

The Effect on Hawaii's Economy of the September 11 Terror Attacks

by

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A Report to the

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Department of Business, Economic Development and Tourism

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Carl Bonham and Byron Gangnes
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The attacks of September 11 on the World Trade Center and Pentagon will have far-reaching adverse impacts on the US, World, and Hawaii economies. Hawaii will be more adversely affected than many other states because of our reliance on air travel and tourism. At this point, there is still much that is not known: how deep will the coming recessions in the US and Japan be; how fast will the global economic recovery be, and, especially, how soon will consumers' confidence in air travel recover so that tourism is able to get back on track. Nevertheless, we now have sufficient evidence to form preliminary estimates of the current and prospective impact on Hawaii's economy.

In this document we describe pre-crisis conditions in the U.S., Japan and Hawaii economies, and we document the adverse effects of the attacks to date. We then present our preliminary economic forecast for Hawaii over the next two years. Because of the extraordinary level of uncertainty about future military and economic developments, we also provide alternative optimistic and pessimistic scenarios for Hawaii's economy.

EXECUTIVE SUMMARY

The terror attacks of September 11 will have a pronounced negative impact on the Hawaii economy over the next eighteen months. Significant job losses have already occurred in tourism-related sectors, and these will continue through the first quarter of 2002. Effects on the broader economy will be muted, partly because the Hawaii economy was performing relatively well before the attacks, and partly because expansionary monetary and fiscal policy in the U.S. will provide a substantial economic stimulus by the middle of next year.

Visitor arrivals to Hawaii were completely interrupted for two days following the attacks. Since then, domestic passenger numbers have improved to about 11% below last year's levels. There has been no discernable improvement in international passenger counts, still 50-60% lower than last year. The effect of the September losses alone caused third quarter domestic arrivals to fall by 7%, 15% for international arrivals.

There were nearly 17,000 initial claims for unemployment insurance benefits in the month following the September 11 attacks; we estimate that about 11,000 are attributable to the attack, about half of these in the hotel industry, the rest in other sectors closely related to tourism. The number of jobs fell by less than this, since the unemployment figures include persons claiming partial compensation because of reduced hours. And the pace of new unemployment claims has receded in recent weeks.

Over the next two years, Hawaii's prospects will depend on economic developments in the U.S. and Japan, but also on the military and security situation, which is much harder to predict. The latter is key to a potential recovery of consumer confidence in air travel and a willingness to vacation in Hawaii. Overall visitor arrivals are expected to fall 7.8% for 2001 as a whole. They will rise 2.0% in

¹ Thanks to Ari Van Assche and Allison Ting Zhou for excellent research assistance. Collaboration of the following people is also gratefully acknowledged: Paul Brewbaker, Bank of Hawaii; Chris Grandy, University of Hawaii Public Administration; Pearl Imada Iboshi, State of Hawaii Department of Business, Economic Development and Tourism; and Michael Sklarz, ISDI, Inc.

2002, and accelerate to 7.4% growth (from a low base) in 2003 as a strong mainland expansion and finally Japanese recovery drives a tourism revival.

The tourism-related sectors of hotels, transportation and retail trade will lose a combined 14,000 jobs by the beginning of next year, and income in these sectors will fall between 4% and 16%. The aggregate impact on Hawaii's economy will be smaller, with non-agricultural employment falling by about 2.5% from the previous high earlier this year. Jobs will return to pre-attack levels by the beginning of 2003, but will remain about 3% lower than we had forecast prior to September 11. The unemployment rate will rise to 5.6% by the middle of next year.

Aggregate real income, the broadest measure of overall economic activity that we track, will show a recession in the fourth quarter of 2001 and the first and second quarter of 2002, on a year-on-year basis, before resuming growth. By 2003, the stimulus from rebounding visitor arrivals will lead to real income growth of nearly 3.5% over the previous year. Consumer inflation will decline to just under 1% in 2002.

We incorporate anticipated effects of the limited fiscal measures adopted during the October legislative special session, and also anticipate government budget cutbacks that limit public sector jobs to existing levels over the forecast horizon.

Because of the unusual level of uncertainty surrounding these forecasts, we consider alternative scenarios that may bracket possible outcomes. In a "high" case, associated with a robust snap-back in the US and in Japan along with quick resolution of security concerns, total visitor arrivals climb to just 14% below last year's levels in the fourth quarter and bounce back sharply in the new year. By 2003, total arrivals are 10% higher than in 2001. The result is much smaller job losses (6,000) for Hawaii's economy and a mere pause in income growth.

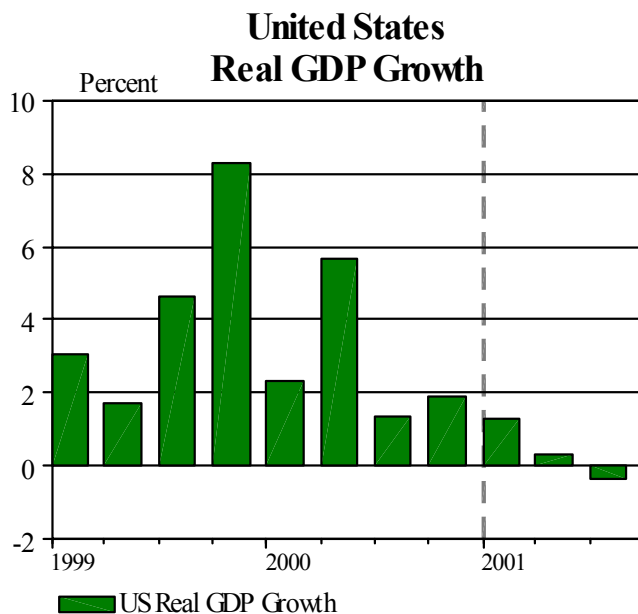
In our "low" scenario, total visitors fail to reclaim pre-attack levels over the entire forecast period. If this adverse scenario were to play out, we could see an additional 6,000 job losses, three consecutive quarters of sharply negative personal income growth, and no real income gain for the entire 2002 calendar year.

ANNUAL SUMMARY TABLE					
CALENDAR YEAR FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO					
	1999	2000	2001	2002	2003
Real Personal Income % Change	0.8	2.3	1.5	0.8	3.5
Non Agriculture Jobs % Change	0.7	3.1	0.7	-0.9	1.8
Unemployment Rate (%)	5.6	4.3	4.6	5.5	5.4
Inflation Rate, Honolulu MSA (%)	1.0	1.8	1.5	0.9	1.5
TOURISM DETAILS (000's)					
Total Visitors	6,741.1	6,976.0	6,435.3	6,562.1	7,046.3
% Change	2.2	3.5	-7.8	2.0	7.4
Eastbound Visitors	2,310.0	2,345.8	1,993.0	1,997.2	2,230.1
% Change	-5.4	1.5	-15.0	0.2	11.7
Westbound Visitors	4,431.8	4,630.7	4,452.2	4,564.9	4,816.1
% Change	6.6	4.5	-3.9	2.5	5.5

THE PRE-ATTACK ECONOMY

Slowing United States economy had been expected to recover

The U.S. economy began to slow markedly in the middle of last year. After expanding at a better than 4% annual rate since 1997, the U.S. economy slowed to a near standstill in the April-to-June quarter of 2001. Prior to the terrorist attacks, we were expecting negative growth for the third quarter with a gradual recovery beginning by the end of the year.



The slowdown in the U.S. had been centered in manufacturing, which saw industrial production fall 3.2% in July from the previous year's level. Business investment, which had been the most buoyant sector during the late 1990s, fell sharply as a weakening profit outlook and the tech sector collapse forced firms to reassess capital needs. The deteriorating profit outlook depressed stock prices and national wealth.

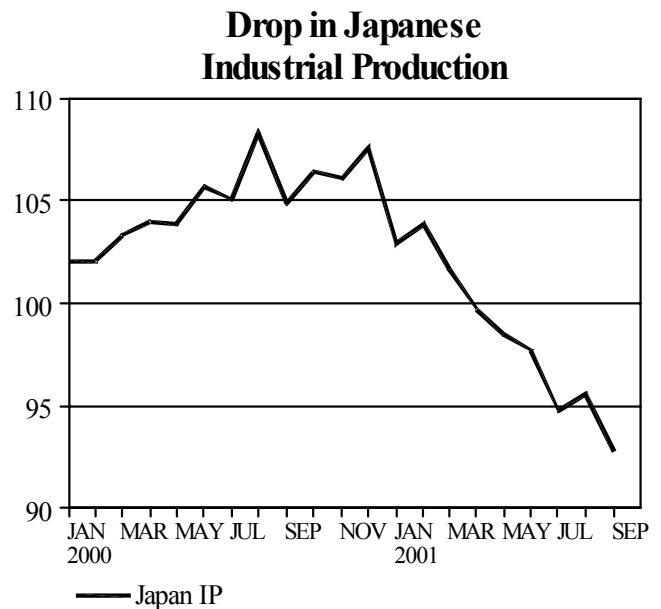
Consumption and residential investment continued to be surprisingly strong, although consumer confidence had fallen to its lowest level in eight years. August retail sales were up 0.3%, following a 0.2% gain in July, according to the Commerce Dept. Since consumption represents 2/3 of output, the fairly

upbeat consumer picture led to hope that the economy would resume growth without suffering an outright recession. At the same time, recent high-profile layoffs and a sharp jump in unemployment to 4.9% in August raised concerns that consumer spending might falter in coming months.

The Federal Reserve Board acted decisively to support economic recovery, reducing short-term interest rates seven times before September 11, and the fiscal stimulus check was in the mail.

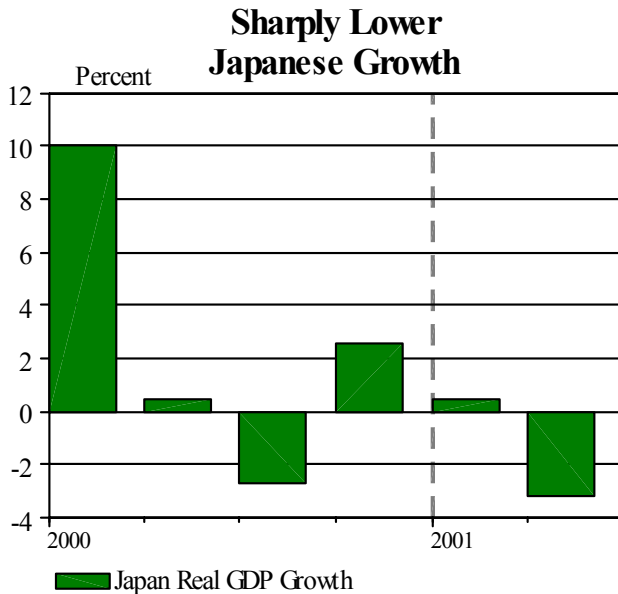
Japanese economy had taken a turn for the worse

Even before the attacks, Japan's economic woes had been deepening. The country's fragile recovery that began in 2000 had been struck broadside by the slumping global economy. With weak demand in its foreign markets and the tech sector collapse, Japanese exports fell 12% in the year to July. Industrial production was off nearly 12% from a year earlier. Prices on the Japanese stock market stood at their lowest levels in 17 years.



Japan's dire straights were confirmed by preliminary estimates of second quarter gross domestic product released on September 7, which showed the economy

contracting at a 3.2% annual rate in the April-June period. Weak demand has been reflected in continuing deflation in Japan, with consumer prices dropping in August for the 23rd month in a row.



