Maui County initiated an affordable housing goal of 5,000 rental and sale units over the next five years, with 36 “priority projects” already drafted that would account for over 4,000 units. (But see the discussion in the UHERO blog, [The Maui County Comprehensive Affordable Housing Plan: Understanding its Pros and Cons and Ideas for How to Improve it.](#)) Other affordable housing initiatives in the works include senior living home projects in Liliha, and at Pahoa on the Big Island. Still, the task of providing affordable housing for Hawaii residents is vast, and affordability challenges will continue to be a problem.

Federal spending will extend construction expansion

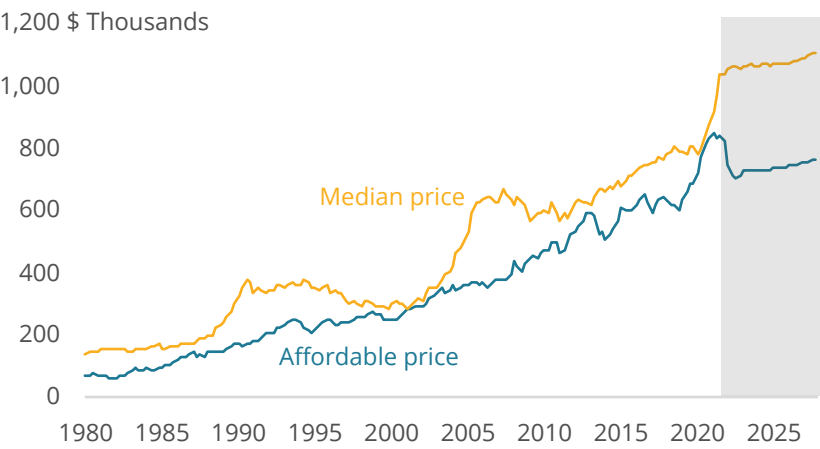
A substantial flow of new government contracts will support construction of new infrastructure in Hawaii. In November, the Navy awarded initial contracts to companies who will compete for a massive \$8 billion of infrastructure construction projects, though not all is destined for Hawaii. Pearl Harbor and other local military installations will receive 40% of the contract funds, to be spent between now and 2029. The Navy contract dwarfs other recent public investments and made 2021 a record year by value for new government contracts awarded.

The Infrastructure Investment and Jobs Act, signed off in November, provides Hawaii with \$2.8 billion of the \$1.2 trillion in federal funding dedicated to infrastructure projects, including at least \$1.5 billion for roads and bridges. Civilian infrastructure improvements have also continued at a strong pace. Infrastructure projects set for 2022 include water system upgrades across the Islands such as a \$267 million Honolulu Wastewater Treatment Plant, a \$25 million water system improvement package on Molokai, a \$22 million water treatment system in Kahului, and a \$20 million storage reservoir for the County of Hawaii. In an effort to facilitate Hawaii’s transfer to renewable energy, a \$219 million energy storage facility was approved for Kapolei.

In addition to the effects on current residents, the Red Hill water crisis could threaten more widespread water contamination that could disrupt the planning and permitting of future developments. With the closure of three

HONOLULU HOME PRICES AND WHAT CAN BE AFFORDED BY A MEDIAN-INCOME HOUSEHOLD

The home price surge and rising interest rates will worsen housing affordability challenges.



Board of Water supply wells to guard against potential contamination from the Red Hill leak, the Chief Engineer of the Honolulu Board of Water Supply has stated that they are considering a moratorium on new water hookups. Ideally, notice of such a moratorium would come sooner rather than later, because builders are planning and breaking ground now on homes set for completion later this summer. A significant delay or denial of new water permit issuance could slow the rate of new housing completion and raise the overall cost of the Red Hill crisis.

The total private residential units authorized in the fourth quarter of 2021 continued to be higher than the same quarters in 2018 and 2019. The annual total value of construction authorizations skyrocketed to nearly \$14 billion in 2021, more than double the 2020 level. In part, this is due to the massive \$8 billion Navy contract, with no adjustment for the 40% share allocated to Hawaii projects. Even with this adjustment, 2021 would still be well ahead of 2020. The number of construction jobs held steady in 2021, hovering around 37 thousand jobs. But the flood of new construction projects and new government awards may generate enough increased demand for workers to place increased upward pressure on wages, subcontractor bids, and overall construction costs.

THE HAWAII OUTLOOK

As in each previous COVID-19 wave, the Omicron surge temporarily stalled Hawaii's recovery. This time the effect was short-lived, and high-frequency indicators of Hawaii economic activity began edging upward soon after Omicron had peaked in the Islands. The *UHERO Pulse*, a composite of a number of near-term indicators, has moved up from its low point at the start of the year. Following a January dip in arrivals, the tourism industry has seen a recent uptick in travel bookings, and further easing of restrictions in major international markets is expected in coming months. The easing of COVID-related restrictions—and of public concern about infection risk—will also support strengthening of local economic activity. Job counts, which have just begun to turn up after a flat second half of last year, will expand further as this year progresses.

As COVID-19 begins to enter an endemic phase, the path is clearer for continued recovery in Hawaii. At the same time, there remain significant risks to the outlook, among them potential economic fallout from the Russian invasion of Ukraine. We will return to a discussion of risks below.

Conditions are favorable for a more complete tourism recovery

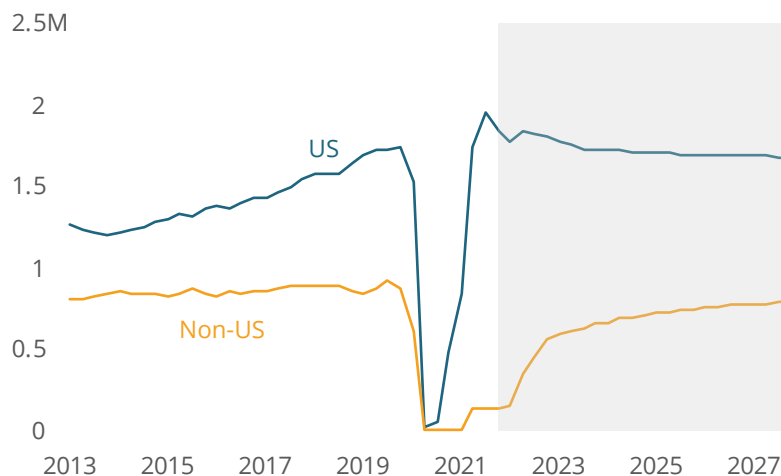
As we noted above, visitor numbers took a tumble with the late summer onset of the Delta wave. They rebounded heading into the holiday season, before falling off somewhat at the start of the year. Despite these ups and downs, the US market has proved surprisingly resilient throughout the pandemic period, while international markets have all but disappeared. Canadian travel began to mount a recovery in the second half of last year, while visitors from Japan and many other overseas markets have yet to turn up.

Based on the balance of expert opinion, we anticipate that after the end of the Omicron wave, COVID-19 will begin to enter an endemic stage. Vaccination progress and significant rates of prior exposure will reduce the likelihood of widespread infection waves, even if periodic surges occur in limited areas and there continues to be a need for booster shots and intermittent protective measures. To be sure, much remains unknown about the future course of the virus, but the scale of risks in developed countries will be much lower than in the past. The relatively low rate of vaccination in

**WEEKLY UHERO
ECONOMIC PULSE
(INDEX, WEEK OF MARCH
7, 2020 = 100)**
UHERO's high-frequency
indicators show the Delta
and Omicron setbacks.



**UHERO FORECAST
FOR QUARTERLY
VISITOR ARRIVALS**
International markets
are expected to
finally stage a
significant recovery.



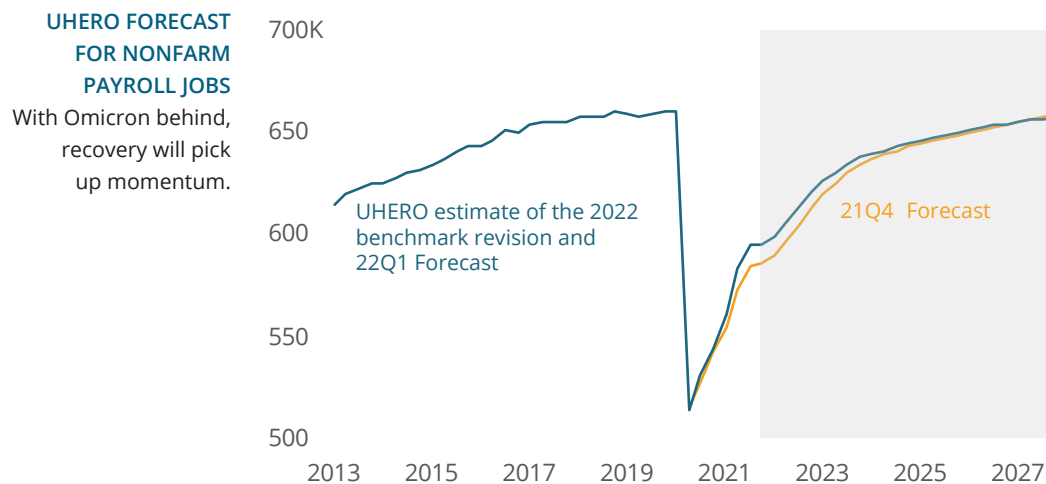
the US is a concern, and the pandemic will still take a year or more to play out in the developing world.

The passing of COVID-19 into the endemic stage will clear the way for the long-awaited return of international visitors. US visitors will continue to come in healthy numbers, and Canadian travel, which recouped 45% of its pandemic losses by last fall, will return to more normal levels. Most importantly, Japan and other Asian countries will remove or substantially relax restrictions on returning residents, so that these markets can begin to return in substantial numbers. After a weak first quarter, Japanese visitors will begin to return in the spring and will recoup half of pandemic era losses by the end of the year. Visitors from other international markets will rise strongly in the second quarter, recovering to three-quarters of their pre-pandemic level by the fourth quarter of this year. More gradual visitor recovery will continue thereafter, as economies strengthen and COVID-19 concerns retreat.

After a weak start to the year, total visitor arrivals will surpass last summer's peak by the second quarter and reach 90% of their pre-pandemic level by the year's end. Visitors will number more than 8.7 million for the year as a whole, rising to 9.5 million in 2023. Oahu will continue to lag in overall numbers compared with the Neighbor Islands until international markets approach full recovery. Real visitor spending in 2022 will be a third higher than last year, aided by the return of higher-spending international visitors. In the medium term, the loss of some tourism infrastructure due to small-business failures and barriers to the reentry of transient vacation rentals will delay a full recovery of the visitor census.

Employment will pick up, but income takes a hit

Overall economic activity was also set back by the two COVID-19 waves in the second half of last year. The labor market drifted sideways, with the number of jobs and the labor force essentially unchanged through year end. With Omicron winding down, prospects are for a significant gain of recovery momentum in coming months. Just as the loosening of travel restrictions will boost tourism, locally the extension of vaccinations and acquired immunity will reduce COVID-19 concerns and permit a return to more normal patterns of work, shopping, and recreation. The decline in the number of infections will reduce absences from work and also the need for dependent care. Those who lost or quit jobs during the pandemic but held off returning to work because of virus concerns will be more comfortable rejoining the labor force,



and the end of pandemic-era fiscal support will provide a further impetus to return to work.

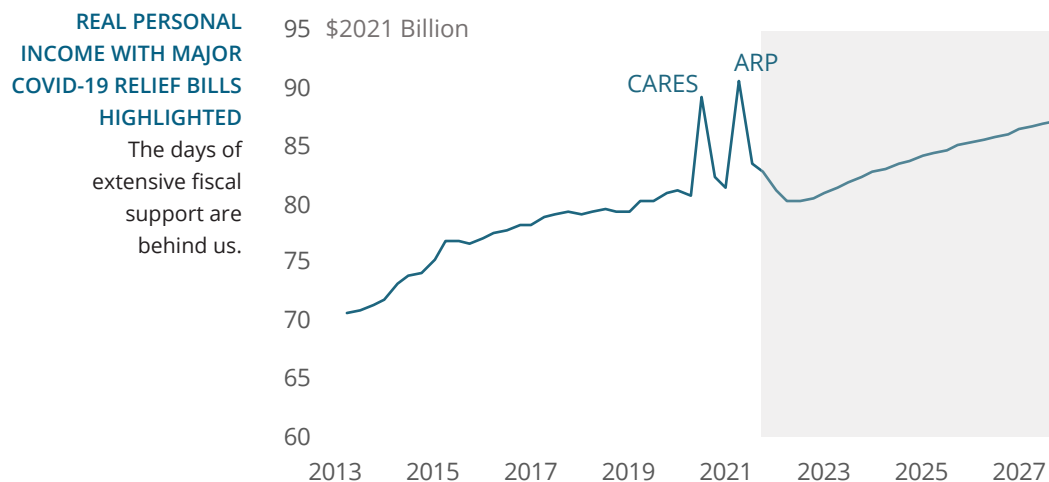
The state's payroll base will see a strengthening of gains as the year progresses and expand by 4.5% for the year overall, nearly a percentage point faster than last year. Growth will continue at a healthy 3.7% in 2023. By then, job growth will have absorbed most of the slack in the labor market, driving the unemployment rate down to 3.3%. But not all labor supply losses will be reversed in the near term. Some retirees may return to the workforce, but many will not. And with the state's population continuing to fall, the labor force and number of filled jobs will remain below the pre-pandemic level throughout the forecast period.