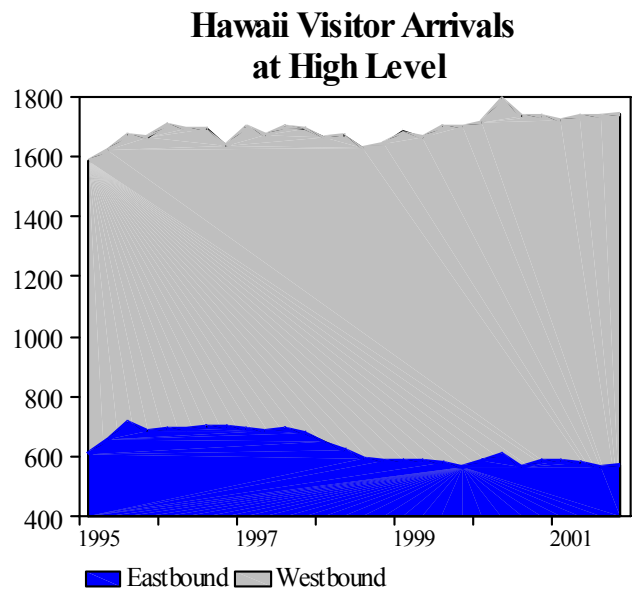
These problems have been compounded by the Japan's inability to use policy measures successfully to restore growth. Repeated fiscal stimulus has failed to move the economy and monetary policy has been timid. Most promising from a long-run perspective is the Koizumi administration's promise of bold reform to finally deal with the nation's banking problems. In the short run, however, more corporate layoffs and profit problems may accompany these restructuring efforts.

Local strength kept the Hawaii economy on a growth path

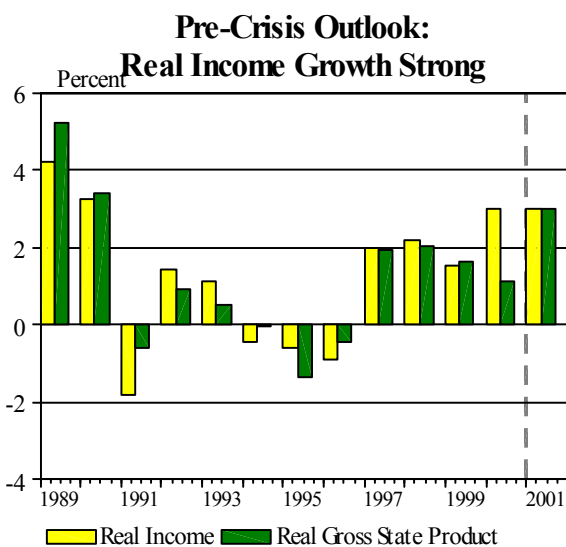
While the external environment deteriorated sharply during the first half of the year, continued strength in local economic activity resulted in limited slowing in Hawaii economic indicators. Visitor arrivals fell by

1.5% during the first six months of the year, yet an increase in length of stay held daily census near last year's levels. In fact, with rising room prices and nearly stable occupancy rates, real (inflation adjusted) hotel revenues grew by over 1% compared with the first half of 2000. Prior to the September 11 attacks, we were expecting a slight 0.7% decline in overall visitor arrivals for 2001 as a whole.

Other indicators posting moderate growth include real personal income up almost 3.5% in the first half, real contracting up almost 4% relative to the first half of 2000, real general fund tax revenues up 4.4%, and jobs growing by 2% through July of 2001. In August 2001, there were 19,000 more jobs and 7,000 fewer unemployed persons when compared with August of 1999.



Largely as a result of increased domestic demand fueled by a more stable job market, the Hawaii economy showed signs of strength at midyear. An optimistic assessment of the global economy, based on expectations of a late year rebound in the US economy driven by falling interest rates, and fiscal stimulus, could have led to a respectable if-not good year for Hawaii businesses and consumers.



THE IMMEDIATE IMPACT—HAWAII'S ECONOMY SINCE SEPTEMBER 11

The economic fallout of the terror attacks was immediate and profound. Economic activity came to a virtual standstill in the days after September 11, and the outlook for business and consumer spending took a sharp downturn. The disruption of air travel and consumers willingness to travel as the nation embarked on a potentially long-lasting war against terrorism has hit the tourism-dependent Hawaii economy particularly hard. In this section we describe the effects to date on the U.S., Japan and Hawaii economies.

The U.S. Economy Slips Toward Recession

The U.S. economy suffered a measurable drop in economic activity from the direct impact of terror attacks. The halt in economic activity during the 2nd week of September alone trimmed an estimated 0.5% to 1% from third quarter U.S. GDP growth. Manufacturing firms reported substantial reductions in output because of transportation bottlenecks, and firms throughout the economy effectively ceased operation as management and employees turned their attention to television coverage of the aftermath.

The immediate reaction of financial markets was also severe. After equity trading resumed on Monday, September 15, the Dow-

Jones Industrial Average fell more than 1,360 points in that week, or 14%, the largest weekly percentage loss in 70 years. The Nasdaq fell 16% for the week. Luckily, these sharp equity market declines did not last; by early October the markets had recovered to near pre-crisis levels. The increased market volatility may weight negatively against the business and consumer outlook.

The terrorist attack pulled down an already weak U.S. economy. Gross domestic product contracted at an annualized rate of 0.4 per cent in the third quarter, the first decline since an isolated negative quarter in 1993. Business investment was the main negative force in the economy, with non-residential fixed investment falling at an annual rate of 11.9%. The decline was cushioned by limited 1.2% growth in consumer spending and 1.9% growth in residential investment.

The impact on consumer confidence is mixed. Retail sales did decline 2.4% in September, but much of that may be due to direct reductions in spending immediately after the attacks. Meanwhile, the two major consumer confidence indexes tell contradicting stories. The University of Michigan's October and November consumer sentiment indexes actually rose. But the recently released Conference Board's index plunged 11.5 points to 85.5 during the month of October, a level it hasn't touched since February 1994. All this paints a shaky picture of the U.S. retail outlook.

The Federal Reserve has moved quickly to shore up economic conditions, making their eighth interest rate cut of the year before markets opened on the Monday after September 11. They followed with a ninth cut on October 2 and a tenth on November 6. The federal funds rate currently is at 2%, its lowest level since 1961. The Federal government has also weighed in with fiscal support, including the airline bailout but also money for rebuilding.

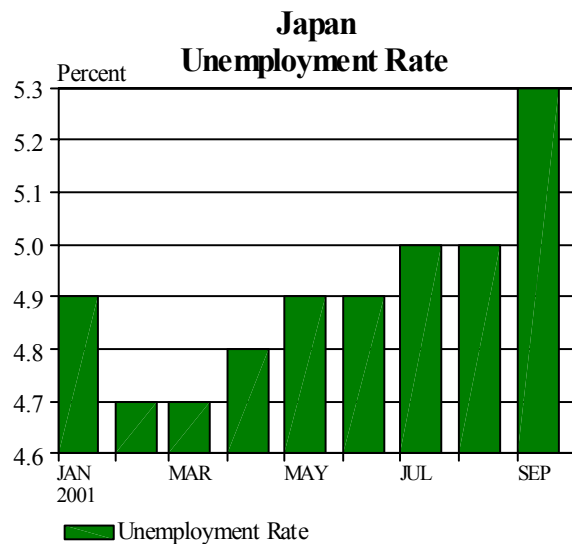
Despite these strong policy responses, the fallout of the attacks has probably been sufficient to push a slowing U.S. economy over the boundary into recession. The recession is not likely to last long, and current and anticipated stimulative policy will underpin a

substantial bounce back in 2002. The U.S. travel industry has been struck much harder than the broad economy as people defer or cancel planned trips, and it will take longer for travel to recover. We describe these developments further below.

Japan Falls Even Further

Japan's economy has weakened further in the wake of the attacks. Hopes for quick recovery in Japan had relied almost exclusively on export-led growth under an anticipated U.S. recovery. Now those hopes have been dashed and the country is embracing itself for the second recession in three years.

Japan's unemployment rate for the first time exceeds postwar levels. In September, the jobless rate soared by 0.3 percentage point to a record 5.3%, the largest monthly increase in 34 years. Meanwhile, industrial production dropped another 2.9%.



Surveys of business confidence since the attack indicate that the outlook in Japan continues to worsen. The Bank of Japan's quarterly *tankan survey* released Oct. 1 showed that business sentiment for large manufacturers stands at minus 33, down 17 points from three months earlier. (The diffusion index is calculated by subtracting the percentage of firms reporting worsening business conditions from those declaring that business is improving). This is the lowest index

figure since June 1999 and the third straight drop in the *tankan* survey.

Despite these concerns, the Bank of Japan has not matched the aggressive response of its American counterpart. The Bank left monetary policy unchanged at its October 12 meeting, taking a wait-and-see stance after easing credit twice in the previous two months. On the fiscal side, Japan has announced plans to spend 1 trillion yen (\$8.3 billion) creating new jobs. It is not clear how much more stimulus can be expected, since Prime Minister Koizumi has imposed a 30 trillion yen (\$255 b.) cap on new government borrowing this fiscal year. He has however sounded somewhat more flexible in recent weeks.

Travel industry woes hurt Hawaii the most

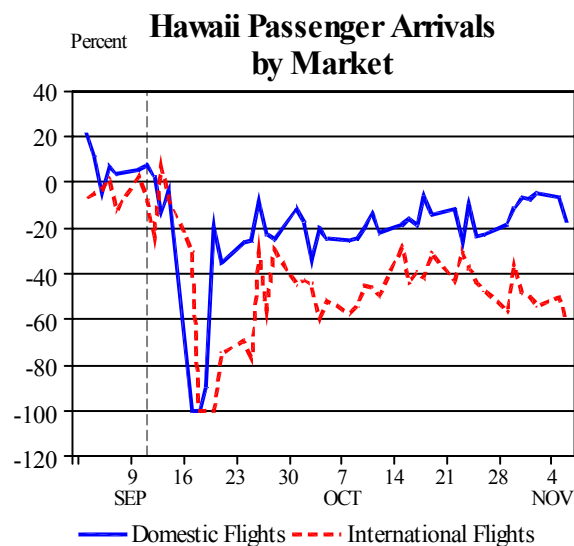
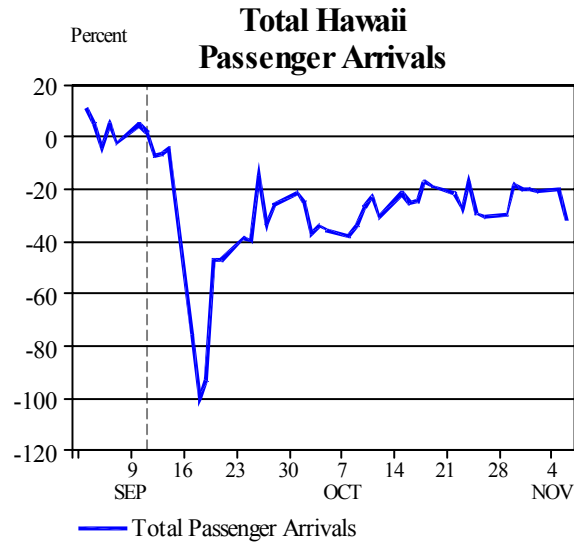
Hawaii's dependence on air travel and the tourism industry means we have been harder hit than most parts of the country. The state is now in the midst of a sharp downturn in tourism-related activities.

The airline industry and much of the transportation sector nationwide was at a near standstill during the second week of September. Since that time, all major US, and some international carriers have announced cut backs in their schedules—most by near 20%. Cutbacks on mainland-Hawaii routes have been less severe. United Airlines, for example, has cut only 2 of 17 Hawaii flights. Hawaiian and Aloha have announced schedule cuts in the 20-25% range, but the majority have been inter-island flights. Japan Airlines has cut back more severely, reducing its weekly number of flights to Honolulu to 58 from 75.

Passenger counts to Hawaii are down significantly as visitors and residents alike cancel or postpone flights. On the domestic market side, the number of passengers has improved fairly steadily from average levels about 20% below last year in the first full week after the attack to about 11% recently. Unfortunately, there has been no discernable improvement in International passenger counts, still off 50-60% from last year's pace. The effect of the September losses alone

caused third quarter domestic arrivals to fall by 7%, 15% for international arrivals.

from losing air service. Locally, Hawaiian Airlines will receive \$24.3 million and Aloha Airlines \$6.9 million from this fund.



The air travel slump has created massive losses for the global airline industry. Since the terrorist attack on Sept. 11, the airline industry nationally has announced more than 120,000 layoffs. American carriers are expected to lose several billion dollars this year alone, with larger losses likely in 2002. President Bush has signed a \$15 billion airline industry aid package that includes \$5 billion in immediate grants to compensate airlines for losses suffered from the government-ordered grounding of flights. It also provides for \$10 billion in loan guarantees to airlines, and some measures designed to prevent small markets

The sharp falloff in visitors to Hawaii has led to immediate and dramatic declines in Hawaii's tourism business. According to a recent survey by Smith Travel Research and Hospitality Advisors LLC, revenue at Hawai'i hotels has fallen an estimated \$143 million compared with a year ago, and revenue per available room is 18% lower than in the period before September 11. Occupancy rates, though improving, are still down about 20-25%.

Tourism businesses have responded to the downturn with a rapid pace of layoffs and hours reductions of their workers. There were nearly 17,000 new initial claims for unemployment insurance benefits in the period between September 11 and October 13; we estimate that about 11,000 are attributable to the attack. As Table 1 shows, about half of these claims occurred in the hotel industry, where more than 5,000 new claims for compensation were filed. Most of the rest of the claims occurred in other sectors closely related to tourism: transportation, eating and drinking establishments, and other retail businesses. Note that the number of jobs has fallen by less than these figures indicate, since they include persons claiming partial compensation because of reduced hours. In recent weeks, the pace of new claims has receded but remains about twice the levels of the previous year.

Category	Number of Claims
Hotels and related enterprises	5,359
Transportation	1,431
Eating and Drinking Establishments	945
Other Retail	1,340
Other	2,308
Total	11,383

Source: UHERO estimates from DBEDT data.

Job losses have not extended significantly beyond the tourism and related industries so far. But there are already some indications of general economic fallout from the tourism slump. Personal bankruptcy filings in Hawaii increased by 62% in the three weeks following the attacks, an increase that led the nation. As the tourism downturn continues, weakness will spill over more substantially to the broader economy.

THE MEDIUM-TERM IMPACT—A PRELIMINARY FORECAST FOR 2002-2003

As always, Hawaii's economic prospects in coming months will depend on economic developments in our key tourism markets, Japan and the mainland U.S. Over the next two quarters, a brief recession in the U.S. and deepening trouble in Japan will reduce the growth of income and wealth that support overall spending. Economic uncertainty will tend to reduce propensities to spend on travel and recreation. The effect of these business cycle influences is expected to reduce the demand for Hawaii vacations in the near term in ways that are well understood.

Much harder to predict is the evolution of the military and security situation and the recovery of consumer confidence in air travel safety. These concerns have been the central source of the recent dramatic decline in Hawaii tourism; their resolution will be key to a Hawaii tourism recovery. For our baseline forecast we assume a continued gradual improvement in the military/security environment that permits a continuation of the domestic visitor recovery trend we have already begun to observe. Considering the lack of visible improvement in Japanese travel, we expect a more moderate recovery path for international arrivals in coming months.

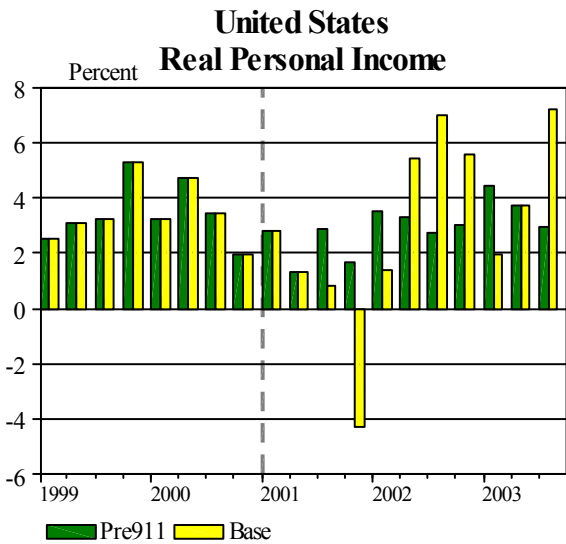
In addition to the prospects for air travel, we must also make assumptions about the policy environment at the national and international level and in the local economy.

For the U.S., we assume continued monetary support by the Federal Reserve, with maintenance of low rates well into 2002. We expect one or more additional fiscal support packages from the U.S. Congress, totaling between \$60 billion and \$100 billion dollars this year. Japan's ability to use fiscal stimulus and hesitance to provide monetary support will bar further substantial efforts there. For our Hawaii baseline, we incorporate anticipated effects of the limited fiscal measures adopted during the October legislative special session, and also anticipate government budget cutbacks that limit public sector jobs to existing levels over the forecast horizon.

The risks associated with visitor projections are clearly much larger than typically encountered in "normal" times. It seems prudent, therefore, to consider alternative scenarios for visitor recovery and the resulting effects on the Hawaii economy. We take up these alternative scenarios at the end of this paper.

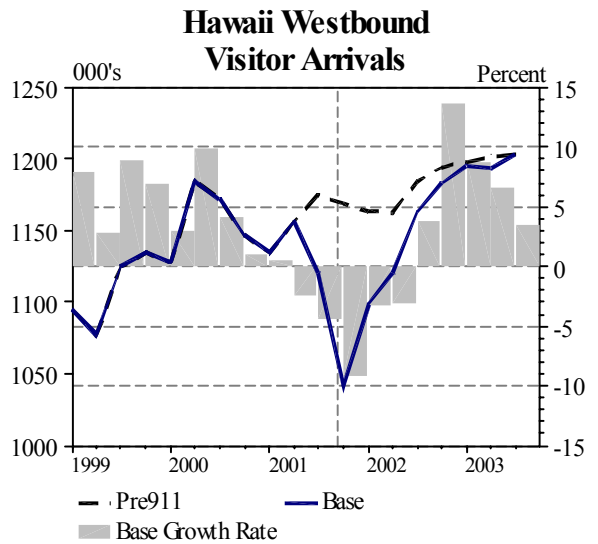
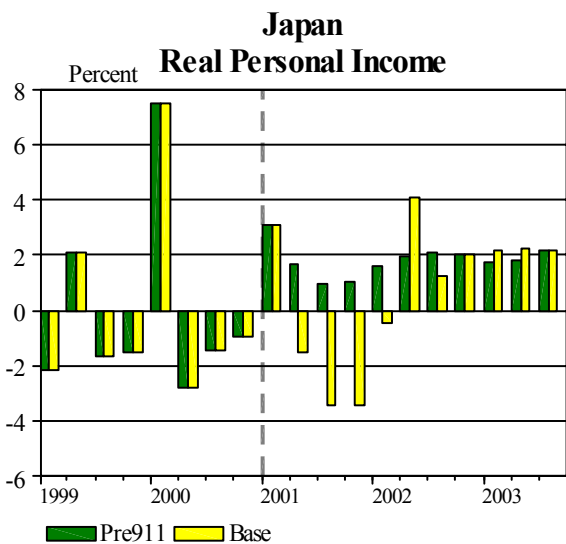
External environment and the visitor path

The dislocation and aftermath of the September attacks will push the U.S. economy over the edge into recession. However, residual strength in consumer spending and housing investment, combined with significant government stimulus, will make this a short and shallow recession by historical standards. We expect U.S. real GDP to contract 1% in the third quarter and more than 4% in the fourth quarter of this year, with moderate growth resuming in the first quarter of next year. Real personal income, a key determinant of westbound visitors in our model, will hold up a bit longer, rising slightly in the third quarter before falling at a 4.3% annual rate in the fourth. By 2003, the considerable current and anticipated fiscal and monetary expansion will power a surge in growth, at rates above what we expected prior to the September 11 attacks.



Westbound visitor arrivals are expected to fall 9.2% in the fourth quarter compared with the fourth quarter of last year, after an estimated 4.4% year-on-year decline in the quarter just ended.² That will bring westbound arrivals for the year 3.9% below their 2000 level. Continuing gradual recovery in mainland-Hawaii travel will bring westbound visitors close to our pre-attack forecast by the end of 2002.

For Japan, the terrorism crisis and the downturn in the all-important U.S. market have pushed the economy deeply into recession. We estimate that output declined at a 3.4% annual rate in the third quarter and will fall at a similar rate this quarter before a modest recovery starts by the middle of next year. This leaves the Japan economy well below our earlier forecasts.



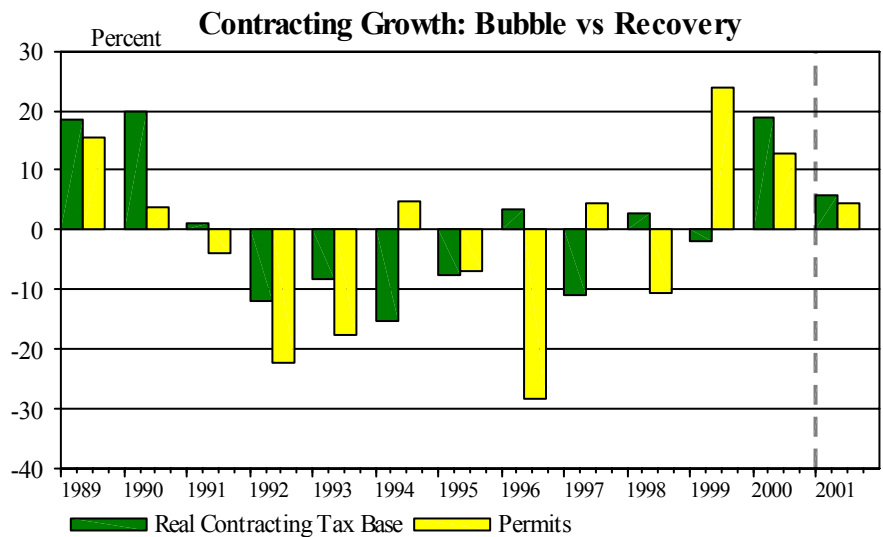
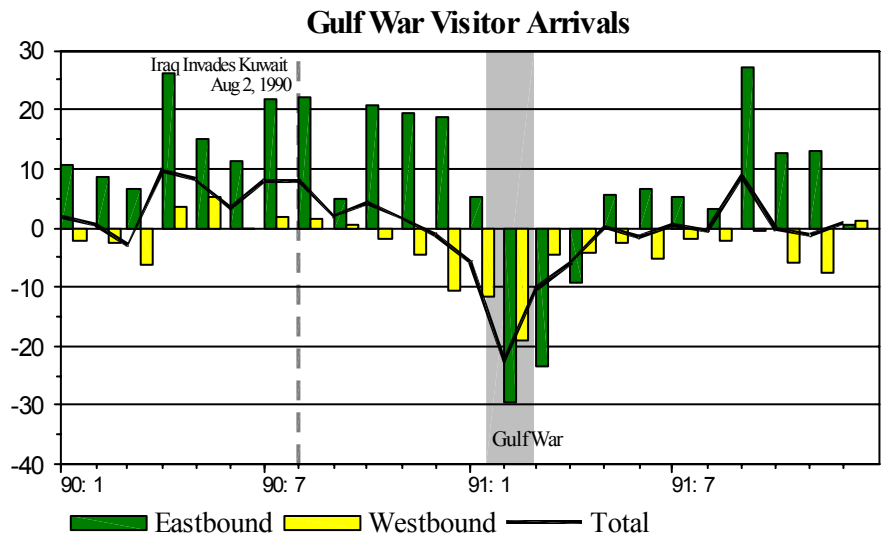
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² For forecasting purposes, UHERO continues to use westbound and eastbound arrivals rather than the domestic and international categories now favored by DBEDT. The primary difference involved treatment of international Canadian visitors who are counted as westbound visitors in our calculations.