Income growth in Hawaii was supported by extensive fiscal stimulus during much of the pandemic period. Most of that support is now gone, although the State and counties will continue to spend American Rescue Plan Act funds over the next several years. In any case, the withdrawal of the extraordinary federal income support will mean a sharp retreat in personal income this year. Real personal income will drop 4.7% this year, essentially back to its level in 2019. Gains in employment and a tight labor market will support the beginning of income recovery as the year progresses.

The pace of employment and income gains will slow as the economy converges onto its long-run growth path by mid-decade. The nonfarm payroll job base will average 1.1% growth from 2023 to 2026, by which time it will have nearly regained its pre-pandemic level. Production, as measured by real gross domestic product, will recover faster than employment due to rising visitor spending and productivity gains from the labor-saving changes that many companies have made during the pandemic. GDP will surpass its pre-COVID-19 peak by the first half of 2024.

Needless to say...

In many ways the path ahead appears clearer than it has in a long time. COVID-19 is receding as a forecast risk, in part because the disease appears set to become a manageable endemic risk, rather than a debilitating pandemic. Economic impacts from limited flare ups are also lower, because people are now less likely to interrupt normal activities because of the virus, and because the political will to reimpose restrictions has clearly ended. Hawaii's recovery has resumed, and we are cautiously optimistic that this will lead us back toward a sustainable long-run path over the next few years.



If our overall view is guardedly optimistic, it is also clear that risks to the outlook remain larger than normal. And these are clearly focused to the downside:

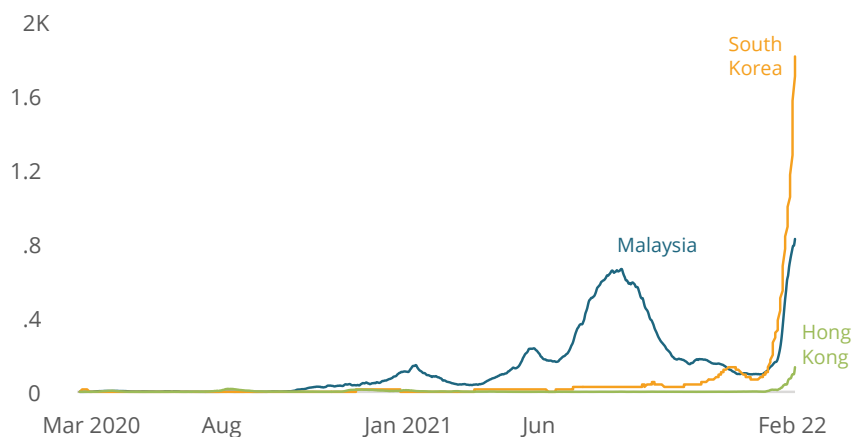
At the time we are completing this report, Russia has begun a full-scale invasion of Ukraine. The US and a number of other countries have imposed a wide range of sanctions in response. How this will play out remains to be seen. The biggest risk from the crisis is a potential surge in oil, gas, and possibly other commodity prices. If Russia were to cut off gas supplies to Western Europe this would deliver a substantial blow to the region's economies. The hit to consumer and business confidence globally could further aggravate the economic impact. For Hawaii, higher energy costs would impact fares and local inflation, while weaker global economies could also impact tourism. While these events appear unlikely to derail Hawaii's recovery, we will of course be tracking them closely in coming weeks.

Despite Omicron's rapid retreat, COVID-19 still has the potential to be disruptive. Of most concern at present is the recent surge in the pandemic in parts of East Asia. Hong Kong, which held the virus at bay through tough restrictions, is now seeing an unprecedented surge in cases that has overwhelmed hospitals. Malaysia and South Korea have recently set records as well. While Japan appears to have turned the corner, Asian countries have been more willing than many Western ones to reimpose restrictions in response to pandemic surges, which could delay a recovery of travel from the region. The emergence of the BA.2 variant is also of concern, since early evidence is that it is more contagious than Omicron and its relative severity is unknown. While we believe that the risk of severe impacts from future COVID-19 developments are manageable, if the virus has taught us anything, it is that it is full of surprises.

In some ways, the coming shift of Federal Reserve policy toward monetary tightening may pose the greatest risk to the US and Hawaii economies. Higher-than-expected inflation has prompted the shift away from policies supportive of growth to the higher rates and tighter credit that will slow the economy and reduce price pressures. But history tells us that the Fed can easily get this wrong, tightening too much and precipitating a recession. This time is particularly fraught, since the spike in inflation may still turn out to be transitory, so that Fed tightening ends up too aggressive after the fact.

**NEW CONFIRMED
COVID-19 CASES PER
MILLION PEOPLE**

The recent spike in
COVID-19 in Asia is
a risk for Hawaii.



None of these risks is readily quantifiable, and none appears large enough at present to alter our generally upbeat outlook for Hawaii's economy. We are now sitting at a point where considerable recovery progress has been made and a return to further upward movement has begun. Given the short Omicron waves seen elsewhere, it is odds on that the missing Asian visitor markets will begin to return in significant numbers by the second quarter of the year. Labor markets are strong, even if that is causing a headache for some businesses, and construction is set to benefit from federally-funded civilian and military contracts. Despite the risks, these factors argue for optimism about Hawaii's growth path.

TABLE 1: MAJOR ECONOMIC INDICATORS
STATE OF HAWAII BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Nonfarm Payrolls (Thou)	658.7	561.9	583.0	609.4	631.7	641.8
% Change	0.1	-14.7	3.7	4.5	3.7	1.6
Unemployment Rate (%)	2.5	11.8	7.2	5.1	3.3	2.7
Population (Thou)	1,459.5	1,455.3	1,441.6	1,437.2	1,436.0	1,436.7
% Change	-0.1	-0.3	-0.9	-0.3	-0.1	0.1
Personal Income (Mil\$)	78,515.0	82,528.2	86,852.6	87,286.7	91,948.3	95,239.0
% Change	3.1	5.1	5.2	0.5	5.3	3.6
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2021\$)	82,839.8	85,727.2	86,800.6	82,719.6	84,380.6	85,948.3
% Change	1.4	3.5	1.3	-4.7	2.0	1.9
Real Per Capita Income (Thou 2021\$)	56.8	58.9	60.2	57.6	58.8	59.8
% Change	1.6	3.8	2.2	-4.4	2.1	1.8
Real GDP (Mil 2021\$)	96,834.9	86,108.9	89,541.9	92,953.6	95,998.8	97,705.8
% Change	0.0	-11.1	4.0	3.8	3.3	1.8
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	10,385.8	2,708.3	6,777.1	8,746.1	9,455.2	9,615.1
% Change - Total Visitor Arrivals by Air	5.0	-73.9	150.2	29.1	8.1	1.7
U.S. Visitors	6,871.3	1,987.3	6,465.4	7,246.5	6,968.7	6,858.5
% Change - U.S. Visitors	7.8	-71.1	225.3	12.1	-3.8	-1.6
Japanese Visitors	1,576.2	289.1	24.2	461.4	1,022.5	1,165.1
% Change - Japanese Visitors	5.8	-81.7	-91.6	1,804.1	121.6	13.9
Other Visitors	1,938.3	399.2	285.7	1,038.2	1,464.0	1,591.6
% Change - Other Visitors	-4.2	-79.4	-28.4	263.3	41.0	8.7
Visitor Days (Thou)	89,690.4	28,515.8	65,341.3	79,470.5	83,998.2	84,810.1
% Change	2.2	-68.2	129.1	21.6	5.7	1.0
Average Daily Room Rate (\$)	282.6	208.3	315.8	361.1	381.3	397.6
% Change	1.8	-26.3	51.6	14.3	5.6	4.3
Occupancy Rate (%)	80.8	31.7	57.1	70.4	74.1	75.3
Real Visitor Expenditures (Mil 2021\$)	18,692.1	4,989.5	12,995.7	17,124.8	19,029.8	18,662.5
% Change	-0.4	-73.3	160.5	31.8	11.1	-1.9

Note: Source is UHERO. Nonfarm Payrolls for 2020-2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2024 are forecasts.

TABLE 2: JOBS BY INDUSTRY
STATE OF HAWAII BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Nonfarm Payrolls (Thou)	658.7	561.9	583.0	609.4	631.7	641.8
% Change	0.1	-14.7	3.7	4.5	3.7	1.6
Construction and Mining	37.3	36.4	36.8	37.2	38.5	39.5
% Change	0.2	-2.4	1.1	1.1	3.4	2.6
Manufacturing	14.0	12.0	11.8	12.3	12.7	13.0
% Change	-2.8	-14.8	-1.5	4.2	3.6	2.3
Trade	89.7	77.8	79.1	81.3	83.5	84.6
% Change	-1.1	-13.2	1.6	2.9	2.7	1.3
Transportation and Utilities	35.5	27.2	29.2	32.3	33.2	33.5
% Change	5.5	-23.4	7.3	10.6	2.8	0.8
Finance, Insurance and Real Estate	30.0	27.4	27.1	27.5	28.5	29.0
% Change	1.3	-8.8	-0.9	1.7	3.5	1.7
Services	325.9	260.1	278.4	297.1	311.9	318.0
% Change	-0.2	-20.2	7.1	6.7	5.0	2.0
Health Care and Soc. Assistance	73.1	70.6	71.4	71.6	73.2	74.4
% Change	0.7	-3.4	1.2	0.2	2.3	1.6
Accommodation and Food	113.0	69.9	85.0	98.3	105.2	107.6
% Change	-0.3	-38.1	21.6	15.6	7.0	2.3
Other	139.8	119.6	122.0	127.3	133.5	136.1
% Change	-0.6	-14.5	2.0	4.4	4.9	1.9
Government	126.3	121.1	120.6	121.7	123.4	124.2
% Change	0.5	-4.1	-0.4	0.9	1.4	0.7
Federal Government	34.4	35.2	34.8	34.7	34.7	34.7
% Change	1.7	2.4	-1.0	-0.3	0.0	-0.2
State and Local Government	91.9	86.0	85.8	86.9	88.7	89.6
% Change	0.0	-6.5	-0.2	1.4	2.0	1.0

Note: Source is UHERO. Industry job counts for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2024 are forecasts.

TABLE 3: PERSONAL INCOME BY INDUSTRY
STATE OF HAWAII BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Real Personal Income (Mil 2021\$)	82,839.8	85,727.2	86,800.6	82,719.6	84,380.6	85,948.3
% Change	1.4	3.5	1.3	-4.7	2.0	1.9
Labor & Proprietors' Income	60,197.3	56,387.3	57,679.4	59,065.5	60,756.9	62,034.4
% Change	1.4	-6.3	2.3	2.4	2.9	2.1
Construction	4,886.6	4,984.5	4,935.0	4,991.3	5,142.7	5,270.0
% Change	3.9	2.0	-1.0	1.1	3.0	2.5
Manufacturing	1,068.6	995.7	980.1	1,000.7	1,013.6	1,037.1
% Change	-0.5	-6.8	-1.6	2.1	1.3	2.3
Trade	5,058.8	4,715.1	4,927.9	4,952.0	5,021.4	5,070.9
% Change	-0.4	-6.8	4.5	0.5	1.4	1.0
Transportation and Utilities	3,443.1	2,973.3	3,103.2	3,349.7	3,505.4	3,590.2
% Change	4.8	-13.6	4.4	7.9	4.6	2.4
Finance, Insurance & Real Estate	4,106.9	4,171.6	4,235.2	4,097.5	4,157.7	4,266.5
% Change	9.9	1.6	1.5	-3.3	1.5	2.6
Services	24,651.5	21,324.1	22,561.1	23,802.3	24,795.7	25,373.7
% Change	0.6	-13.5	5.8	5.5	4.2	2.3
Health Care & Soc. Assist. (% ch.)	3.0	4.2	1.3	-0.3	2.7	2.3
Accommodation & Food (% ch.)	4.9	-44.1	25.2	21.4	6.4	3.0
Other (% ch.)	-2.8	-6.3	2.2	2.6	4.0	2.1
Government	16,676.1	16,853.2	16,592.8	16,531.8	16,774.2	17,076.2
% Change	0.0	1.1	-1.5	-0.4	1.5	1.8
Federal, civilian (% ch.)	2.6	2.1	-2.8	0.3	1.0	0.6
State & Local (% ch.)	0.9	0.0	-0.9	-1.0	2.1	2.8
Less Social Security Taxes (-)	6,929.9	6,531.5	6,720.8	6,882.0	7,071.9	7,215.8
% Change	3.0	-5.7	2.9	2.4	2.8	2.0
Transfer Payments	13,387.9	20,109.0	20,570.5	15,395.7	15,449.7	15,697.0
% Change	2.6	50.2	2.3	-25.2	0.4	1.6
Dividends, Interest and Rent	16,184.6	15,762.5	15,271.0	15,140.4	15,246.1	15,433.2
% Change	1.3	-2.6	-3.1	-0.9	0.7	1.2
Population (Thou)	1,459.5	1,455.3	1,441.6	1,437.2	1,436.0	1,436.7
% Change	-0.1	-0.3	-0.9	-0.3	-0.1	0.1
Real Per Capita Income (Thou 2021\$)	56.8	58.9	60.2	57.6	58.8	59.8
% Change	1.6	3.8	2.2	-4.4	2.1	1.8
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Nominal Personal Income (Mil. \$)	78,515.0	82,528.2	86,852.6	87,286.7	91,948.3	95,239.0
% Change	3.1	5.1	5.2	0.5	5.3	3.6

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts.