The Gulf War and the 1991 Downturn

As a direct consequence of the Gulf War, Hawaii lost 12% of its visitors during the 1st quarter of 1991. While Westbound visitor growth turned negative almost immediately after the Iraqi invasion of Kuwait in August 1990, Eastbound arrivals growth remained strong until the start of the U.S. offensive in January 1991. The worst monthly decline came in February, when total arrivals were 22% lower than the previous year.

The end of hostilities brought a sharp rebound of Eastbound arrivals, which posted near 8% growth in May 1991. The failure of Westbound travel to recover fully owes less to the lingering effects of the war than the mainland recession that was then underway. California’s recession was particularly lengthy—real income growth did not reach pre-war levels until 1995. And Hurricane Iniki hit Westbound travel hard in the fall of 1992.



Another significant difference between the Gulf War shock to Hawaii’s economy and the current situation is the collapse of the Japanese *Bubble* Economy. In the late 80s, the Japanese Bubble powered not only visitors to Hawaii, but also a massive building spree in the islands. As a result, the 90s saw a loss of 38% of Hawaii’s contracting jobs. In contrast, our position near the start of a construction upswing should help to cushion the overall impact of the tourism downturn.

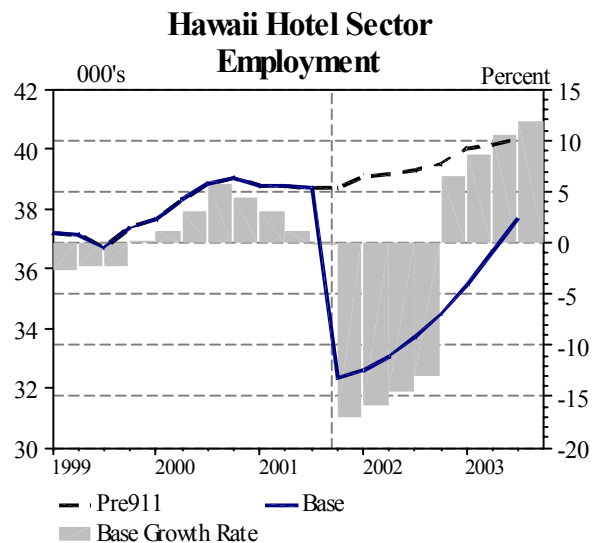
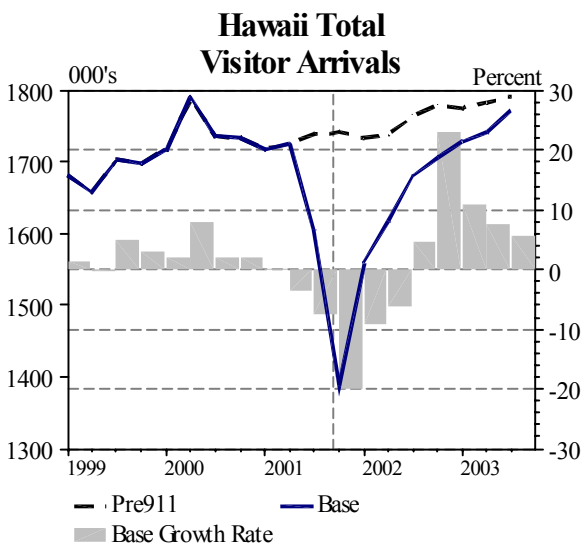
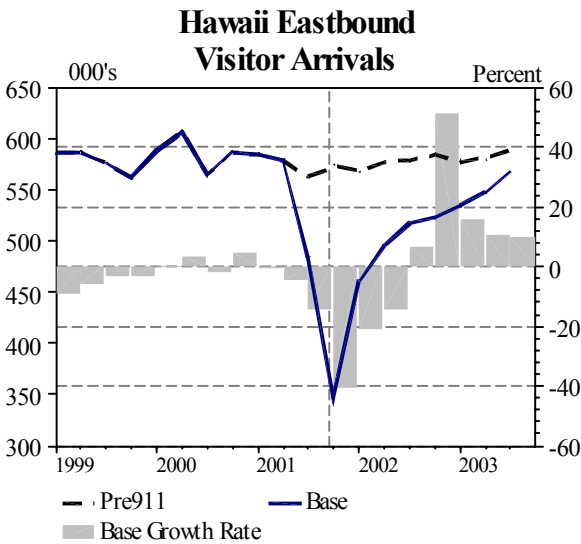
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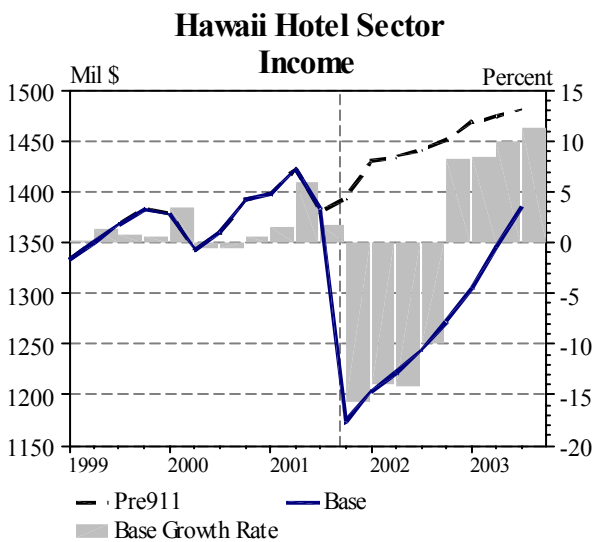
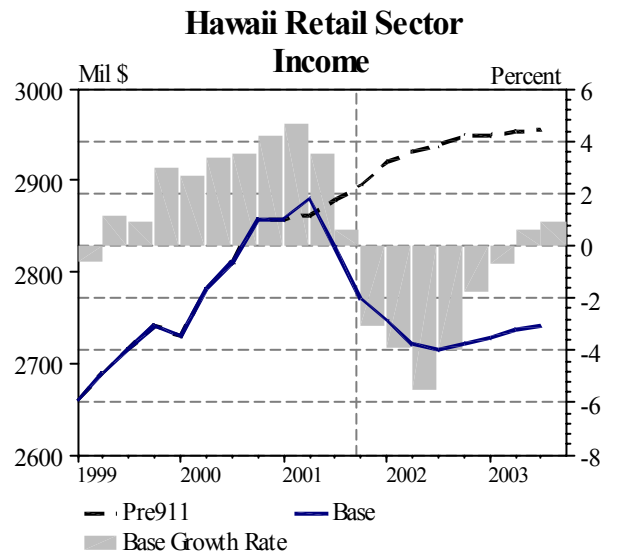
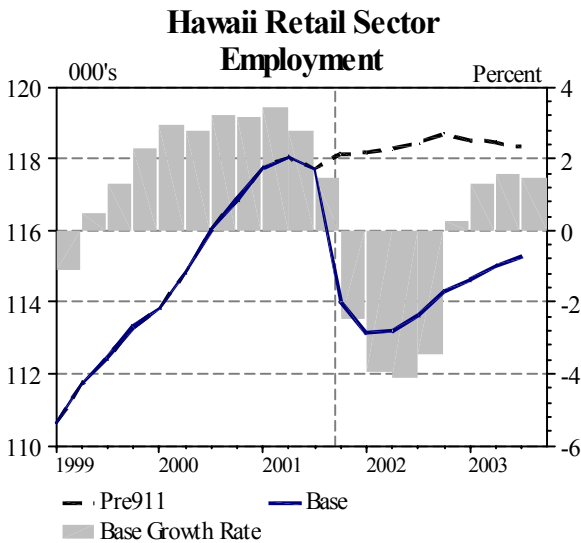
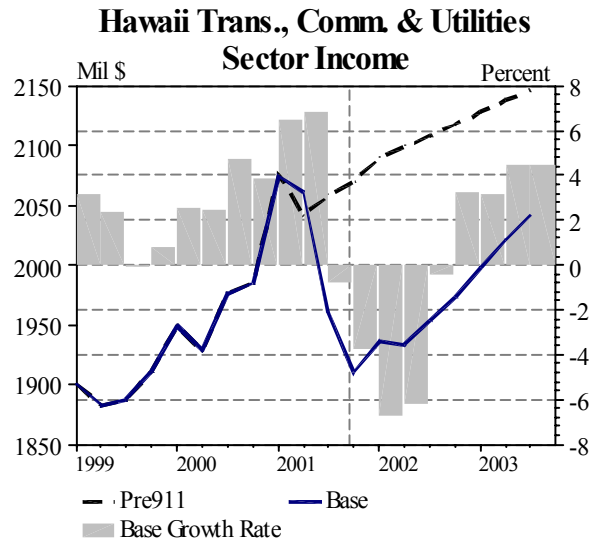
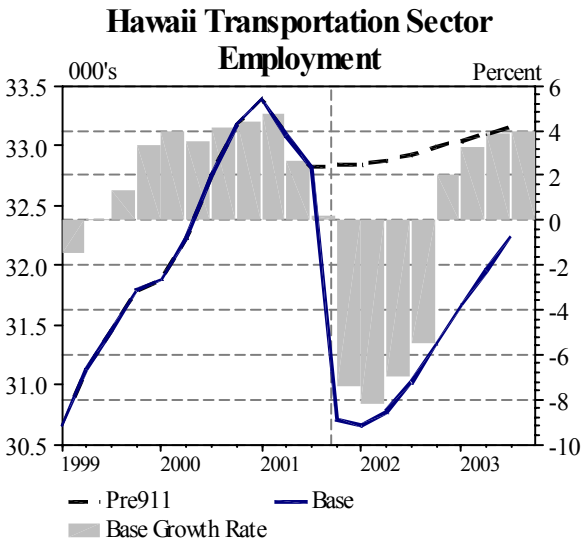
The eastbound outlook is considerably worse, with arrivals 40.9% below last year in the fourth quarter, after a 15% decline in quarter 3. Recovery is very slow, so that eastbound arrivals remain 10% below pre-attack forecasts at the end of 2002, 3% lower at the end of 2003. Overall visitor arrivals are expected to fall nearly 8% for 2001 as a whole. They will rise 2% in 2002, and accelerate to 7.4% growth (from a low base) in 2003 as a strong mainland expansion and finally Japanese recovery drives a tourism revival.