TABLE 4: CONSTRUCTION INDICATORS
STATE OF HAWAII BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
BUILDING PERMITS (Mil 2021\$)						
Total Commitments to Build	4,100	6,492	6,058	6,222	6,717	6,672
% Change	-29.0	58.3	-6.7	2.7	8.0	-0.7
Real Private Building Permits	3,462	3,261	3,747	3,653	3,992	3,953
% Change	-4.4	-5.8	14.9	-2.5	9.3	-1.0
Real Residential Building Permits	1,302	1,201	1,995	1,686	1,705	1,567
% Change	-15.8	-7.8	66.1	-15.5	1.1	-8.1
Real Non-Residential Building Permits	2,160	2,060	1,752	1,968	2,287	2,386
% Change	4.1	-4.6	-14.9	12.3	16.2	4.4
Real Government Contracts Awarded	638	3,232	2,311	2,569	2,725	2,719
% Change	-70.4	406.4	-28.5	11.2	6.1	-0.2
CONSTRUCTION ACTIVITY						
Real GE Contracting Tax Base (Mil 2021\$)	10,327	10,235	10,213	11,015	11,485	11,708
% Change	-1.4	-0.9	-0.2	7.9	4.3	1.9
Nominal GE Contracting Tax Base (Mil \$)	9,609	9,757	10,213	11,840	13,076	13,912
% Change	1.6	1.5	4.7	15.9	10.4	6.4
Construction Job Count (Thou)	37.3	36.4	36.8	37.2	38.5	39.5
% Change	0.2	-2.4	1.1	1.1	3.4	2.6
Real Construction Income (Mil 2021\$)	4,887	4,985	4,935	4,991	5,143	5,270
% Change	3.9	2.0	-1.0	1.1	3.0	2.5
PRICES & COSTS (HONOLULU)						
Honolulu Median Home Price (Thou \$)	790.4	822.4	988.0	1056.3	1062.2	1064.6
% Change	0.2	4.1	20.1	6.9	0.6	0.2
Honolulu Median Condominium Price (Thou \$)	427.6	433.1	470.9	507.9	513.2	516.1
% Change	1.1	1.3	8.7	7.9	1.1	0.5
Honolulu Housing Affordability Index	85.0	94.9	84.2	67.8	68.5	68.3
% Change	7.7	11.6	-11.2	-19.5	1.1	-0.3
Honolulu Construction Cost Index (2021=100)	93.1	95.3	100.0	107.5	113.9	118.8
% Change	3.1	2.5	4.9	7.5	5.9	4.4
30-Year Mortgage Rate (%)	3.9	3.1	3.0	4.0	4.3	4.5

Note: Source is UHERO. Construction job counts for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2024 are forecasts. Commitments to Build are the sum of private permits and public contracts awarded. Permits and tax base are deflated by Honolulu Construction Cost Index. Income is deflated by Honolulu CPI. Housing affordability index is the ratio of median family income to qualifying income for a loan for the median-priced home (times 100).

TABLE 5: MAJOR ECONOMIC INDICATOR SUMMARY
HONOLULU COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	473.8	413.1	422.6	439.8	456.3	463.0
% Change	0.1	-12.8	2.3	4.1	3.7	1.5
Unemployment Rate (%)	2.3	10.3	7.1	4.8	2.9	2.4
Population (Thou)	1,003.7	996.9	986.9	981.6	979.6	979.0
% Change	-0.4	-0.7	-1.0	-0.5	-0.2	-0.1
Personal Income (Mil \$)	57,756.1	60,521.9	63,470.7	63,933.1	67,371.3	69,777.5
% Change	2.4	4.8	4.9	0.7	5.4	3.6
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2020 \$)	58,663.5	60,521.9	61,065.6	58,327.1	59,519.3	60,620.8
% Change	0.8	3.2	0.9	-4.5	2.0	1.9
Real Per Capita Income (Thou 2020 \$)	58.1	60.9	61.9	59.4	60.8	61.9
% Change	2.1	4.8	1.7	-4.0	2.3	1.9
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	6,153.9	1,506.2	3,330.9	4,709.0	5,533.2	5,668.2
% Change - Total Visitor Arrivals by Air	5.0	-75.5	121.1	41.4	17.5	2.4
U.S. Visitors	3,326.5	967.4	3,139.1	3,580.5	3,436.9	3,361.2
% Change - U.S. Visitors	9.3	-70.9	224.5	14.1	-4.0	-2.2
Japanese Visitors	1,492.8	269.4	23.1	439.3	997.3	1,116.2
% Change - Japanese Visitors	6.7	-82.0	-91.4	1,799.4	127.0	11.9
Other Visitors	1,334.6	269.5	168.7	689.2	1,099.0	1,190.9
% Change - Other Visitors	-6.0	-79.8	-37.4	308.6	59.5	8.4
Visitor Days (Thou)	41,827.3	12,829.5	26,980.7	34,587.8	38,419.1	38,854.8
% Change	3.3	-69.3	110.3	28.2	11.1	1.1
Occupancy Rate (%)	84.0	32.8	54.9	70.5	77.1	78.3

Note: Source is UHERO. Nonfarm Payrolls for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2024 are forecasts.

TABLE 6: JOBS BY DETAILED SECTOR (THOUSANDS)
HONOLULU COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	473.8	413.1	422.6	439.8	456.3	463.0
% Change	0.1	-12.8	2.3	4.1	3.7	1.5
Construction and Mining	27.0	26.5	26.9	27.1	28.0	28.8
% Change	-0.1	-1.7	1.2	0.9	3.4	2.6
Manufacturing	11.0	9.3	9.0	9.4	9.8	10.0
% Change	-4.6	-14.8	-3.5	4.6	4.0	2.5
Trade	62.0	53.6	54.1	55.8	57.5	58.3
% Change	-1.6	-13.6	0.9	3.2	2.9	1.5
Transportation and Utilities	25.8	20.3	21.5	23.9	24.5	24.7
% Change	7.1	-21.5	6.2	11.0	2.5	0.6
Finance, Insurance and Real Estate	23.0	21.7	21.3	21.4	22.0	22.3
% Change	1.3	-5.7	-1.8	0.5	2.8	1.5
Services	227.9	188.6	196.9	208.3	219.1	222.9
% Change	-0.1	-17.3	4.4	5.8	5.2	1.7
Health Care and Soc. Assistance	54.1	52.4	53.2	53.2	54.4	55.3
% Change	0.1	-3.1	1.4	0.0	2.3	1.6
Accommodation and Food	67.4	43.3	50.1	57.7	62.3	63.4
% Change	-0.4	-35.7	15.6	15.3	7.9	1.8
Other	106.4	92.8	93.7	97.4	102.4	104.2
% Change	0.0	-12.8	0.9	4.0	5.1	1.7
Government	97.0	93.2	92.9	93.9	95.4	96.1
% Change	0.1	-4.0	-0.3	1.0	1.6	0.7
Federal Government	31.6	32.4	32.2	32.2	32.1	32.1
% Change	1.6	2.5	-0.6	-0.1	-0.1	-0.3
State and Local Government	65.4	60.8	60.6	61.7	63.3	64.0
% Change	-0.7	-7.1	-0.2	1.7	2.6	1.1

Note: Source is UHERO. Industry job counts for 2020 and 2021 are UHERO estimates of 2022 the benchmark revision. Figures for 2022-2024 are forecasts.

TABLE 7: PERSONAL INCOME BY DETAILED SECTOR
HONOLULU COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Real Personal Income (Mil 2020 \$)	58,663.5	60,521.9	61,065.6	58,327.1	59,519.3	60,620.8
% Change	0.8	3.2	0.9	-4.5	2.0	1.9
Labor & Proprietors' Income	43,898.1	41,757.2	42,301.0	43,137.9	44,390.6	45,293.0
% Change	0.6	-4.9	1.3	2.0	2.9	2.0
Construction	3,468.0	3,566.8	3,535.3	3,567.5	3,677.0	3,767.7
% Change	4.4	2.8	-0.9	0.9	3.1	2.5
Manufacturing	829.7	771.2	745.6	764.6	774.8	794.2
% Change	-1.8	-7.0	-3.3	2.5	1.3	2.5
Trade	3,420.3	3,196.4	3,309.3	3,327.8	3,379.1	3,410.5
% Change	-2.1	-6.5	3.5	0.6	1.5	0.9
Transportation and Utilities	2,581.0	2,260.9	2,355.2	2,558.0	2,669.0	2,730.5
% Change	5.8	-12.4	4.2	8.6	4.3	2.3
Finance, Insurance & Real Estate	3,126.5	3,193.3	3,235.8	3,112.4	3,158.9	3,234.7
% Change	9.3	2.1	1.3	-3.8	1.5	2.4
Services	16,908.6	15,067.3	15,620.9	16,323.5	17,046.7	17,437.1
% Change	-0.6	-10.9	3.7	4.5	4.4	2.3
Health Care & Soc. Assist. (% ch.)	2.5	3.6	1.5	-0.3	2.7	2.2
Accommodation & Food (% ch.)	4.5	-44.5	21.0	22.1	7.5	2.9
Other (% ch.)	-3.9	-5.4	1.0	2.5	4.4	2.1
Government	13,465.3	13,592.1	13,382.8	13,372.9	13,572.9	13,805.5
% Change	-0.7	0.9	-1.5	-0.1	1.5	1.7
Federal, civilian (% ch.)	2.5	2.1	-2.5	0.5	0.9	0.6
State & Local (% ch.)	-0.3	-0.6	-0.9	-0.6	2.4	2.9
Less Social Security Taxes (-)	5,031.0	4,813.6	4,876.2	4,971.3	5,114.3	5,217.7
% Change	2.1	-4.3	1.3	1.9	2.9	2.0
Transfer Payments	8,630.1	12,702.1	12,739.4	9,841.9	9,915.6	10,051.1
% Change	2.6	47.2	0.3	-22.7	0.7	1.4
Dividends, Interest and Rent	11,216.9	10,928.8	10,597.8	10,523.2	10,592.9	10,720.3
% Change	0.9	-2.6	-3.0	-0.7	0.7	1.2
Population (Thou)	1,003.7	996.9	986.9	981.6	979.6	979.0
% Change	-0.4	-0.7	-1.0	-0.5	-0.2	-0.1
Real Per Capita Income (Thou 2020 \$)	58.1	60.9	61.9	59.4	60.8	61.9
% Change	2.1	4.8	1.7	-4.0	2.3	1.9
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Nominal Personal Income (Mil \$)	57,756.1	60,521.9	63,470.7	63,933.1	67,371.3	69,777.5
% Change	2.4	4.8	4.9	0.7	5.4	3.6

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts.