Key Hawaii Indicators

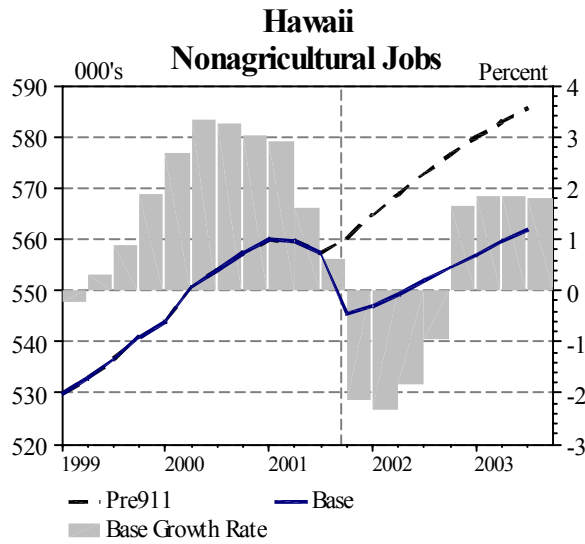
In Hawaii, sectors closely related to tourism will bear the brunt of the visitor slowdown. The hotel industry is expected to lose 6,400 jobs by the first quarter of next year (roughly 16% of the workforce). Jobs will be added back slowly as the industry recovers, approaching pre-attack levels only at the very end of 2003. Income in the hotel sector will show a similar path, falling nearly 15.6% below 2000 levels by the fourth quarter of the year, and recovering gradually thereafter.

The transportation sector will have shed about 2,700 jobs by the end of the year. This will pull real income for the broader transportation, communication and utilities sector down 3.7% in the fourth quarter compared with 2000 and 6.7% below last year's levels in 2002Q1. Retail trade will suffer both from fewer visitors and a shift in their composition toward lower-spending domestic travelers. The sector will lose more than half of the jobs that it added over the past two years—about 5,000 jobs overall—and see a decline in 2002 income of nearly 4%.

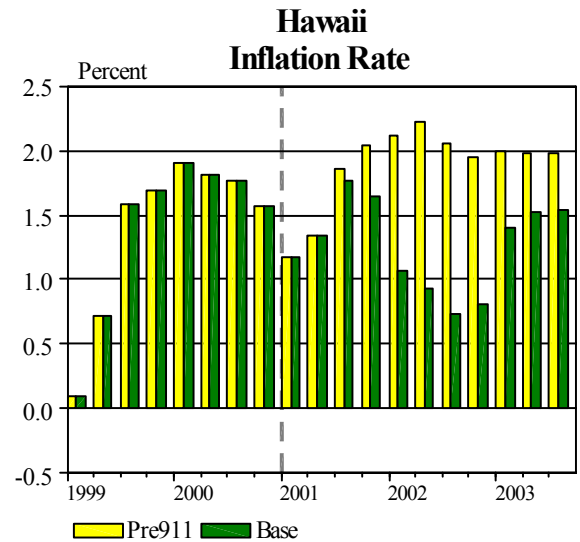
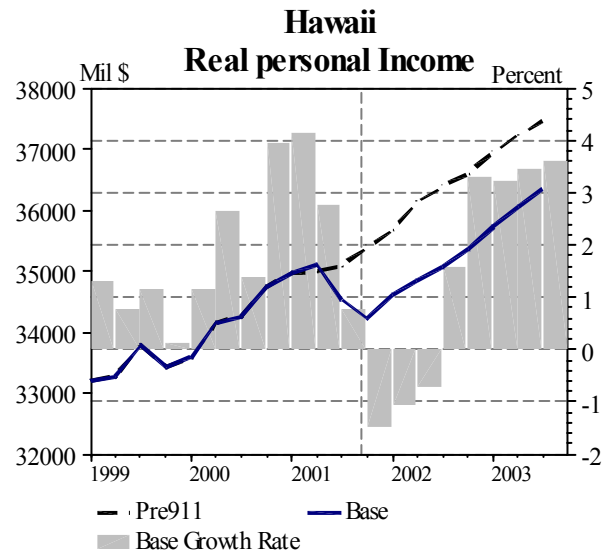
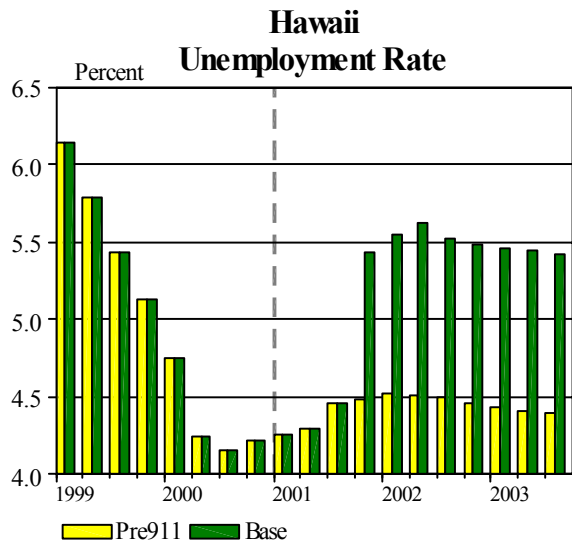




The aggregate impact on Hawaii's economy will be less severe than in the tourism-related industries. Total non-agricultural employment will fall by "only" 14,100 payroll jobs (about 2.5%) because modest continuing growth in other sectors will offset tourism losses. Jobs will return to pre-attack levels by the beginning of 2003, but at these levels will be about 4% lower than we had forecast prior to attacks. Because survey employment will fall by less than payroll jobs, the unemployment rate will rise 1.2 percentage point to 5.6% by the second quarter of 2002 before falling back somewhat as economic recovery takes hold.



Aggregate real income, the broadest measure of overall economic activity that we track, will shrink in the fourth quarter of 2001 and first two quarters of 2002, before resuming growth. By 2003, the stimulus from rebounding visitor arrivals will create robust growth at about a 3.5% annual rate. A familiar silver lining in slack economic times in Hawaii is falling price pressures. We expect to see that in this case as well, with consumer inflation declining to just below 1% in 2002.



FORECAST RISK AND ALTERNATIVE SCENARIOS

There are always risks that unforeseen events will lead to outcomes that differ in important ways from forecasted values. In the present situation, the risks are considerably larger than normal because some of the primary factors likely to drive the economy are simply unknowable at this point. At the head of the list of uncertainties is the progress of the War on Terrorism; will hostilities in the Middle East be brought to a close fairly quickly with a minimum of violence, or will the scope of war in the region intensify? At home, how will the threat of new terrorism attacks unfold? We have seen in the past month how new threats of Anthrax have disrupted private businesses and the national government. Continued threats could further undermine consumer confidence.

Of perhaps greater importance for Hawaii are the evolving attitudes of consumers toward vacations and air travel. Hawaii's tourism economy will not recover unless there is continued improvement in consumer confidence and willingness to travel. It appears that progress is being made for mainland travelers, but the resilience of this renewed confidence is unclear, and there is no evidence yet of a turnaround in the Japanese market.

In addition to security uncertainties and consumer confidence, there are economic policy uncertainties. The Federal Reserve had acted decisively to support U.S. economic growth since the attacks, and we should feel the effects of that support in coming months. The Federal government has already provided \$40 billion dollars for the rebuilding effort and another \$15 billion in bailout funds for the Airlines. It is unclear how much additional stimulus will be forthcoming from the Feds and in what form. Precisely what emerges from negotiations between the White House and Congress will affect the recovery in coming months. Similar uncertainty is involved in potential further State economic stimulus.

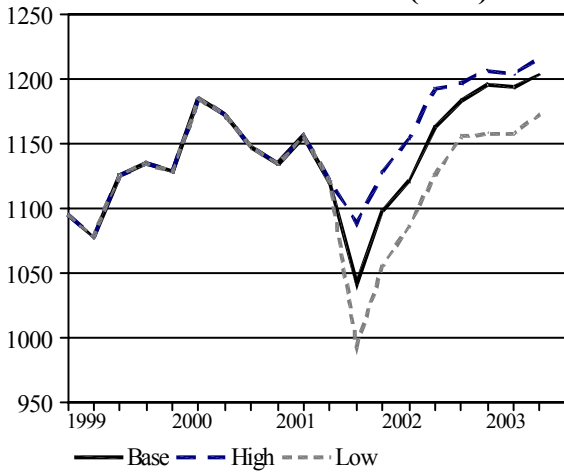
We discussed above the constraints facing Japan as it tries to deal with this crisis on top of an already faltering economy. The willingness of both fiscal and monetary authorities to provide additional stimulus makes a quick recovery difficult to predict.

In Hawaii we have been aided by the relatively strong position of the economy going into the crisis, particularly a strong construction industry and rapid income growth for Hawaii residents. Our models tell us something about how tourism weakness is likely to affect the broader economy, but the depth of the tourism shock makes it difficult to predict how other sectors like construction will weather the storm. If larger negative spillovers occur than we are anticipating the pace of Hawaii recovery will be delayed.

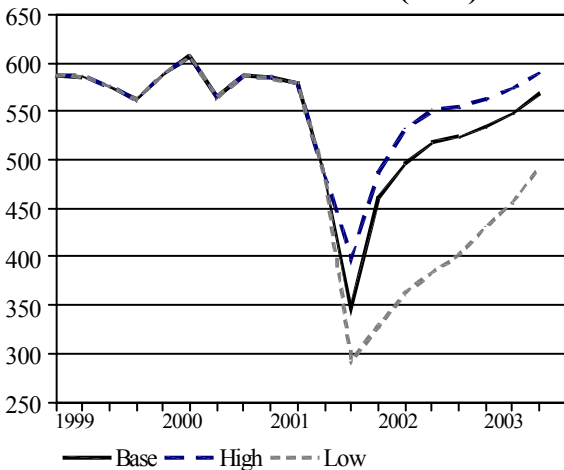
Finally, Dengue Fever is an unrelated threat to Hawaii tourism that has recently appeared. While it looks like progress has been made in containing the disease outbreaks in Hawaii—and there is little anecdotal evidence that it is affecting tourism except in East Maui—the problem could represent a severe threat to the tourism industry if the disease gets established in Hawaii.

While it is impossible to quantify all of these risks, it may be useful to consider alternative scenarios that may bracket possible outcomes. Here, we present two such forecasts: one that assumes a more rapid recovery of both domestic and international tourism, and another that looks at the implications of a slower return of Hawaii tourists. Neither scenario is considered as likely to occur as the baseline forecast.

Hawaii
Westbound Visitors (000s)



Hawaii
Eastbound Visitors (000s)

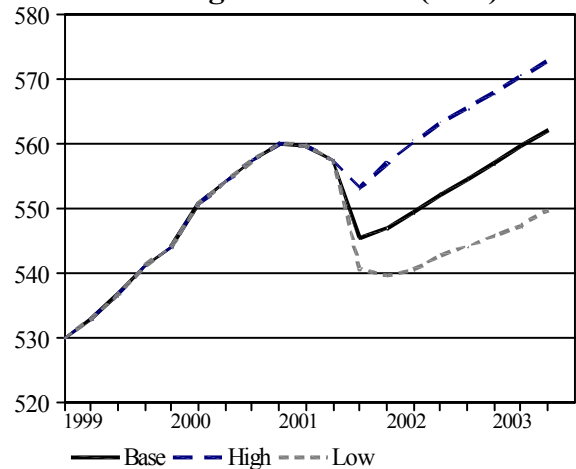


The “high” and “low” scenarios are illustrated in the accompanying figures. In each case, we show the levels of key variables under these two scenarios as well as the baseline forecast path. In the “high” case, associated with a robust snap-back on the mainland and in Japan along with quick resolution of security concerns, westbound visitor arrivals are assumed to climb to just 5% below last year’s levels in the fourth quarter and bounce back sharply in the new year. Eastbound arrivals also begin significant recovery much sooner than in the baseline (-32% for the fourth quarter), but still take two years to approach pre-attack levels. The result

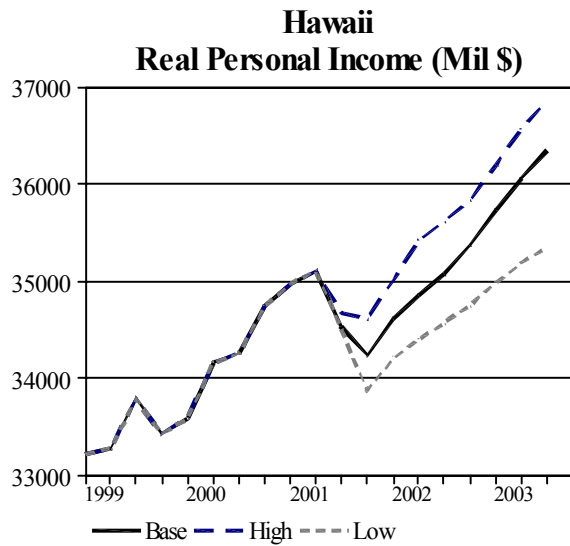
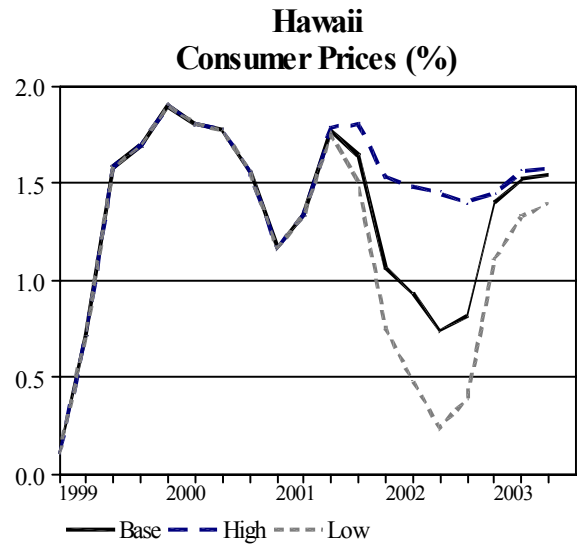
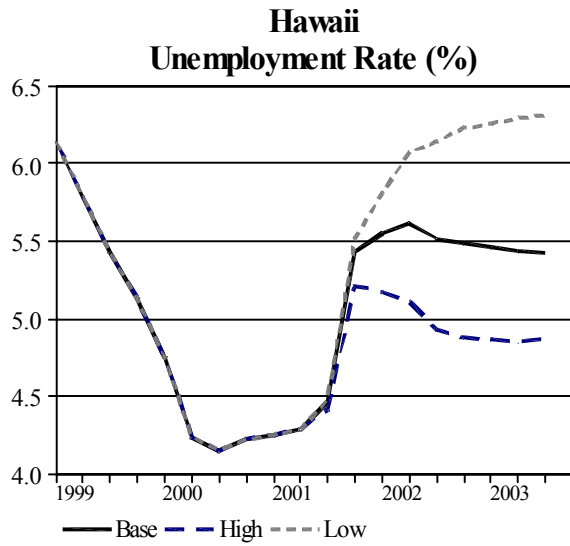
is much smaller job losses (7,000) for Hawaii’s economy and a mere pause in income growth.

If the economic downturn on the U.S. mainland and in Japan is longer and deeper than now expected, and if consumer confidence in air travel—especially by the Japanese—shows more resistance to recover, arrivals could remain below pre-attack levels for much longer than we now expect. In our “low” scenario, westbound arrivals remain at present levels and take a half-year longer to recovery to pre-attack levels. The eastbound market stays 40-50% below normal until mid-2002, and makes a very slow recovery from there. Total visitors fail to reclaim pre-attack levels over the entire forecast period. If this adverse scenario were to play out, we could see an additional 6,000 job losses, three consecutive quarters of sharply negative personal income growth, and no real income gain for the entire 2002 calendar year.

Hawaii
Nonagricultural Jobs (000s)



These high and low scenarios are intended to show a possible range of outcomes for Hawaii if circumstances turn out much better or worse than we currently expect. It is our view that outcomes more extreme than these alternatives are not very likely. Nevertheless, considering the volatile nature of the current environment, such outcomes cannot be completely dismissed.



FORECAST TABLES
(For more recent updates go to <http://www2.hawaii.edu/~uhero/>)

TABLE 1: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO

	200101	200102	200103	200104
Real Personal Income (Mil 2001\$)	34974.2	35106.0	34529.9	34230.4
% Change	4.1	2.8	0.8	-1.5
Nominal Personal Income (Mil \$)	34837.0	35106.0	34727.8	34519.8
% Change	5.3	4.1	2.6	0.1
Inflation Rate, Honolulu MSA (%)	1.2	1.3	1.8	1.6
Non Agriculture Jobs (000's)	559.9	559.6	557.4	545.5
% Change	2.9	1.6	0.6	-2.1
Unemployment Rate (%)	4.3	4.3	4.5	5.4
TOURISM DETAILS (000's)				
Total Visitors	1718.0	1724.4	1604.8	1388.1
% Change	0.1	-3.6	-7.5	-19.9
Eastbound Visitors	584.0	578.2	484.2	346.5
% Change	-0.7	-4.7	-14.2	-40.9
Westbound Visitors	1134.4	1155.7	1120.6	1041.6
% Change	0.6	-2.4	-4.4	-9.2
JOB DETAILS (000's)				
Lodging Industry	38.8	38.7	38.7	32.4
% Change	3.1	1.2	-0.2	-17.1
Transportation Industry	33.4	33.1	32.8	30.7
% Change	4.7	2.7	0.2	-7.4
Retail Trade Industry	117.8	118.0	117.7	114.0
% Change	3.4	2.8	1.5	-2.5
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1398.4	1422.3	1382.8	1174.1
% Change	1.5	5.9	1.7	-15.6
Transportation Industry	2075.1	2061.0	1960.8	1910.6
% Change	6.5	6.9	-0.8	-3.7
Retail Trade Industry	2858.2	2880.0	2827.7	2771.0
% Change	4.7	3.5	0.6	-3.0

TABLE 1: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO

	200201	200202	200203	200204
Real Personal Income (Mil 2001\$)	34609.5	34848.4	35078.2	35363.7
% Change	-1.0	-0.7	1.6	3.3
Nominal Personal Income (Mil \$)	34839.4	35173.0	35539.9	35953.3
% Change	0.0	0.2	2.3	4.2
Inflation Rate, Honolulu MSA (%)	1.1	0.9	0.7	0.8
Non Agriculture Jobs (000's)	546.9	549.4	552.0	554.5
% Change	-2.3	-1.8	-1.0	1.7
Unemployment Rate (%)	5.5	5.6	5.5	5.5
TOURISM DETAILS (000's)				
Total Visitors	1559.2	1616.3	1680.1	1706.5
% Change	-9.2	-6.3	4.7	22.9
Eastbound Visitors	461.0	495.6	517.3	523.3
% Change	-21.1	-14.3	6.8	51.0
Westbound Visitors	1098.2	1120.7	1162.8	1183.2
% Change	-3.2	-3.0	3.8	13.6
JOB DETAILS (000's)				
Lodging Industry	32.6	33.1	33.7	34.5
% Change	-16.0	-14.6	-13.0	6.5
Transportation Industry	30.7	30.8	31.0	31.3
% Change	-8.2	-7.0	-5.5	2.0
Retail Trade Industry	113.1	113.2	113.6	114.3
% Change	-3.9	-4.1	-3.5	0.2
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1203.2	1221.8	1244.3	1271.9
% Change	-14.0	-14.1	-10.0	8.3
Transportation Industry	1936.4	1933.6	1953.4	1973.3
% Change	-6.7	-6.2	-0.4	3.3
Retail Trade Industry	2746.5	2720.6	2715.4	2722.4
% Change	-3.9	-5.5	-4.0	-1.8

TABLE 1: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO

	200301	200302	200303	200304
Real Personal Income (Mil 2001\$)	35725.6	36056.2	36349.4	36620.5
% Change	3.2	3.5	3.6	3.6
Nominal Personal Income (Mil \$)	36467.0	36944.8	37396.3	37838.3
% Change	4.7	5.0	5.2	5.2
Inflation Rate, Honolulu MSA (%)	1.4	1.5	1.5	1.6
Non Agriculture Jobs (000's)	556.9	559.5	562.1	564.7
% Change	1.8	1.8	1.8	1.8
Unemployment Rate (%)	5.5	5.4	5.4	5.4
TOURISM DETAILS (000's)				
Total Visitors	1729.1	1741.5	1772.1	1803.7
% Change	10.9	7.7	5.5	5.7
Eastbound Visitors	534.3	547.4	568.6	579.8
% Change	15.9	10.5	9.9	10.8
Westbound Visitors	1194.8	1194.1	1203.5	1223.8
% Change	8.8	6.5	3.5	3.4
JOB DETAILS (000's)				
Lodging Industry	35.4	36.6	37.7	38.8
% Change	8.7	10.6	11.9	12.7
Transportation Industry	31.7	32.0	32.2	32.5
% Change	3.3	3.8	3.9	3.8
Retail Trade Industry	114.6	115.0	115.3	115.7
% Change	1.3	1.6	1.5	1.2
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1304.6	1344.6	1384.7	1425.2
% Change	8.4	10.1	11.3	12.0
Transportation Industry	1997.7	2020.4	2041.7	2061.1
% Change	3.2	4.5	4.5	4.4
Retail Trade Industry	2728.4	2736.6	2741.3	2745.4
% Change	-0.7	0.6	1.0	0.8