TABLE 8: MAJOR ECONOMIC INDICATOR SUMMARY
HAWAII COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	70.9	61.0	64.5	66.5	68.3	69.3
% Change	-0.2	-14.0	5.8	3.2	2.6	1.5
Unemployment Rate (%)	3.1	11.5	7.7	5.5	4.1	3.4
Population (Thou)	208.4	210.3	209.8	209.8	210.2	210.9
% Change	0.3	0.9	-0.2	0.0	0.2	0.3
Personal Income (Mil \$)	8,602.4	9,410.8	10,061.8	9,956.5	10,409.5	10,762.0
% Change	3.9	9.4	6.9	-1.0	4.6	3.4
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2020 \$)	8,737.5	9,410.8	9,680.5	9,083.5	9,196.3	9,349.7
% Change	2.3	7.7	2.9	-6.2	1.2	1.7
Real Per Capita Income (Thou 2020 \$)	41.6	44.9	46.1	43.3	43.8	44.3
% Change	2.8	7.7	2.9	-6.2	1.0	1.3
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	1,763.9	493.6	1,184.1	1,552.4	1,656.4	1,692.8
% Change - Total Visitor Arrivals by Air	3.4	-72.0	139.9	31.1	6.7	2.2
U.S. Visitors	1,250.6	379.2	1,137.8	1,329.2	1,293.6	1,284.1
% Change - U.S. Visitors	5.7	-69.7	200.1	16.8	-2.7	-0.7
Japanese Visitors	170.7	35.5	1.4	51.2	108.7	125.6
% Change - Japanese Visitors	-3.3	-79.2	-96.2	3,667.6	112.1	15.6
Other Visitors	342.6	79.0	44.9	172.0	254.1	283.0
% Change - Other Visitors	-1.0	-76.9	-43.2	283.1	47.8	11.4
Visitor Days (Thou)	12,977.7	4,992.5	10,966.8	12,212.9	12,382.4	12,515.4
% Change	1.5	-61.5	119.7	11.4	1.4	1.1
Occupancy Rate (%)	77.0	34.2	60.8	69.0	68.8	69.2

Note: Source is UHERO. Nonfarm Payrolls for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2024 are forecasts.

TABLE 9: JOBS BY DETAILED SECTOR (THOUSANDS)
HAWAII COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	70.9	61.0	64.5	66.5	68.3	69.3
% Change	-0.2	-14.0	5.8	3.2	2.6	1.5
Construction and Mining	3.8	3.6	3.7	3.7	3.8	3.9
% Change	-2.4	-5.2	1.8	-0.3	2.8	2.3
Manufacturing	1.4	1.2	1.4	1.4	1.4	1.4
% Change	2.4	-9.2	10.9	0.8	2.0	1.2
Trade	11.5	10.6	10.9	11.0	11.2	11.2
% Change	0.2	-7.9	3.1	0.4	1.5	0.6
Transportation and Utilities	3.3	2.5	2.8	3.0	3.0	3.1
% Change	-1.0	-22.4	9.5	6.6	2.7	0.6
Finance, Insurance and Real Estate	2.7	2.3	2.3	2.4	2.5	2.5
% Change	1.9	-13.8	-1.6	3.8	5.3	1.8
Services	33.2	26.4	29.3	31.1	32.3	32.9
% Change	-1.6	-20.4	10.9	6.2	3.6	2.0
Health Care and Soc. Assistance	7.9	7.5	7.5	7.5	7.6	7.7
% Change	1.3	-5.3	0.6	-1.0	1.7	1.2
Accommodation and Food	12.9	8.3	10.7	12.2	12.7	13.1
% Change	-2.9	-35.9	29.3	13.8	4.9	2.4
Other	12.4	10.7	11.1	11.5	11.9	12.2
% Change	-2.1	-13.9	3.8	3.9	3.5	2.2
Government	15.0	14.2	14.1	14.0	14.1	14.3
% Change	3.0	-5.3	-0.7	-0.8	0.9	1.0
Federal Government	1.3	1.3	1.1	1.1	1.1	1.2
% Change	0.0	0.1	-13.1	-2.4	2.8	2.1
State and Local Government	13.7	12.9	13.0	12.9	13.0	13.1
% Change	3.3	-5.8	0.6	-0.6	0.7	0.9

Note: Source is UHERO. Industry job counts for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2024 are forecasts.

TABLE 10: PERSONAL INCOME BY DETAILED SECTOR
HAWAII COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Real Personal Income (Mil 2020 \$)	8,737.5	9,410.8	9,680.5	9,083.5	9,196.3	9,349.7
% Change	2.3	7.7	2.9	-6.2	1.2	1.7
Labor & Proprietors' Income	5,273.1	5,046.7	5,235.0	5,303.2	5,410.8	5,517.0
% Change	1.4	-4.3	3.7	1.3	2.0	2.0
Construction	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Trade	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Transportation and Utilities	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Finance, Insurance & Real Estate	—	284.8	—	—	—	—
% Change	—	—	—	—	—	—
Services	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Health Care & Soc. Assist. (% ch.)	—	—	—	—	—	—
Accommodation & Food (% ch.)	—	—	—	—	—	—
Other (% ch.)	—	—	—	—	—	—
Government	1,294.2	1,313.1	1,290.0	1,250.6	1,269.8	1,304.8
% Change	4.3	1.5	-1.8	-3.1	1.5	2.8
Federal, civilian (% ch.)	2.7	3.4	-13.3	-3.0	3.6	3.0
State & Local (% ch.)	4.7	1.1	0.1	-3.1	1.3	2.7
Less Social Security Taxes (-)	626.1	602.4	639.9	648.4	659.4	670.8
% Change	4.0	-3.8	6.2	1.3	1.7	1.7
Transfer Payments	2,135.1	3,046.3	3,276.2	2,332.7	2,322.8	2,371.4
% Change	1.8	42.7	7.5	-28.8	-0.4	2.1
Dividends, Interest and Rent	1,924.1	1,890.1	1,824.3	1,797.6	1,809.3	1,833.4
% Change	5.8	-1.8	-3.5	-1.5	0.7	1.3
Population (Thou)	208.4	210.3	209.8	209.8	210.2	210.9
% Change	0.3	0.9	-0.2	0.0	0.2	0.3
Real Per Capita Income (Thou 2020 \$)	41.6	44.9	46.1	43.3	43.8	44.3
% Change	2.8	7.7	2.9	-6.2	1.0	1.3
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Nominal Personal Income (Mil \$)	8,602.4	9,410.8	10,061.8	9,956.5	10,409.5	10,762.0
% Change	3.9	9.4	6.9	-1.0	4.6	3.4

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts. Because of data disclosure rules, industry-level income is not available for some sectors.

TABLE 11: MAJOR ECONOMIC INDICATOR SUMMARY
MAUI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	80.7	61.8	68.9	73.7	76.6	78.2
% Change	0.2	-23.4	11.6	6.9	3.9	2.0
Unemployment Rate (%)	2.4	18.1	10.3	5.9	4.0	3.3
Population (Thou)	173.0	173.8	172.5	172.1	172.3	172.7
% Change	0.6	0.5	-0.7	-0.2	0.1	0.2
Personal Income (Mil \$)	8,478.3	8,708.3	9,194.0	9,276.0	9,839.2	10,242.6
% Change	5.7	2.7	5.6	0.9	6.1	4.1
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2020 \$)	8,611.5	8,708.3	8,845.6	8,462.6	8,692.4	8,898.5
% Change	4.0	1.1	1.6	-4.3	2.7	2.4
Real Per Capita Income (Thou 2020 \$)	49.5	50.3	51.3	49.2	50.4	51.5
% Change	4.4	1.6	2.0	-4.1	2.6	2.1
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	3,111.1	807.3	2,336.1	2,938.8	3,037.2	3,100.9
% Change - Total Visitor Arrivals by Air	5.0	-74.1	189.4	25.8	3.3	2.1
U.S. Visitors	2,488.6	672.0	2,236.7	2,663.1	2,616.9	2,636.6
% Change - U.S. Visitors	7.5	-73.0	232.8	19.1	-1.7	0.8
Japanese Visitors	48.5	8.3	0.9	10.4	24.1	30.7
% Change - Japanese Visitors	-3.0	-83.0	-89.0	1,037.2	132.4	27.4
Other Visitors	574.0	127.0	98.6	265.3	396.2	433.5
% Change - Other Visitors	-4.1	-77.9	-22.4	169.2	49.3	9.4
Visitor Days (Thou)	24,776.6	7,754.3	20,387.8	23,906.7	23,749.4	23,750.1
% Change	2.9	-68.7	162.9	17.3	-0.7	0.0
Occupancy Rate (%)	77.8	27.9	59.9	72.7	73.8	75.1

Note: Source is UHERO. Nonfarm Payrolls for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2024 are forecasts.

TABLE 12: JOBS BY DETAILED SECTOR (THOUSANDS)
MAUI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	80.7	61.8	68.9	73.7	76.6	78.2
% Change	0.2	-23.4	11.6	6.9	3.9	2.0
Construction and Mining	4.4	4.3	4.3	4.4	4.5	4.7
% Change	0.9	-1.6	-0.8	2.4	3.6	2.6
Manufacturing	1.2	1.0	1.0	1.0	1.1	1.1
% Change	7.4	-20.0	1.8	4.3	3.3	1.8
Trade	11.5	9.8	10.2	10.4	10.7	10.8
% Change	-0.2	-15.4	4.3	2.6	2.5	1.1
Transportation and Utilities	4.8	3.3	3.6	4.0	4.2	4.3
% Change	4.1	-31.6	9.0	11.6	4.6	1.9
Finance, Insurance and Real Estate	3.1	2.4	2.6	2.8	2.9	3.0
% Change	0.5	-22.3	7.1	6.7	6.2	2.2
Services	46.5	32.2	38.7	42.4	44.4	45.5
% Change	-0.3	-30.6	19.9	9.5	4.8	2.6
Health Care and Soc. Assistance	8.1	7.9	8.0	8.1	8.3	8.5
% Change	3.5	-3.3	1.8	1.5	2.5	1.6
Accommodation and Food	23.4	13.1	18.0	20.8	22.0	22.7
% Change	0.7	-44.1	37.5	15.7	5.9	2.9
Other	15.0	11.3	12.7	13.4	14.0	14.4
% Change	-3.6	-24.4	12.2	5.7	4.4	2.7
Government	9.1	8.8	8.6	8.7	8.8	8.8
% Change	-0.4	-4.0	-1.9	1.0	0.8	0.4
Federal Government	0.9	0.9	0.9	0.9	0.9	0.9
% Change	1.0	-1.6	1.3	0.0	0.9	-1.0
State and Local Government	8.3	7.9	7.7	7.8	7.9	7.9
% Change	-0.5	-4.2	-2.3	1.1	0.7	0.5

Note: Source is UHERO. Industry job counts for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2024 are forecasts.

TABLE 13: PERSONAL INCOME BY DETAILED SECTOR
MAUI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Real Personal Income (Mil 2020 \$)	8,611.5	8,708.3	8,845.6	8,462.6	8,692.4	8,898.5
% Change	4.0	1.1	1.6	-4.3	2.7	2.4
Labor & Proprietors' Income	6,216.0	5,214.5	5,696.4	5,966.5	6,155.0	6,299.2
% Change	5.3	-16.1	9.2	4.7	3.2	2.3
Construction	557.0	565.4	554.9	556.1	566.3	576.8
% Change	6.0	1.5	-1.9	0.2	1.8	1.9
Manufacturing	78.4	73.3	73.0	74.8	76.9	78.7
% Change	8.8	-6.5	-0.3	2.5	2.8	2.3
Trade	605.7	535.8	553.6	558.0	572.7	584.5
% Change	4.0	-11.5	3.3	0.8	2.6	2.0
Transportation and Utilities	319.4	259.7	278.6	306.4	318.7	326.3
% Change	4.7	-18.7	7.3	10.0	4.0	2.4
Finance, Insurance & Real Estate	408.3	389.8	399.7	409.4	421.4	427.3
% Change	17.3	-4.5	2.5	2.4	2.9	1.4
Services	3,400.4	2,468.7	2,944.0	3,176.7	3,313.9	3,416.0
% Change	4.8	-27.4	19.3	7.9	4.3	3.1
Health Care & Soc. Assist. (% ch.)	7.3	1.9	-0.3	-0.6	1.8	1.9
Accommodation & Food (% ch.)	6.8	-47.1	45.7	16.3	6.1	3.7
Other (% ch.)	1.0	-16.6	9.6	3.5	3.5	2.9
Government	818.5	827.9	812.7	802.8	812.9	828.0
% Change	3.5	1.1	-1.8	-1.2	1.3	1.9
Federal, civilian (% ch.)	3.9	0.6	1.0	-0.7	1.8	-0.1
State & Local (% ch.)	3.2	0.9	-2.8	-1.4	1.3	2.3
Less Social Security Taxes (-)	715.3	606.2	678.4	710.9	730.9	746.1
% Change	6.9	-15.3	11.9	4.8	2.8	2.1
Transfer Payments	1,406.2	2,455.5	2,556.3	1,783.6	1,777.3	1,815.6
% Change	5.7	74.6	4.1	-30.2	-0.4	2.2
Dividends, Interest and Rent	1,674.0	1,614.6	1,566.9	1,551.2	1,563.8	1,582.5
% Change	-0.6	-3.6	-3.0	-1.0	0.8	1.2
Population (Thou)	173.0	173.8	172.5	172.1	172.3	172.7
% Change	0.6	0.5	-0.7	-0.2	0.1	0.2
Real Per Capita Income (Thou 2020 \$)	49.5	50.3	51.3	49.2	50.4	51.5
% Change	4.4	1.6	2.0	-4.1	2.6	2.1
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Nominal Personal Income (Mil \$)	8,478.3	8,708.3	9,194.0	9,276.0	9,839.2	10,242.6
% Change	5.7	2.7	5.6	0.9	6.1	4.1

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts.