TABLE 2: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- HIGH SCENARIO

	200101	200102	200103	200104
Real Personal Income (Mil 2001\$)	34974.2	35106.0	34678.1	34615.9
% Change	4.1	2.8	1.2	-0.4
Nominal Personal Income (Mil \$)	34837.0	35106.0	34882.6	34963.3
% Change	5.3	4.1	3.0	1.4
Inflation Rate, Honolulu MSA (%)	1.2	1.3	1.8	1.8
Non Agriculture Jobs (000's)	559.9	559.6	557.4	553.2
% Change	2.9	1.6	0.6	-0.7
Unemployment Rate (%)	4.3	4.3	4.5	5.2
TOURISM DETAILS (000's)				
Total Visitors	1718.0	1724.4	1604.8	1489.3
% Change	0.1	-3.6	-7.5	-14.1
Eastbound Visitors	584.0	578.2	484.2	397.4
% Change	-0.7	-4.7	-14.2	-32.3
Westbound Visitors	1134.4	1155.7	1120.6	1088.1
% Change	0.6	-2.4	-4.4	-5.1
JOB DETAILS (000's)				
Lodging Industry	38.8	38.7	38.7	36.2
% Change	3.1	1.2	-0.2	-7.2
Transportation Industry	33.4	33.1	32.8	31.6
% Change	4.7	2.7	0.2	-4.7
Retail Trade Industry	117.8	118.0	117.7	116.0
% Change	3.4	2.8	1.5	-0.8
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1398.4	1422.3	1415.6	1305.9
% Change	1.5	5.9	4.1	-6.2
Transportation Industry	2075.1	2061.0	1961.4	1924.9
% Change	6.5	6.9	-0.8	-3.0
Retail Trade Industry	2858.2	2880.0	2828.0	2777.8
% Change	4.7	3.5	0.6	-2.8

TABLE 2: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- HIGH SCENARIO

	200201	200202	200203	200204
Real Personal Income (Mil 2001\$)	35005.9	35416.2	35622.5	35833.4
% Change	0.1	0.9	2.7	3.5
Nominal Personal Income (Mil \$)	35401.7	35964.0	36332.1	36678.8
% Change	1.6	2.4	4.2	4.9
Inflation Rate, Honolulu MSA (%)	1.5	1.5	1.4	1.3
Non Agriculture Jobs (000's)	556.8	560.2	563.0	565.4
% Change	-0.6	0.1	0.8	2.2
Unemployment Rate (%)	5.2	5.1	4.9	4.9
TOURISM DETAILS (000's)				
Total Visitors	1616.6	1684.4	1742.6	1751.3
% Change	-5.9	-2.3	8.6	17.6
Eastbound Visitors	487.5	530.7	551.1	554.3
% Change	-16.5	-8.2	13.8	39.5
Westbound Visitors	1128.4	1153.3	1191.5	1196.9
% Change	-0.5	-0.2	6.3	10.0
JOB DETAILS (000's)				
Lodging Industry	37.5	38.1	38.4	38.9
% Change	-3.4	-1.8	-0.7	7.5
Transportation Industry	31.6	31.7	32.0	32.3
% Change	-5.3	-4.0	-2.5	2.1
Retail Trade Industry	115.8	115.9	116.3	116.9
% Change	-1.7	-1.8	-1.2	0.8
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1371.3	1393.8	1409.0	1428.0
% Change	-1.9	-2.0	-0.5	9.4
Transportation Industry	1959.7	1966.8	1990.6	2012.4
% Change	-5.6	-4.6	1.5	4.5
Retail Trade Industry	2774.8	2763.4	2768.3	2782.1
% Change	-2.9	-4.0	-2.1	0.2

TABLE 2: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- HIGH SCENARIO

	200301	200302	200303	200304
Real Personal Income (Mil 2001\$)	36201.9	36563.9	36870.7	37144.2
% Change	3.4	3.2	3.5	3.7
Nominal Personal Income (Mil \$)	37203.6	37717.6	38183.9	38628.3
% Change	5.1	4.9	5.1	5.3
Inflation Rate, Honolulu MSA (%)	1.6	1.6	1.5	1.6
Non Agriculture Jobs (000's)	567.9	570.4	572.8	575.3
% Change	2.0	1.8	1.7	1.7
Unemployment Rate (%)	4.9	4.9	4.9	4.9
TOURISM DETAILS (000's)				
Total Visitors	1768.8	1777.8	1805.3	1836.4
% Change	9.4	5.5	3.6	4.9
Eastbound Visitors	562.2	573.6	590.1	598.4
% Change	15.3	8.1	7.1	8.0
Westbound Visitors	1206.4	1204.1	1215.1	1237.9
% Change	6.9	4.4	2.0	3.4
JOB DETAILS (000's)				
Lodging Industry	39.8	40.7	41.5	42.3
% Change	6.2	6.8	7.9	8.8
Transportation Industry	32.6	32.8	33.1	33.3
% Change	3.0	3.3	3.3	3.2
Retail Trade Industry	117.1	117.4	117.5	117.8
% Change	1.1	1.2	1.1	0.8
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1457.9	1488.3	1518.5	1549.2
% Change	6.3	6.8	7.8	8.5
Transportation Industry	2037.6	2060.3	2080.8	2099.1
% Change	4.0	4.8	4.5	4.3
Retail Trade Industry	2792.1	2801.7	2806.1	2809.0
% Change	0.6	1.4	1.4	1.0

**TABLE 3: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- LOW SCENARIO**

	200101	200102	200103	200104
Real Personal Income (Mil 2001\$)	34974.2	35106.0	34501.8	33875.2
% Change	4.1	2.8	0.7	-2.5
Nominal Personal Income (Mil \$)	34837.0	35106.0	34691.7	34116.2
% Change	5.3	4.1	2.5	-1.0
Inflation Rate, Honolulu MSA (%)	1.2	1.3	1.7	1.5
Non Agriculture Jobs (000's)	559.9	559.6	557.4	540.7
% Change	2.9	1.6	0.6	-3.0
Unemployment Rate (%)	4.3	4.3	4.5	5.5
TOURISM DETAILS (000's)				
Total Visitors	1718.0	1724.4	1604.8	1281.7
% Change	0.1	-3.6	-7.5	-26.1
Eastbound Visitors	584.0	578.2	484.2	293.0
% Change	-0.7	-4.7	-14.2	-50.1
Westbound Visitors	1134.4	1155.7	1120.6	992.8
% Change	0.6	-2.4	-4.4	-13.4
JOB DETAILS (000's)				
Lodging Industry	38.8	38.7	38.7	30.2
% Change	3.1	1.2	-0.2	-22.6
Transportation Industry	33.4	33.1	32.8	30.0
% Change	4.7	2.7	0.2	-9.7
Retail Trade Industry	117.8	118.0	117.7	112.5
% Change	3.4	2.8	1.5	-3.7
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1398.4	1422.3	1348.5	1100.0
% Change	1.5	5.9	-0.8	-21.0
Transportation Industry	2075.1	2061.0	1957.8	1896.3
% Change	6.5	6.9	-0.9	-4.4
Retail Trade Industry	2858.2	2880.0	2826.7	2762.5
% Change	4.7	3.5	0.6	-3.3

**TABLE 3: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- LOW SCENARIO**

	200201	200202	200203	200204
Real Personal Income (Mil 2001\$)	34204.1	34397.0	34570.8	34751.3
% Change	-2.2	-2.0	0.2	2.6
Nominal Personal Income (Mil \$)	34324.9	34563.7	34844.0	35135.1
% Change	-1.5	-1.5	0.4	3.0
Inflation Rate, Honolulu MSA (%)	0.7	0.5	0.2	0.4
Non Agriculture Jobs (000's)	539.5	540.4	542.7	544.1
% Change	-3.6	-3.4	-2.4	0.6
Unemployment Rate (%)	5.8	6.1	6.1	6.2
TOURISM DETAILS (000's)				
Total Visitors	1377.1	1445.9	1509.3	1556.6
% Change	-19.8	-16.1	-6.0	21.4
Eastbound Visitors	328.0	362.5	383.8	402.1
% Change	-43.8	-37.3	-20.7	37.3
Westbound Visitors	1055.4	1085.8	1125.4	1154.9
% Change	-7.0	-6.0	0.4	16.3
JOB DETAILS (000's)				
Lodging Industry	30.0	30.4	31.0	31.6
% Change	-22.5	-21.6	-19.9	4.8
Transportation Industry	29.7	29.6	29.8	30.1
% Change	-11.2	-10.4	-9.1	0.5
Retail Trade Industry	110.9	110.6	110.8	111.4
% Change	-5.8	-6.3	-5.8	-1.0
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1114.8	1127.4	1149.8	1172.2
% Change	-20.3	-20.7	-14.7	6.6
Transportation Industry	1907.4	1892.8	1902.3	1913.7
% Change	-8.1	-8.2	-2.8	0.9
Retail Trade Industry	2723.8	2685.5	2668.7	2665.6
% Change	-4.7	-6.8	-5.6	-3.5

**TABLE 3: MAJOR ECONOMIC INDICATORS
QUARTERLY FORECASTS FOR THE STATE OF HAWAII -- LOW SCENARIO**

	200301	200302	200303	200304
Real Personal Income (Mil 2001\$)	34985.4	35185.6	35339.9	35490.3
% Change	2.3	2.3	2.2	2.1
Nominal Personal Income (Mil \$)	35498.9	35825.7	36116.2	36425.2
% Change	3.4	3.7	3.7	3.7
Inflation Rate, Honolulu MSA (%)	1.1	1.3	1.4	1.5
Non Agriculture Jobs (000's)	545.7	547.3	549.7	552.2
% Change	1.2	1.3	1.3	1.5
Unemployment Rate (%)	6.3	6.3	6.3	6.3
TOURISM DETAILS (000's)				
Total Visitors	1586.7	1613.3	1664.9	1707.2
% Change	15.2	11.6	10.3	9.7
Eastbound Visitors	430.5	456.0	492.8	516.8
% Change	31.2	25.8	28.4	28.5
Westbound Visitors	1157.1	1157.8	1172.4	1190.7
% Change	9.6	6.6	4.2	3.1
JOB DETAILS (000's)				
Lodging Industry	32.6	33.3	33.8	34.3
% Change	8.6	9.6	9.0	8.3
Transportation Industry	30.4	30.8	31.1	31.5
% Change	2.7	3.8	4.5	4.7
Retail Trade Industry	111.7	112.1	112.4	112.9
% Change	0.7	1.3	1.4	1.3
INCOME DETAILS (Mil 2001\$)				
Lodging Industry	1204.5	1227.0	1245.2	1261.0
% Change	8.0	8.8	8.3	7.6
Transportation Industry	1928.8	1943.2	1958.1	1973.5
% Change	1.1	2.7	2.9	3.1
Retail Trade Industry	2663.0	2664.9	2665.6	2667.3
% Change	-2.2	-0.8	-0.1	0.1

TABLE 4: MAJOR ECONOMIC INDICATORS
CALENDAR YEAR FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33423.4	34186.5	34710.1	34974.9	36187.9
% Change	0.8	2.3	1.5	0.8	3.5
Nominal Personal Income (Mil \$)	32449.8	33775.8	34797.7	35376.4	37161.6
% Change	1.9	4.1	3.0	1.7	5.0
Inflation Rate, Honolulu MSA (%)	1.0	1.8	1.5	0.9	1.5
Non Agriculture Jobs (000's)	535.0	551.5	555.6	550.7	560.8
% Change	0.7	3.1	0.7	-0.9	1.8
Unemployment Rate (%)	5.6	4.3	4.6	5.5	5.4
TOURISM DETAILS (000's)					
Total Visitors	6741.1	6976.0	6435.3	6562.1	7046.3
% Change	2.2	3.5	-7.8	2.0	7.4
Eastbound Visitors	2310.0	2345.8	1993.0	1997.2	2230.1
% Change	-5.4	1.5	-15.0	0.2	11.7
Westbound Visitors	4431.8	4630.7	4452.2	4564.9	4816.1
% Change	6.6	4.5	-3.9	2.5	5.5
JOB DETAILS (000's)					
Lodging Industry	37.1	38.4	37.2	33.5	37.1
% Change	-1.7	3.6	-3.3	-9.9	11.0
Transportation Industry	31.3	32.5	32.5	30.9	32.1
% Change	0.8	4.0	-0.0	-4.8	3.7
Retail Trade Industry	112.0	115.4	116.9	113.6	115.1
% Change	0.7	3.0	1.3	-2.8	1.4
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1358.5	1368.2	1344.4	1235.3	1364.8
% Change	0.7	0.7	-1.7	-8.1	10.5
Transportation Industry	1895.5	1959.6	2001.9	1949.2	2030.2
% Change	1.5	3.4	2.2	-2.6	4.2
Retail Trade Industry	2701.6	2795.1	2834.2	2726.2	2737.9
% Change	1.1	3.5	1.4	-3.8	0.4