TABLE 14: MAJOR ECONOMIC INDICATOR SUMMARY
KAUAI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	33.3	26.1	27.0	29.4	30.5	31.3
% Change	1.6	-21.7	3.6	8.9	3.8	2.6
Unemployment Rate (%)	2.4	16.3	10.9	6.6	4.3	3.2
Population (Thou)	74.4	74.3	73.8	73.7	73.8	74.0
% Change	0.2	-0.2	-0.7	-0.1	0.2	0.3
Personal Income (Mil \$)	3,679.3	3,886.4	4,126.1	4,121.1	4,328.3	4,456.9
% Change	4.9	5.6	6.2	-0.1	5.0	3.0
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Real Personal Income (Mil 2020 \$)	3,737.1	3,886.4	3,969.8	3,759.7	3,823.9	3,872.0
% Change	3.3	4.0	2.1	-5.3	1.7	1.3
Real Per Capita Income (Thou 2020 \$)	49.9	52.4	53.8	51.0	51.8	52.3
% Change	3.9	5.1	2.7	-5.2	1.5	1.0
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	1,370.0	330.3	812.6	1,138.0	1,251.4	1,286.0
% Change - Total Visitor Arrivals by Air	-1.3	-75.9	146.0	40.0	10.0	2.8
U.S. Visitors	1,135.7	279.8	784.9	1,015.0	1,072.7	1,091.5
% Change - U.S. Visitors	0.1	-75.4	180.5	29.3	5.7	1.8
Japanese Visitors	25.3	3.6	0.4	8.3	17.2	19.0
% Change - Japanese Visitors	2.1	-85.7	-88.3	1,847.1	108.2	10.7
Other Visitors	209.0	46.8	27.3	114.8	161.5	175.5
% Change - Other Visitors	-8.9	-77.6	-41.6	320.2	40.7	8.6
Visitor Days (Thou)	10,108.8	2,940.4	7,001.9	8,763.0	9,447.4	9,689.8
% Change	-2.7	-70.9	138.1	25.2	7.8	2.6
Occupancy Rate (%)	73.3	30.6	57.0	66.4	71.0	72.5

Note: Source is UHERO. Nonfarm Payrolls for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2024 are forecasts.

TABLE 15: JOBS BY DETAILED SECTOR (THOUSANDS)
KAUAI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Non-farm Payrolls (Thou)	33.3	26.1	27.0	29.4	30.5	31.3
% Change	1.6	-21.7	3.6	8.9	3.8	2.6
Construction and Mining	2.1	1.9	2.0	2.0	2.1	2.2
% Change	7.8	-8.7	3.2	4.3	3.7	3.1
Manufacturing	0.5	0.4	0.4	0.4	0.4	0.4
% Change	0.0	-18.3	-2.0	6.1	3.2	2.2
Trade	4.6	3.9	3.9	4.1	4.2	4.3
% Change	-0.4	-14.8	-0.3	5.1	2.7	1.8
Transportation and Utilities	1.6	1.1	1.3	1.4	1.5	1.5
% Change	-1.0	-30.2	17.4	9.0	2.1	0.7
Finance, Insurance and Real Estate	1.2	1.0	1.0	1.0	1.1	1.1
% Change	0.7	-20.9	-0.3	8.7	6.2	2.7
Services	18.2	12.8	13.5	15.3	16.1	16.7
% Change	1.5	-29.7	5.4	13.2	5.4	3.6
Health Care and Soc. Assistance	3.0	2.8	2.7	2.8	2.9	3.0
% Change	2.6	-4.7	-3.4	3.7	2.7	2.2
Accommodation and Food	9.3	5.3	6.3	7.6	8.1	8.4
% Change	1.7	-43.3	19.4	20.2	6.6	4.1
Other	6.0	4.7	4.5	4.9	5.1	5.3
% Change	0.6	-21.0	-5.1	9.0	4.9	3.7
Government	5.1	5.0	5.0	5.1	5.1	5.1
% Change	2.8	-2.7	0.0	2.3	0.4	0.1
Federal Government	0.6	0.6	0.6	0.6	0.6	0.6
% Change	13.3	3.7	-5.9	1.2	0.7	-0.8
State and Local Government	4.6	4.4	4.4	4.5	4.6	4.6
% Change	1.7	-3.5	0.8	2.4	0.3	0.2

Note: Source is UHERO. Industry job counts for 2020 and 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2024 are forecasts.

TABLE 16: PERSONAL INCOME BY DETAILED SECTOR
KAUAI COUNTY BASELINE FORECAST

	2019	2020	2021	2022	2023	2024
Real Personal Income (Mil 2020 \$)	3,737.1	3,886.4	3,969.8	3,759.7	3,823.9	3,872.0
% Change	3.3	4.0	2.1	-5.3	1.7	1.3
Labor & Proprietors' Income	2,564.7	2,259.5	2,294.6	2,453.7	2,533.3	2,610.4
% Change	5.7	-11.9	1.6	6.9	3.2	3.0
Construction	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Trade	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Transportation and Utilities	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Finance, Insurance & Real Estate	—	148.2	—	—	—	—
% Change	—	—	—	—	—	—
Services	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Health Care & Soc. Assist. (% ch.)	—	—	—	—	—	—
Accommodation & Food (% ch.)	—	—	—	—	—	—
Other (% ch.)	—	—	—	—	—	—
Government	475.9	491.1	488.2	488.6	492.7	500.6
% Change	3.3	3.2	-0.6	0.1	0.8	1.6
Federal, civilian (% ch.)	5.9	5.4	-6.1	0.6	1.5	0.2
State & Local (% ch.)	2.8	2.8	0.3	-0.1	0.8	2.0
Less Social Security Taxes (-)	299.1	264.8	275.4	294.7	303.4	311.9
% Change	6.8	-11.5	4.0	7.0	2.9	2.8
Transfer Payments	717.2	1,158.8	1,230.9	863.1	857.4	873.1
% Change	0.4	61.6	6.2	-29.9	-0.7	1.8
Dividends, Interest and Rent	765.6	740.1	712.1	703.4	711.1	721.2
% Change	-0.4	-3.3	-3.8	-1.2	1.1	1.4
Population (Thou)	74.4	74.3	73.8	73.7	73.8	74.0
% Change	0.2	-0.2	-0.7	-0.1	0.2	0.3
Real Per Capita Income (Thou 2020 \$)	49.9	52.4	53.8	51.0	51.8	52.3
% Change	3.9	5.1	2.7	-5.2	1.5	1.0
Inflation Rate, Honolulu MSA (%)	1.6	1.6	3.9	5.5	3.3	1.7
Nominal Personal Income (Mil \$)	3,679.3	3,886.4	4,126.1	4,121.1	4,328.3	4,456.9
% Change	4.9	5.6	6.2	-0.1	5.0	3.0

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts. Because of data disclosure rules, industry-level income is not available for some sectors.

TABLE 17: EXTERNAL INDICATORS
STATE OF HAWAII FORECAST

	2019	2020	2021	2022	2023	2024
U.S. FACTORS						
Employment (Thou)	157,538.1	147,794.8	152,580.7	157,973.2	159,949.5	160,623.5
% Change	1.1	-6.2	3.2	3.5	1.3	0.4
Unemployment Rate (%)	3.7	8.1	5.4	3.8	3.5	3.6
Inflation Rate (%)	1.8	1.2	4.7	5.5	3.2	2.2
Real GDP (Bil chained 2012\$)	19,032.7	18,384.7	19,427.2	20,154.5	20,618.9	20,985.3
% Change	2.3	-3.4	5.7	3.7	2.3	1.8
Population (Thou)	328,527.0	330,152.0	331,383.0	332,530.7	333,736.2	335,008.6
% Change	0.5	0.5	0.4	0.3	0.4	0.4
JAPAN FACTORS						
Employment (Thou)	67,245.0	66,765.8	66,665.8	66,638.9	66,698.1	66,463.0
% Change	0.9	-0.7	-0.2	0.0	0.1	-0.4
Unemployment Rate (%)	2.4	2.8	2.8	2.8	2.7	2.7
Inflation Rate (%)	0.5	0.0	0.3	1.1	1.0	1.0
Real GDP (Bil chained 2011 yen)	553,036.7	527,948.0	535,464.1	544,688.2	554,443.2	560,538.4
% Change	-0.2	-4.5	1.4	1.7	1.8	1.1
Population (Thou)	126,264.9	125,836.0	125,444.3	125,052.7	124,635.4	124,196.9
% Change	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4
Exchange Rate (Yen/\$)	109.0	106.8	109.8	111.3	105.4	100.7

Note: Source is UHERO. Figures for Japanese population and GDP for 2021 are UHERO estimates. Figures for 2022-2024 are forecasts.

TABLE 18: MAJOR ECONOMIC INDICATORS
EXTENDED STATE OF HAWAII BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Nonfarm Payrolls (Thou)	583.0	609.4	631.7	641.8	647.9	652.5
% Change	3.7	4.5	3.7	1.6	0.9	0.7
Unemployment Rate (%)	7.2	5.1	3.3	2.7	2.5	2.5
Population (Thou)	1,441.6	1,437.2	1,436.0	1,436.7	1,438.7	1,441.1
% Change	-0.9	-0.3	-0.1	0.1	0.1	0.2
Personal Income (Mil\$)	86,852.6	87,286.7	91,948.3	95,239.0	98,288.4	101,159.3
% Change	5.2	0.5	5.3	3.6	3.2	2.9
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Real Personal Income (Mil 2021\$)	86,800.6	82,719.6	84,380.6	85,948.3	87,231.9	88,362.6
% Change	1.3	-4.7	2.0	1.9	1.5	1.3
Real Per Capita Income (Thou 2021\$)	60.2	57.6	58.8	59.8	60.6	61.3
% Change	2.2	-4.4	2.1	1.8	1.4	1.1
Real GDP (Mil 2021\$)	89,541.9	92,953.6	95,998.8	97,705.8	99,126.9	100,374.5
% Change	4.0	3.8	3.3	1.8	1.5	1.3
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	6,777.1	8,746.1	9,455.2	9,615.1	9,730.7	9,811.4
% Change - Total Visitor Arrivals by Air	150.2	29.1	8.1	1.7	1.2	0.8
U.S. Visitors	6,465.4	7,246.5	6,968.7	6,858.5	6,795.2	6,762.2
% Change - U.S. Visitors	225.3	12.1	-3.8	-1.6	-0.9	-0.5
Japanese Visitors	24.2	461.4	1,022.5	1,165.1	1,255.8	1,300.9
% Change - Japanese Visitors	-91.6	1,804.1	121.6	13.9	7.8	3.6
Other Visitors	285.7	1,038.2	1,464.0	1,591.6	1,679.6	1,748.3
% Change - Other Visitors	-28.4	263.3	41.0	8.7	5.5	4.1
Visitor Days (Thou)	65,341.3	79,470.5	83,998.2	84,810.1	85,298.9	85,544.5
% Change	129.1	21.6	5.7	1.0	0.6	0.3
Average Daily Room Rate (\$)	315.8	361.1	381.3	397.6	413.7	427.0
% Change	51.6	14.3	5.6	4.3	4.0	3.2
Occupancy Rate (%)	57.1	70.4	74.1	75.3	75.9	76.3
Real Visitor Expenditures (Mil 2021\$)	12,995.7	17,124.8	19,029.8	18,662.5	18,467.7	18,370.9
% Change	160.5	31.8	11.1	-1.9	-1.0	-0.5

Note: Source is UHERO. Nonfarm Payrolls for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2026 are forecasts.

TABLE 19: JOBS BY INDUSTRY
EXTENDED STATE OF HAWAII BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Nonfarm Payrolls (Thou)	583.0	609.4	631.7	641.8	647.9	652.5
% Change	3.7	4.5	3.7	1.6	0.9	0.7
Construction and Mining	36.8	37.2	38.5	39.5	39.9	39.8
% Change	1.1	1.1	3.4	2.6	1.0	-0.2
Manufacturing	11.8	12.3	12.7	13.0	13.3	13.5
% Change	-1.5	4.2	3.6	2.3	2.0	1.7
Trade	79.1	81.3	83.5	84.6	85.3	86.1
% Change	1.6	2.9	2.7	1.3	0.8	0.9
Transportation and Utilities	29.2	32.3	33.2	33.5	33.8	34.0
% Change	7.3	10.6	2.8	0.8	1.0	0.7
Finance, Insurance and Real Estate	27.1	27.5	28.5	29.0	29.1	29.2
% Change	-0.9	1.7	3.5	1.7	0.5	0.2
Services	278.4	297.1	311.9	318.0	321.8	324.7
% Change	7.1	6.7	5.0	2.0	1.2	0.9
Health Care and Soc. Assistance	71.4	71.6	73.2	74.4	75.3	76.1
% Change	1.2	0.2	2.3	1.6	1.2	1.1
Accommodation and Food	85.0	98.3	105.2	107.6	108.7	109.4
% Change	21.6	15.6	7.0	2.3	1.0	0.7
Other	122.0	127.3	133.5	136.1	137.8	139.2
% Change	2.0	4.4	4.9	1.9	1.3	1.0
Government	120.6	121.7	123.4	124.2	124.7	125.2
% Change	-0.4	0.9	1.4	0.7	0.4	0.4
Federal Government	34.8	34.7	34.7	34.7	34.6	34.6
% Change	-1.0	-0.3	0.0	-0.2	-0.1	0.0
State and Local Government	85.8	86.9	88.7	89.6	90.1	90.6
% Change	-0.2	1.4	2.0	1.0	0.6	0.6

Note: Source is UHERO. Industry job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts.

TABLE 20: PERSONAL INCOME BY INDUSTRY
EXTENDED STATE OF HAWAII BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Real Personal Income (Mil 2021\$)	86,800.6	82,719.6	84,380.6	85,948.3	87,231.9	88,362.6
% Change	1.3	-4.7	2.0	1.9	1.5	1.3
Labor & Proprietors' Income	57,679.4	59,065.5	60,756.9	62,034.4	62,979.7	63,707.3
% Change	2.3	2.4	2.9	2.1	1.5	1.2
Construction	4,935.0	4,991.3	5,142.7	5,270.0	5,329.9	5,337.8
% Change	-1.0	1.1	3.0	2.5	1.1	0.1
Manufacturing	980.1	1,000.7	1,013.6	1,037.1	1,061.5	1,086.4
% Change	-1.6	2.1	1.3	2.3	2.4	2.3
Trade	4,927.9	4,952.0	5,021.4	5,070.9	5,124.8	5,183.3
% Change	4.5	0.5	1.4	1.0	1.1	1.1
Transportation and Utilities	3,103.2	3,349.7	3,505.4	3,590.2	3,658.2	3,705.6
% Change	4.4	7.9	4.6	2.4	1.9	1.3
Finance, Insurance & Real Estate	4,235.2	4,097.5	4,157.7	4,266.5	4,364.6	4,441.1
% Change	1.5	-3.3	1.5	2.6	2.3	1.8
Services	22,561.1	23,802.3	24,795.7	25,373.7	25,822.9	26,187.8
% Change	5.8	5.5	4.2	2.3	1.8	1.4
Health Care & Soc. Assist. (% ch.)	1.3	-0.3	2.7	2.3	2.2	1.6
Accommodation & Food (% ch.)	25.2	21.4	6.4	3.0	1.7	1.5
Other (% ch.)	2.2	2.6	4.0	2.1	1.6	1.3
Government	16,592.8	16,531.8	16,774.2	17,076.2	17,265.0	17,410.4
% Change	-1.5	-0.4	1.5	1.8	1.1	0.8
Federal, civilian (% ch.)	-2.8	0.3	1.0	0.6	0.5	0.5
State & Local (% ch.)	-0.9	-1.0	2.1	2.8	1.7	1.1
Less Social Security Taxes (-)	6,720.8	6,882.0	7,071.9	7,215.8	7,321.6	7,402.5
% Change	2.9	2.4	2.8	2.0	1.5	1.1
Transfer Payments	20,570.5	15,395.7	15,449.7	15,697.0	15,957.0	16,229.4
% Change	2.3	-25.2	0.4	1.6	1.7	1.7
Dividends, Interest and Rent	15,271.0	15,140.4	15,246.1	15,433.2	15,617.3	15,828.9
% Change	-3.1	-0.9	0.7	1.2	1.2	1.4
Population (Thou)	1,441.6	1,437.2	1,436.0	1,436.7	1,438.7	1,441.1
% Change	-0.9	-0.3	-0.1	0.1	0.1	0.2
Real Per Capita Income (Thou 2021\$)	60.2	57.6	58.8	59.8	60.6	61.3
% Change	2.2	-4.4	2.1	1.8	1.4	1.1
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Nominal Personal Income (Mil. \$)	86,852.6	87,286.7	91,948.3	95,239.0	98,288.4	101,159.3
% Change	5.2	0.5	5.3	3.6	3.2	2.9

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts.

TABLE 21: CONSTRUCTION INDICATORS
EXTENDED STATE OF HAWAII BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
BUILDING PERMITS (Mil 2021\$)						
Total Commitments to Build	6,058	6,222	6,717	6,672	6,552	6,466
% Change	-6.7	2.7	8.0	-0.7	-1.8	-1.3
Real Private Building Permits	3,747	3,653	3,992	3,953	3,888	3,905
% Change	14.9	-2.5	9.3	-1.0	-1.7	0.4
Real Residential Building Permits	1,995	1,686	1,705	1,567	1,491	1,537
% Change	66.1	-15.5	1.1	-8.1	-4.9	3.1
Real Non-Residential Building Permits	1,752	1,968	2,287	2,386	2,397	2,368
% Change	-14.9	12.3	16.2	4.4	0.4	-1.2
Real Government Contracts Awarded	2,311	2,569	2,725	2,719	2,664	2,562
% Change	-28.5	11.2	6.1	-0.2	-2.0	-3.8
CONSTRUCTION ACTIVITY						
Real GE Contracting Tax Base (Mil 2021\$)	10,213	11,015	11,485	11,708	11,701	11,630
% Change	-0.2	7.9	4.3	1.9	-0.1	-0.6
Nominal GE Contracting Tax Base (Mil \$)	10,213	11,840	13,076	13,912	14,382	14,715
% Change	4.7	15.9	10.4	6.4	3.4	2.3
Construction Job Count (Thou)	36.8	37.2	38.5	39.5	39.9	39.8
% Change	1.1	1.1	3.4	2.6	1.0	-0.2
Real Construction Income (Mil 2021\$)	4,935	4,991	5,143	5,270	5,330	5,338
% Change	-1.0	1.1	3.0	2.5	1.1	0.1
PRICES & COSTS (HONOLULU)						
Honolulu Median Home Price (Thou \$)	988.0	1056.3	1062.2	1064.6	1066.7	1078.2
% Change	20.1	6.9	0.6	0.2	0.2	1.1
Honolulu Median Condominium Price (Thou \$)	470.9	507.9	513.2	516.1	516.4	518.1
% Change	8.7	7.9	1.1	0.5	0.1	0.3
Honolulu Housing Affordability Index	84.2	67.8	68.5	68.3	69.0	68.9
% Change	-11.2	-19.5	1.1	-0.3	0.9	-0.1
Honolulu Construction Cost Index (2021=100)	100.0	107.5	113.9	118.8	122.9	126.5
% Change	4.9	7.5	5.9	4.4	3.4	2.9
30-Year Mortgage Rate (%)	3.0	4.0	4.3	4.5	4.7	4.7

Note: Source is UHERO. Construction job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts. Commitments to Build are the sum of private permits and public contracts awarded. Permits and tax base are deflated by Honolulu Construction Cost Index. Income is deflated by Honolulu CPI. Housing affordability index is the ratio of median family income to qualifying income for a loan for the median-priced home (times 100).

TABLE 22: MAJOR ECONOMIC INDICATOR SUMMARY
EXTENDED HONOLULU COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls (Thou)	422.6	439.8	456.3	463.0	467.0	470.1
% Change	2.3	4.1	3.7	1.5	0.9	0.7
Unemployment Rate (%)	7.1	4.8	2.9	2.4	2.1	2.0
Population (Thou)	986.9	981.6	979.6	979.0	979.4	980.1
% Change	-1.0	-0.5	-0.2	-0.1	0.0	0.1
Personal Income (Mil \$)	63,470.7	63,933.1	67,371.3	69,777.5	72,053.9	74,094.0
% Change	4.9	0.7	5.4	3.6	3.3	2.8
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Real Personal Income (Mil 2020 \$)	61,065.6	58,327.1	59,519.3	60,620.8	61,562.2	62,306.0
% Change	0.9	-4.5	2.0	1.9	1.6	1.2
Real Per Capita Income (Thou 2020 \$)	61.9	59.4	60.8	61.9	62.9	63.6
% Change	1.7	-4.0	2.3	1.9	1.5	1.1
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	3,330.9	4,709.0	5,533.2	5,668.2	5,777.2	5,842.9
% Change - Total Visitor Arrivals by Air	121.1	41.4	17.5	2.4	1.9	1.1
U.S. Visitors	3,139.1	3,580.5	3,436.9	3,361.2	3,315.1	3,285.7
% Change - U.S. Visitors	224.5	14.1	-4.0	-2.2	-1.4	-0.9
Japanese Visitors	23.1	439.3	997.3	1,116.2	1,205.4	1,249.1
% Change - Japanese Visitors	-91.4	1,799.4	127.0	11.9	8.0	3.6
Other Visitors	168.7	689.2	1,099.0	1,190.9	1,256.7	1,308.1
% Change - Other Visitors	-37.4	308.6	59.5	8.4	5.5	4.1
Visitor Days (Thou)	26,980.7	34,587.8	38,419.1	38,854.8	39,248.2	39,547.9
% Change	110.3	28.2	11.1	1.1	1.0	0.8
Occupancy Rate (%)	54.9	70.5	77.1	78.3	79.4	80.2

Note: Source is UHERO. Nonfarm Payrolls for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2026 are forecasts.

TABLE 23: JOBS BY DETAILED SECTOR (THOUSANDS)
EXTENDED HONOLULU COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls	422.6	439.8	456.3	463.0	467.0	470.1
% Change	2.3	4.1	3.7	1.5	0.9	0.7
Construction and Mining	26.9	27.1	28.0	28.8	29.1	29.1
% Change	1.2	0.9	3.4	2.6	1.1	0.1
Manufacturing	9.0	9.4	9.8	10.0	10.3	10.5
% Change	-3.5	4.6	4.0	2.5	2.2	1.9
Trade	54.1	55.8	57.5	58.3	58.8	59.4
% Change	0.9	3.2	2.9	1.5	0.9	1.0
Transportation and Utilities	21.5	23.9	24.5	24.7	24.9	25.0
% Change	6.2	11.0	2.5	0.6	0.9	0.6
Finance, Insurance and Real Estate	21.3	21.4	22.0	22.3	22.4	22.4
% Change	-1.8	0.5	2.8	1.5	0.4	0.2
Services	196.9	208.3	219.1	222.9	225.1	226.9
% Change	4.4	5.8	5.2	1.7	1.0	0.8
Health Care and Soc. Assistance	53.2	53.2	54.4	55.3	55.9	56.5
% Change	1.4	0.0	2.3	1.6	1.2	1.1
Accommodation and Food	50.1	57.7	62.3	63.4	63.7	63.9
% Change	15.6	15.3	7.9	1.8	0.5	0.3
Other	93.7	97.4	102.4	104.2	105.4	106.4
% Change	0.9	4.0	5.1	1.7	1.2	0.9
Government	92.9	93.9	95.4	96.1	96.4	96.7
% Change	-0.3	1.0	1.6	0.7	0.4	0.3
Federal Government	32.2	32.2	32.1	32.1	32.0	32.0
% Change	-0.6	-0.1	-0.1	-0.3	-0.1	0.0
State and Local Government	60.6	61.7	63.3	64.0	64.4	64.7
% Change	-0.2	1.7	2.6	1.1	0.6	0.5

Note: Source is UHERO. Industry job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts.