TABLE 5: MAJOR ECONOMIC INDICATORS
CALENDAR YEAR FORECASTS FOR THE STATE OF HAWAII -- HIGH SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33423.4	34186.5	34843.5	35469.5	36695.2
% Change	0.8	2.3	1.9	1.8	3.5
Nominal Personal Income (Mil \$)	32449.8	33775.8	34947.2	36094.1	37933.3
% Change	1.9	4.1	3.5	3.3	5.1
Inflation Rate, Honolulu MSA (%)	1.0	1.8	1.5	1.5	1.6
Non Agriculture Jobs (000's)	535.0	551.5	557.8	561.4	571.6
% Change	0.7	3.1	1.1	0.6	1.8
Unemployment Rate (%)	5.6	4.3	4.6	5.0	4.9
TOURISM DETAILS (000's)					
Total Visitors	6741.1	6976.0	6536.4	6794.9	7188.3
% Change	2.2	3.5	-6.3	4.0	5.8
Eastbound Visitors	2310.0	2345.8	2043.9	2123.6	2324.3
% Change	-5.4	1.5	-12.9	3.9	9.5
Westbound Visitors	4431.8	4630.7	4498.7	4670.0	4863.5
% Change	6.6	4.5	-2.9	3.8	4.1
JOB DETAILS (000's)					
Lodging Industry	37.1	38.4	38.1	38.2	41.1
% Change	-1.7	3.6	-0.8	0.3	7.5
Transportation Industry	31.3	32.5	32.7	31.9	32.9
% Change	0.8	4.0	0.7	-2.5	3.2
Retail Trade Industry	112.0	115.4	117.4	116.2	117.4
% Change	0.7	3.0	1.7	-1.0	1.1
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1358.5	1368.2	1385.6	1400.5	1503.5
% Change	0.7	0.7	1.3	1.1	7.3
Transportation Industry	1895.5	1959.6	2005.6	1982.4	2069.5
% Change	1.5	3.4	2.4	-1.2	4.4
Retail Trade Industry	2701.6	2795.1	2836.0	2772.2	2802.2
% Change	1.1	3.5	1.5	-2.3	1.1

TABLE 6: MAJOR ECONOMIC INDICATORS
CALENDAR YEAR FORECASTS FOR THE STATE OF HAWAII -- LOW SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33423.4	34186.5	34614.3	34480.8	35250.3
% Change	0.8	2.3	1.3	-0.4	2.2
Nominal Personal Income (Mil \$)	32449.8	33775.8	34687.7	34716.9	35966.5
% Change	1.9	4.1	2.7	0.1	3.6
Inflation Rate, Honolulu MSA (%)	1.0	1.8	1.4	0.5	1.3
Non Agriculture Jobs (000's)	535.0	551.5	554.0	541.7	548.7
% Change	0.7	3.1	0.5	-2.2	1.3
Unemployment Rate (%)	5.6	4.3	4.6	6.1	6.3
TOURISM DETAILS (000's)					
Total Visitors	6741.1	6976.0	6328.9	5888.9	6572.2
% Change	2.2	3.5	-9.3	-7.0	11.6
Eastbound Visitors	2310.0	2345.8	1939.4	1476.5	1896.0
% Change	-5.4	1.5	-17.3	-23.9	28.4
Westbound Visitors	4431.8	4630.7	4403.4	4421.6	4678.0
% Change	6.6	4.5	-4.9	0.4	5.8
JOB DETAILS (000's)					
Lodging Industry	37.1	38.4	36.6	30.8	33.5
% Change	-1.7	3.6	-4.8	-16.0	8.9
Transportation Industry	31.3	32.5	32.3	29.8	31.0
% Change	0.8	4.0	-0.6	-7.8	3.9
Retail Trade Industry	112.0	115.4	116.5	110.9	112.3
% Change	0.7	3.0	1.0	-4.8	1.2
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1358.5	1368.2	1317.3	1141.1	1234.4
% Change	0.7	0.7	-3.7	-13.4	8.2
Transportation Industry	1895.5	1959.6	1997.6	1904.1	1950.9
% Change	1.5	3.4	1.9	-4.7	2.5
Retail Trade Industry	2701.6	2795.1	2831.9	2685.9	2665.2
% Change	1.1	3.5	1.3	-5.2	-0.8

TABLE 7: MAJOR ECONOMIC INDICATORS
FISCAL YEAR FORECASTS FOR THE STATE OF HAWAII -- BASELINE SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33317.6	33738.7	34770.7	34554.6	35555.9
% Change	1.8	1.3	3.1	-0.6	2.9
Nominal Personal Income (Mil \$)	32085.0	33058.8	34567.5	34815.0	36226.2
% Change	1.8	3.0	4.6	0.7	4.1
Inflation Rate, Honolulu MSA (%)	-0.0	1.7	1.5	1.3	1.1
Non Agriculture Jobs (000's)	531.3	543.0	557.7	549.8	555.7
% Change	0.1	2.2	2.7	-1.4	1.1
Unemployment Rate (%)	6.1	4.9	4.2	5.3	5.5
TOURISM DETAILS (000's)					
Total Visitors	6612.0	6907.4	6911.8	6168.4	6857.1
% Change	-1.7	4.5	0.1	-10.8	11.2
Eastbound Visitors	2347.7	2332.2	2313.5	1787.4	2122.3
% Change	-11.0	-0.7	-0.8	-22.7	18.7
Westbound Visitors	4265.6	4571.7	4608.6	4381.1	4734.8
% Change	4.4	7.2	0.8	-4.9	8.1
JOB DETAILS (000's)					
Lodging Industry	37.3	37.5	38.8	34.2	35.0
% Change	-2.2	0.5	3.6	-12.0	2.5
Transportation Industry	30.9	31.8	33.1	31.2	31.5
% Change	-0.5	3.1	4.0	-5.6	0.8
Retail Trade Industry	111.0	113.6	117.2	114.5	114.4
% Change	-0.9	2.3	3.1	-2.3	-0.1
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1354.1	1367.9	1393.1	1245.5	1291.4
% Change	1.1	1.0	1.8	-10.6	3.7
Transportation Industry	1892.1	1918.9	2024.2	1935.4	1986.2
% Change	2.5	1.4	5.5	-4.4	2.6
Retail Trade Industry	2675.4	2742.3	2851.7	2766.4	2725.7
% Change	-0.1	2.5	4.0	-3.0	-1.5

TABLE 8: MAJOR ECONOMIC INDICATORS
FISCAL YEAR FORECASTS FOR THE STATE OF HAWAII -- HIGH SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33317.6	33738.7	34770.7	34929.0	36055.4
% Change	1.8	1.3	3.1	0.5	3.2
Nominal Personal Income (Mil \$)	32085.0	33058.8	34567.5	35302.9	36983.0
% Change	1.8	3.0	4.6	2.1	4.8
Inflation Rate, Honolulu MSA (%)	-0.0	1.7	1.5	1.7	1.5
Non Agriculture Jobs (000's)	531.3	543.0	557.7	557.2	566.7
% Change	0.1	2.2	2.7	-0.1	1.7
Unemployment Rate (%)	6.1	4.9	4.2	5.0	4.9
TOURISM DETAILS (000's)					
Total Visitors	6612.0	6907.4	6911.8	6395.1	7040.5
% Change	-1.7	4.5	0.1	-7.5	10.1
Eastbound Visitors	2347.7	2332.2	2313.5	1899.9	2241.2
% Change	-11.0	-0.7	-0.8	-17.9	18.0
Westbound Visitors	4265.6	4571.7	4608.6	4490.3	4798.9
% Change	4.4	7.2	0.8	-2.6	6.9
JOB DETAILS (000's)					
Lodging Industry	37.3	37.5	38.8	37.6	39.5
% Change	-2.2	0.5	3.6	-3.1	4.9
Transportation Industry	30.9	31.8	33.1	32.0	32.4
% Change	-0.5	3.1	4.0	-3.5	1.4
Retail Trade Industry	111.0	113.6	117.2	116.3	116.9
% Change	-0.9	2.3	3.1	-0.7	0.5
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1354.1	1367.9	1393.1	1371.7	1445.8
% Change	1.1	1.0	1.8	-1.5	5.4
Transportation Industry	1892.1	1918.9	2024.2	1953.2	2025.2
% Change	2.5	1.4	5.5	-3.5	3.7
Retail Trade Industry	2675.4	2742.3	2851.7	2786.0	2786.1
% Change	-0.1	2.5	4.0	-2.3	0.0

TABLE 9: MAJOR ECONOMIC INDICATORS
FISCAL YEAR FORECASTS FOR THE STATE OF HAWAII -- LOW SCENARIO

	1999	2000	2001	2002	2003
Real Personal Income (Mil 2001\$)	33317.6	33738.7	34770.7	34244.5	34873.3
% Change	1.8	1.3	3.1	-1.5	1.8
Nominal Personal Income (Mil \$)	32085.0	33058.8	34567.5	34424.1	35325.9
% Change	1.8	3.0	4.6	-0.4	2.6
Inflation Rate, Honolulu MSA (%)	-0.0	1.7	1.5	1.1	0.8
Non Agriculture Jobs (000's)	531.3	543.0	557.7	544.1	545.0
% Change	0.1	2.2	2.7	-2.4	0.2
Unemployment Rate (%)	6.1	4.9	4.2	5.5	6.2
TOURISM DETAILS (000's)					
Total Visitors	6612.0	6907.4	6911.8	5709.5	6265.9
% Change	-1.7	4.5	0.1	-17.4	9.7
Eastbound Visitors	2347.7	2332.2	2313.5	1467.7	1672.4
% Change	-11.0	-0.7	-0.8	-36.6	13.9
Westbound Visitors	4265.6	4571.7	4608.6	4254.5	4595.3
% Change	4.4	7.2	0.8	-7.7	8.0
JOB DETAILS (000's)					
Lodging Industry	37.3	37.5	38.8	32.3	32.1
% Change	-2.2	0.5	3.6	-16.7	-0.6
Transportation Industry	30.9	31.8	33.1	30.5	30.3
% Change	-0.5	3.1	4.0	-7.8	-0.8
Retail Trade Industry	111.0	113.6	117.2	113.0	111.5
% Change	-0.9	2.3	3.1	-3.6	-1.3
INCOME DETAILS (Mil 2001\$)					
Lodging Industry	1354.1	1367.9	1393.1	1172.7	1188.4
% Change	1.1	1.0	1.8	-15.8	1.3
Transportation Industry	1892.1	1918.9	2024.2	1913.6	1922.0
% Change	2.5	1.4	5.5	-5.5	0.4
Retail Trade Industry	2675.4	2742.3	2851.7	2749.6	2665.6
% Change	-0.1	2.5	4.0	-3.6	-3.1