TABLE 24: PERSONAL INCOME BY DETAILED SECTOR
EXTENDED HONOLULU COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Real Personal Income (Mil 2020 \$)	61,065.6	58,327.1	59,519.3	60,620.8	61,562.2	62,306.0
% Change	0.9	-4.5	2.0	1.9	1.6	1.2
Labor & Proprietors' Income	42,301.0	43,137.9	44,390.6	45,293.0	45,955.7	46,470.5
% Change	1.3	2.0	2.9	2.0	1.5	1.1
Construction	3,535.3	3,567.5	3,677.0	3,767.7	3,816.5	3,828.8
% Change	-0.9	0.9	3.1	2.5	1.3	0.3
Manufacturing	745.6	764.6	774.8	794.2	814.6	835.7
% Change	-3.3	2.5	1.3	2.5	2.6	2.6
Trade	3,309.3	3,327.8	3,379.1	3,410.5	3,451.9	3,495.5
% Change	3.5	0.6	1.5	0.9	1.2	1.3
Transportation and Utilities	2,355.2	2,558.0	2,669.0	2,730.5	2,781.7	2,817.2
% Change	4.2	8.6	4.3	2.3	1.9	1.3
Finance, Insurance & Real Estate	3,235.8	3,112.4	3,158.9	3,234.7	3,300.3	3,357.2
% Change	1.3	-3.8	1.5	2.4	2.0	1.7
Services	15,620.9	16,323.5	17,046.7	17,437.1	17,736.4	17,975.0
% Change	3.7	4.5	4.4	2.3	1.7	1.3
Health Care & Soc. Assist. (% ch.)	1.5	-0.3	2.7	2.2	2.1	1.6
Accommodation & Food (% ch.)	21.0	22.1	7.5	2.9	1.3	1.2
Other (% ch.)	1.0	2.5	4.4	2.1	1.6	1.2
Government	13,382.8	13,372.9	13,572.9	13,805.5	13,941.4	14,048.3
% Change	-1.5	-0.1	1.5	1.7	1.0	0.8
Federal, civilian (% ch.)	-2.5	0.5	0.9	0.6	0.5	0.5
State & Local (% ch.)	-0.9	-0.6	2.4	2.9	1.6	1.0
Less Social Security Taxes (-)	4,876.2	4,971.3	5,114.3	5,217.7	5,293.7	5,352.8
% Change	1.3	1.9	2.9	2.0	1.5	1.1
Transfer Payments	12,739.4	9,841.9	9,915.6	10,051.1	10,193.7	10,343.1
% Change	0.3	-22.7	0.7	1.4	1.4	1.5
Dividends, Interest and Rent	10,597.8	10,523.2	10,592.9	10,720.3	10,849.0	10,989.9
% Change	-3.0	-0.7	0.7	1.2	1.2	1.3
Population (Thou)	986.9	981.6	979.6	979.0	979.4	980.1
% Change	-1.0	-0.5	-0.2	-0.1	0.0	0.1
Real Per Capita Income (Thou 2020 \$)	61.9	59.4	60.8	61.9	62.9	63.6
% Change	1.7	-4.0	2.3	1.9	1.5	1.1
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Nominal Personal Income (Mil \$)	63,470.7	63,933.1	67,371.3	69,777.5	72,053.9	74,094.0
% Change	4.9	0.7	5.4	3.6	3.3	2.8

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts.

TABLE 25: MAJOR ECONOMIC INDICATOR SUMMARY
EXTENDED HAWAII COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls (Thou)	64.5	66.5	68.3	69.3	69.8	70.1
% Change	5.8	3.2	2.6	1.5	0.8	0.5
Unemployment Rate (%)	7.7	5.5	4.1	3.4	3.3	3.6
Population (Thou)	209.8	209.8	210.2	210.9	211.7	212.6
% Change	-0.2	0.0	0.2	0.3	0.4	0.4
Personal Income (Mil \$)	10,061.8	9,956.5	10,409.5	10,762.0	11,104.7	11,432.5
% Change	6.9	-1.0	4.6	3.4	3.2	3.0
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Real Personal Income (Mil 2020 \$)	9,680.5	9,083.5	9,196.3	9,349.7	9,487.7	9,613.7
% Change	2.9	-6.2	1.2	1.7	1.5	1.3
Real Per Capita Income (Thou 2020 \$)	46.1	43.3	43.8	44.3	44.8	45.2
% Change	2.9	-6.2	1.0	1.3	1.1	0.9
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	1,184.1	1,552.4	1,656.4	1,692.8	1,719.1	1,739.8
% Change - Total Visitor Arrivals by Air	139.9	31.1	6.7	2.2	1.6	1.2
U.S. Visitors	1,137.8	1,329.2	1,293.6	1,284.1	1,280.9	1,281.4
% Change - U.S. Visitors	200.1	16.8	-2.7	-0.7	-0.3	0.0
Japanese Visitors	1.4	51.2	108.7	125.6	135.5	140.3
% Change - Japanese Visitors	-96.2	3,667.6	112.1	15.6	7.8	3.6
Other Visitors	44.9	172.0	254.1	283.0	302.8	318.0
% Change - Other Visitors	-43.2	283.1	47.8	11.4	7.0	5.0
Visitor Days (Thou)	10,966.8	12,212.9	12,382.4	12,515.4	12,582.9	12,663.7
% Change	119.7	11.4	1.4	1.1	0.5	0.6
Occupancy Rate (%)	60.8	69.0	68.8	69.2	69.4	69.7

Note: Source is UHERO. Nonfarm Payrolls for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2026 are forecasts.

TABLE 26: JOBS BY DETAILED SECTOR (THOUSANDS)
EXTENDED HAWAII COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls	64.5	66.5	68.3	69.3	69.8	70.1
% Change	5.8	3.2	2.6	1.5	0.8	0.5
Construction and Mining	3.7	3.7	3.8	3.9	3.9	3.8
% Change	1.8	-0.3	2.8	2.3	0.4	-1.2
Manufacturing	1.4	1.4	1.4	1.4	1.5	1.5
% Change	10.9	0.8	2.0	1.2	1.0	0.7
Trade	10.9	11.0	11.2	11.2	11.2	11.2
% Change	3.1	0.4	1.5	0.6	0.1	0.2
Transportation and Utilities	2.8	3.0	3.0	3.1	3.1	3.1
% Change	9.5	6.6	2.7	0.6	0.4	-0.1
Finance, Insurance and Real Estate	2.3	2.4	2.5	2.5	2.6	2.6
% Change	-1.6	3.8	5.3	1.8	0.3	-0.1
Services	29.3	31.1	32.3	32.9	33.2	33.4
% Change	10.9	6.2	3.6	2.0	1.0	0.6
Health Care and Soc. Assistance	7.5	7.5	7.6	7.7	7.7	7.8
% Change	0.6	-1.0	1.7	1.2	0.9	0.7
Accommodation and Food	10.7	12.2	12.7	13.1	13.2	13.3
% Change	29.3	13.8	4.9	2.4	1.0	0.6
Other	11.1	11.5	11.9	12.2	12.3	12.4
% Change	3.8	3.9	3.5	2.2	1.1	0.5
Government	14.1	14.0	14.1	14.3	14.4	14.5
% Change	-0.7	-0.8	0.9	1.0	1.0	1.0
Federal Government	1.1	1.1	1.1	1.2	1.2	1.2
% Change	-13.1	-2.4	2.8	2.1	2.1	2.7
State and Local Government	13.0	12.9	13.0	13.1	13.2	13.3
% Change	0.6	-0.6	0.7	0.9	0.9	0.9

Note: Source is UHERO. Industry job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts.

TABLE 27: PERSONAL INCOME BY DETAILED SECTOR
EXTENDED HAWAII COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Real Personal Income (Mil 2020 \$)	9,680.5	9,083.5	9,196.3	9,349.7	9,487.7	9,613.7
% Change	2.9	-6.2	1.2	1.7	1.5	1.3
Labor & Proprietors' Income	5,235.0	5,303.2	5,410.8	5,517.0	5,592.3	5,643.8
% Change	3.7	1.3	2.0	2.0	1.4	0.9
Construction	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Trade	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Transportation and Utilities	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Finance, Insurance & Real Estate	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Services	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Health Care & Soc. Assist. (% ch.)	—	—	—	—	—	—
Accommodation & Food (% ch.)	—	—	—	—	—	—
Other (% ch.)	—	—	—	—	—	—
Government	1,290.0	1,250.6	1,269.8	1,304.8	1,334.7	1,359.2
% Change	-1.8	-3.1	1.5	2.8	2.3	1.8
Federal, civilian (% ch.)	-13.3	-3.0	3.6	3.0	2.7	3.2
State & Local (% ch.)	0.1	-3.1	1.3	2.7	2.2	1.6
Less Social Security Taxes (-)	639.9	648.4	659.4	670.8	678.5	683.5
% Change	6.2	1.3	1.7	1.7	1.2	0.7
Transfer Payments	3,276.2	2,332.7	2,322.8	2,371.4	2,422.5	2,476.1
% Change	7.5	-28.8	-0.4	2.1	2.2	2.2
Dividends, Interest and Rent	1,824.3	1,797.6	1,809.3	1,833.4	1,852.6	1,878.2
% Change	-3.5	-1.5	0.7	1.3	1.1	1.4
Population (Thou)	209.8	209.8	210.2	210.9	211.7	212.6
% Change	-0.2	0.0	0.2	0.3	0.4	0.4
Real Per Capita Income (Thou 2020 \$)	46.1	43.3	43.8	44.3	44.8	45.2
% Change	2.9	-6.2	1.0	1.3	1.1	0.9
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Nominal Personal Income (Mil \$)	10,061.8	9,956.5	10,409.5	10,762.0	11,104.7	11,432.5
% Change	6.9	-1.0	4.6	3.4	3.2	3.0

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts. Because of data disclosure rules, industry-level income is not available for some sectors.

TABLE 28: MAJOR ECONOMIC INDICATOR SUMMARY
EXTENDED MAUI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls (Thou)	68.9	73.7	76.6	78.2	79.2	80.0
% Change	11.6	6.9	3.9	2.0	1.3	1.0
Unemployment Rate (%)	10.3	5.9	4.0	3.3	3.2	3.4
Population (Thou)	172.5	172.1	172.3	172.7	173.3	173.9
% Change	-0.7	-0.2	0.1	0.2	0.3	0.3
Personal Income (Mil \$)	9,194.0	9,276.0	9,839.2	10,242.6	10,503.4	10,844.4
% Change	5.6	0.9	6.1	4.1	2.5	3.2
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Real Personal Income (Mil 2020 \$)	8,845.6	8,462.6	8,692.4	8,898.5	8,974.0	9,119.1
% Change	1.6	-4.3	2.7	2.4	0.8	1.6
Real Per Capita Income (Thou 2020 \$)	51.3	49.2	50.4	51.5	51.8	52.4
% Change	2.0	-4.1	2.6	2.1	0.5	1.3
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	2,336.1	2,938.8	3,037.2	3,100.9	3,143.4	3,152.5
% Change - Total Visitor Arrivals by Air	189.4	25.8	3.3	2.1	1.4	0.3
U.S. Visitors	2,236.7	2,663.1	2,616.9	2,636.6	2,650.1	2,637.3
% Change - U.S. Visitors	232.8	19.1	-1.7	0.8	0.5	-0.5
Japanese Visitors	0.9	10.4	24.1	30.7	35.7	39.0
% Change - Japanese Visitors	-89.0	1,037.2	132.4	27.4	16.3	9.2
Other Visitors	98.6	265.3	396.2	433.5	457.6	476.2
% Change - Other Visitors	-22.4	169.2	49.3	9.4	5.5	4.1
Visitor Days (Thou)	20,387.8	23,906.7	23,749.4	23,750.1	23,743.4	23,620.7
% Change	162.9	17.3	-0.7	0.0	0.0	-0.5
Occupancy Rate (%)	59.9	72.7	73.8	75.1	75.7	75.6

Note: Source is UHERO. Nonfarm Payrolls for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2026 are forecasts.

TABLE 29: JOBS BY DETAILED SECTOR (THOUSANDS)
EXTENDED MAUI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls	68.9	73.7	76.6	78.2	79.2	80.0
% Change	11.6	6.9	3.9	2.0	1.3	1.0
Construction and Mining	4.3	4.4	4.5	4.7	4.7	4.7
% Change	-0.8	2.4	3.6	2.6	0.8	-0.8
Manufacturing	1.0	1.0	1.1	1.1	1.1	1.1
% Change	1.8	4.3	3.3	1.8	1.5	1.1
Trade	10.2	10.4	10.7	10.8	10.9	11.0
% Change	4.3	2.6	2.5	1.1	0.7	0.9
Transportation and Utilities	3.6	4.0	4.2	4.3	4.4	4.5
% Change	9.0	11.6	4.6	1.9	2.1	2.0
Finance, Insurance and Real Estate	2.6	2.8	2.9	3.0	3.0	3.0
% Change	7.1	6.7	6.2	2.2	0.7	0.3
Services	38.7	42.4	44.4	45.5	46.3	46.8
% Change	19.9	9.5	4.8	2.6	1.6	1.3
Health Care and Soc. Assistance	8.0	8.1	8.3	8.5	8.6	8.7
% Change	1.8	1.5	2.5	1.6	1.4	1.3
Accommodation and Food	18.0	20.8	22.0	22.7	23.1	23.3
% Change	37.5	15.7	5.9	2.9	1.7	1.3
Other	12.7	13.4	14.0	14.4	14.6	14.8
% Change	12.2	5.7	4.4	2.7	1.7	1.2
Government	8.6	8.7	8.8	8.8	8.8	8.9
% Change	-1.9	1.0	0.8	0.4	0.4	0.4
Federal Government	0.9	0.9	0.9	0.9	0.9	0.8
% Change	1.3	0.0	0.9	-1.0	-1.9	-2.3
State and Local Government	7.7	7.8	7.9	7.9	8.0	8.0
% Change	-2.3	1.1	0.7	0.5	0.6	0.7

Note: Source is UHERO. Industry job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts.

TABLE 30: PERSONAL INCOME BY DETAILED SECTOR
EXTENDED MAUI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Real Personal Income (Mil 2020 \$)	8,845.6	8,462.6	8,692.4	8,898.5	8,974.0	9,119.1
% Change	1.6	-4.3	2.7	2.4	0.8	1.6
Labor & Proprietors' Income	5,696.4	5,966.5	6,155.0	6,299.2	6,408.7	6,491.7
% Change	9.2	4.7	3.2	2.3	1.7	1.3
Construction	554.9	556.1	566.3	576.8	581.6	579.7
% Change	-1.9	0.2	1.8	1.9	0.8	-0.3
Manufacturing	73.0	74.8	76.9	78.7	80.3	81.5
% Change	-0.3	2.5	2.8	2.3	2.1	1.5
Trade	553.6	558.0	572.7	584.5	594.7	605.1
% Change	3.3	0.8	2.6	2.0	1.8	1.7
Transportation and Utilities	278.6	306.4	318.7	326.3	335.0	343.2
% Change	7.3	10.0	4.0	2.4	2.7	2.4
Finance, Insurance & Real Estate	399.7	409.4	421.4	427.3	430.0	431.4
% Change	2.5	2.4	2.9	1.4	0.6	0.3
Services	2,944.0	3,176.7	3,313.9	3,416.0	3,491.8	3,550.3
% Change	19.3	7.9	4.3	3.1	2.2	1.7
Health Care & Soc. Assist. (% ch.)	-0.3	-0.6	1.8	1.9	1.9	1.6
Accommodation & Food (% ch.)	45.7	16.3	6.1	3.7	2.5	1.9
Other (% ch.)	9.6	3.5	3.5	2.9	2.1	1.5
Government	812.7	802.8	812.9	828.0	839.5	846.8
% Change	-1.8	-1.2	1.3	1.9	1.4	0.9
Federal, civilian (% ch.)	1.0	-0.7	1.8	-0.1	-1.3	-1.8
State & Local (% ch.)	-2.8	-1.4	1.3	2.3	2.0	1.4
Less Social Security Taxes (-)	678.4	710.9	730.9	746.1	757.4	765.6
% Change	11.9	4.8	2.8	2.1	1.5	1.1
Transfer Payments	2,556.3	1,783.6	1,777.3	1,815.6	1,856.0	1,898.2
% Change	4.1	-30.2	-0.4	2.2	2.2	2.3
Dividends, Interest and Rent	1,566.9	1,551.2	1,563.8	1,582.5	1,602.5	1,628.2
% Change	-3.0	-1.0	0.8	1.2	1.3	1.6
Population (Thou)	172.5	172.1	172.3	172.7	173.3	173.9
% Change	-0.7	-0.2	0.1	0.2	0.3	0.3
Real Per Capita Income (Thou 2020 \$)	51.3	49.2	50.4	51.5	51.8	52.4
% Change	2.0	-4.1	2.6	2.1	0.5	1.3
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Nominal Personal Income (Mil \$)	9,194.0	9,276.0	9,839.2	10,242.6	10,503.4	10,844.4
% Change	5.6	0.9	6.1	4.1	2.5	3.2

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts.

TABLE 31: MAJOR ECONOMIC INDICATOR SUMMARY
EXTENDED KAUAI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls (Thou)	27.0	29.4	30.5	31.3	31.9	32.3
% Change	3.6	8.9	3.8	2.6	1.8	1.4
Unemployment Rate (%)	10.9	6.6	4.3	3.2	3.0	3.1
Population (Thou)	73.8	73.7	73.8	74.0	74.3	74.5
% Change	-0.7	-0.1	0.2	0.3	0.3	0.3
Personal Income (Mil \$)	4,126.1	4,121.1	4,328.3	4,456.9	4,626.4	4,788.4
% Change	6.2	-0.1	5.0	3.0	3.8	3.5
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Real Personal Income (Mil 2020 \$)	3,969.8	3,759.7	3,823.9	3,872.0	3,952.8	4,026.5
% Change	2.1	-5.3	1.7	1.3	2.1	1.9
Real Per Capita Income (Thou 2020 \$)	53.8	51.0	51.8	52.3	53.2	54.0
% Change	2.7	-5.2	1.5	1.0	1.7	1.5
TOURISM SECTOR DETAIL						
Total Visitor Arrivals by Air (Thou)	812.6	1,138.0	1,251.4	1,286.0	1,299.9	1,307.6
% Change - Total Visitor Arrivals by Air	146.0	40.0	10.0	2.8	1.1	0.6
U.S. Visitors	784.9	1,015.0	1,072.7	1,091.5	1,094.5	1,094.0
% Change - U.S. Visitors	180.5	29.3	5.7	1.8	0.3	0.0
Japanese Visitors	0.4	8.3	17.2	19.0	20.3	20.9
% Change - Japanese Visitors	-88.3	1,847.1	108.2	10.7	6.5	3.1
Other Visitors	27.3	114.8	161.5	175.5	185.2	192.7
% Change - Other Visitors	-41.6	320.2	40.7	8.6	5.5	4.1
Visitor Days (Thou)	7,001.9	8,763.0	9,447.4	9,689.8	9,724.5	9,712.1
% Change	138.1	25.2	7.8	2.6	0.4	-0.1
Occupancy Rate (%)	57.0	66.4	71.0	72.5	72.6	72.5

Note: Source is UHERO. Nonfarm Payrolls for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for income and GDP for 2021 are UHERO estimates. Occupancy rate includes UHERO's estimate of TVR occupancy. Figures for 2022-2026 are forecasts.

TABLE 32: JOBS BY DETAILED SECTOR (THOUSANDS)
EXTENDED KAUAI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Non-farm Payrolls	27.0	29.4	30.5	31.3	31.9	32.3
% Change	3.6	8.9	3.8	2.6	1.8	1.4
Construction and Mining	2.0	2.0	2.1	2.2	2.2	2.2
% Change	3.2	4.3	3.7	3.1	1.3	-0.3
Manufacturing	0.4	0.4	0.4	0.4	0.5	0.5
% Change	-2.0	6.1	3.2	2.2	1.8	1.3
Trade	3.9	4.1	4.2	4.3	4.3	4.4
% Change	-0.3	5.1	2.7	1.8	1.5	1.6
Transportation and Utilities	1.3	1.4	1.5	1.5	1.5	1.5
% Change	17.4	9.0	2.1	0.7	0.7	0.7
Finance, Insurance and Real Estate	1.0	1.0	1.1	1.1	1.1	1.2
% Change	-0.3	8.7	6.2	2.7	1.1	0.7
Services	13.5	15.3	16.1	16.7	17.1	17.5
% Change	5.4	13.2	5.4	3.6	2.6	2.2
Health Care and Soc. Assistance	2.7	2.8	2.9	3.0	3.0	3.1
% Change	-3.4	3.7	2.7	2.2	2.0	1.8
Accommodation and Food	6.3	7.6	8.1	8.4	8.7	8.9
% Change	19.4	20.2	6.6	4.1	2.9	2.5
Other	4.5	4.9	5.1	5.3	5.4	5.6
% Change	-5.1	9.0	4.9	3.7	2.6	2.1
Government	5.0	5.1	5.1	5.1	5.1	5.1
% Change	0.0	2.3	0.4	0.1	-0.1	-0.3
Federal Government	0.6	0.6	0.6	0.6	0.6	0.5
% Change	-5.9	1.2	0.7	-0.8	-1.6	-1.9
State and Local Government	4.4	4.5	4.6	4.6	4.6	4.6
% Change	0.8	2.4	0.3	0.2	0.1	-0.1

Note: Source is UHERO. Industry job counts for 2021 are UHERO estimates of the 2022 benchmark revision. Figures for 2022-2026 are forecasts.

TABLE 33: PERSONAL INCOME BY DETAILED SECTOR
EXTENDED KAUAI COUNTY BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
Real Personal Income (Mil 2020 \$)	3,969.8	3,759.7	3,823.9	3,872.0	3,952.8	4,026.5
% Change	2.1	-5.3	1.7	1.3	2.1	1.9
Labor & Proprietors' Income	2,294.6	2,453.7	2,533.3	2,610.4	2,672.8	2,723.9
% Change	1.6	6.9	3.2	3.0	2.4	1.9
Construction	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Manufacturing	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Trade	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Transportation and Utilities	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Finance, Insurance & Real Estate	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Services	—	—	—	—	—	—
% Change	—	—	—	—	—	—
Health Care & Soc. Assist. (% ch.)	—	—	—	—	—	—
Accommodation & Food (% ch.)	—	—	—	—	—	—
Other (% ch.)	—	—	—	—	—	—
Government	488.2	488.6	492.7	500.6	505.2	506.4
% Change	-0.6	0.1	0.8	1.6	0.9	0.2
Federal, civilian (% ch.)	-6.1	0.6	1.5	0.2	-1.0	-1.4
State & Local (% ch.)	0.3	-0.1	0.8	2.0	1.4	0.6
Less Social Security Taxes (-)	275.4	294.7	303.4	311.9	318.8	324.4
% Change	4.0	7.0	2.9	2.8	2.2	1.8
Transfer Payments	1,230.9	863.1	857.4	873.1	889.4	906.5
% Change	6.2	-29.9	-0.7	1.8	1.9	1.9
Dividends, Interest and Rent	712.1	703.4	711.1	721.2	730.4	741.9
% Change	-3.8	-1.2	1.1	1.4	1.3	1.6
Population (Thou)	73.8	73.7	73.8	74.0	74.3	74.5
% Change	-0.7	-0.1	0.2	0.3	0.3	0.3
Real Per Capita Income (Thou 2020 \$)	53.8	51.0	51.8	52.3	53.2	54.0
% Change	2.7	-5.2	1.5	1.0	1.7	1.5
Inflation Rate, Honolulu MSA (%)	3.9	5.5	3.3	1.7	1.7	1.6
Nominal Personal Income (Mil \$)	4,126.1	4,121.1	4,328.3	4,456.9	4,626.4	4,788.4
% Change	6.2	-0.1	5.0	3.0	3.8	3.5

Note: Source is UHERO. Figures for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts. Because of data disclosure rules, industry-level income is not available for some sectors.

TABLE 34: EXTERNAL INDICATORS
EXTENDED STATE OF HAWAII BASELINE FORECAST

	2021	2022	2023	2024	2025	2026
U.S. FACTORS						
Employment (Thou)	152,580.7	157,973.2	159,949.5	160,623.5	161,097.0	161,608.3
% Change	3.2	3.5	1.3	0.4	0.3	0.3
Unemployment Rate (%)	5.4	3.8	3.5	3.6	3.9	4.0
Inflation Rate (%)	4.7	5.5	3.2	2.2	2.0	2.0
Real GDP (Bil chained 2012\$)	19,427.2	20,154.5	20,618.9	20,985.3	21,341.8	21,709.3
% Change	5.7	3.7	2.3	1.8	1.7	1.7
Population (Thou)	331,383.0	332,530.7	333,736.2	335,008.6	336,362.7	337,805.2
% Change	0.4	0.3	0.4	0.4	0.4	0.4
JAPAN FACTORS						
Employment (Thou)	66,665.8	66,638.9	66,698.1	66,463.0	66,143.0	65,779.6
% Change	-0.2	0.0	0.1	-0.4	-0.5	-0.5
Unemployment Rate (%)	2.8	2.8	2.7	2.7	2.7	2.7
Inflation Rate (%)	0.3	1.1	1.0	1.0	1.0	1.0
Real GDP (Bil chained 2011 yen)	535,464.1	544,688.2	554,443.2	560,538.4	565,169.0	568,658.8
% Change	1.4	1.7	1.8	1.1	0.8	0.6
Population (Thou)	125,444.3	125,052.7	124,635.4	124,196.9	123,738.4	123,256.1
% Change	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4
Exchange Rate (Yen/\$)	109.8	111.3	105.4	100.7	97.6	96.6

Note: Source is UHERO. Figures for Japanese population and GDP for 2021 are UHERO estimates. Figures for 2022-2026 are forecasts.

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