1998 YEAR IN REVIEW
Hawaii's ailing economy showed signs both of relapse and improvement in 1998. While preliminary Department of Commerce estimates indicate that real personal income growth for 1998 will likely surpass 2% for the first time in seven years, job losses resumed after a brief respite in 1997. In fact, 1998 non-agricultural jobs declined at their most rapid rate since the 1982 recession. Last April, we predicted an anemic 1.2% growth rate for Hawaii real personal income, and a decline of 0.6% in the job count for 1998. While our jobs forecast was just a bit too optimistic, we have revised our income estimate upward to 2.1%, exceeding the revised 1997 growth rate of 1.9%. The state economy (primarily the public sector) has demonstrated a remarkable ability to grow wages during a period of effectively no increase in labor demand.

If Hawaii's economy remains under the weather, it is the result of the Asian flu. Visitor arrivals have been severely curtailed by a deterioration in the global economic outlook and the outlook for Japan in particular. Last April we predicted growth of 2.0% right before the bottom fell out of the Eastbound visitor market. Overall 1998 arrivals were down 1.9%, with Eastbound arrivals down almost 11%. A sharp pickup in Westbound arrivals by 4% averted disaster in 1998.

Visitor expenditures have almost certainly declined in the face of an 8% decline in eastbound visitor days, and the yen buying 8% fewer dollars than in 1997. As a result, retail activity in the state has suffered, with businesses catering to local customers generally faring much better than those focusing on the tourism market. As a whole, retail sales have fallen at a rate of almost 6% during the first 9 months of 1998, and we expect the year end numbers to be down more than 5% in real terms.

The hoped for end to the construction downturn also failed to materialize. During the first nine months of 1998, the real contracting tax base declined almost 2%, leading us to revise our April forecast to -1%.

Overall, 1998 has come in little changed from 1997. The Tourism industry was hit hard, construction is still declining, the job count resumed its perpetual fall, and real income growth has slowed somewhat through the year. Nevertheless, largely on the basis of strength in real income growth, we have revised our estimate of real gross state product from 1.1% to 1.6% growth in 1998.
The US inflation rate reached a 32 year low in 1997, and then proceeded to fall further during 1998. US consumer price inflation barely exceeded 1.5% in 1998, and year to date is only slightly higher despite the recent rise in transportation costs and energy prices. The effects of slowing mainland price growth and overall weak demand on Oahu led us to predict 0% price growth in last April's forecast. During the first half of the year the Honolulu CPI declined by almost .1%, led by a 1% decline in housing costs and nearly 3% declines in clothing and transportation costs. During the second half, the deflation accelerated slightly, and Honolulu turned in its first annual deflation in more than three decades, with prices falling by .26%.

1999 Forecast Summary
We predict a continuation of weak economic growth in 1999. While visitor arrivals will rebound somewhat, we expect overall arrivals to rise at most 1.9%. Again, any strengthening in arrivals will have to come from the US mainland, as the best we can expect from Asia is to stop the bleeding. One bright spot has been the recent strength in the Yen, so that at least the visitors who are here may spend a few more dollars. In any event, the economic turmoil in Asia, and its effect on the US economy only lead to cautious optimism for the tourism industry.

Private sector construction activity will continue as a drag on the state economy with the real contracting tax base declining by almost 1% in 1999 and then growing at more than 4% in 2000. While net job losses ended in 1997, they resumed in 1998, and we expect a .4% decline in jobs in 1999 before resuming growth in 2000. With continued weakness in the local job market, income growth cannot continue at the rate experienced over the past two years, particularly in the face of lower than expected public sector tax collections. As a result, we estimate real personal income growth of 2.1% in 98 followed by a slower growth in wages, and dividends leading to growth of 1.7% in 1999. Overall, output in Hawai‘i as measured by real Gross State Product, will expand by only 1.6% in 98 and 1.8% in 99.

Inflation? What inflation? Although the bottoming of the housing market and the possibility of rising oil prices exist, the switch to the use of geometric means in the calculation of the Honolulu CPI will result in measured deflation of .2% in 1999.

Risks

Last year we warned that there were substantial risks of further spillovers from SE Asia to Japan, and unfortunately those risks materialized in 98. Were it not for Japan's malaise, the Hawaii economy would have grown nicely in 98. Unfortunately, the risk that the Japanese economy will perform below our expectations are very real. The prospects of an additional 5-7% decline in eastbound arrivals is daunting, but not implausible. While few Asian economies (Korea) are expected to grow in 1999, the risks from the mainland are of too rapid growth. Should rising energy prices and an overheated job market produce wage and price pressures, the resulting Federal reserve interest rate response could seriously hamper Hawaii's recovering housing market. More importantly, the reaction of a runaway bull market to FED tightening would almost certainly slow westbound visitor growth and expenditures as US consumption growth slows.
Hawai‘i Economic Indicators (Annual Growth Rates)

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<th>1997</th>
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<tr>
<td>Real Personal Income</td>
<td>1.9</td>
<td>2.1*</td>
<td>1.7</td>
<td>2.0</td>
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<tr>
<td>Visitor Arrivals</td>
<td>0.7</td>
<td>-1.9</td>
<td>1.9</td>
<td>2.9</td>
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<tr>
<td>Nonagricultural Jobs</td>
<td>0.2</td>
<td>-1.0</td>
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<td>0.7</td>
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<td>Construction Put in Place</td>
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<td>-0.6</td>
<td>-0.6</td>
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<tr>
<td>Real Gross State Product</td>
<td>1.4*</td>
<td>1.6*</td>
<td>1.8</td>
<td>2.1</td>
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<tr>
<td>Consumer Price Inflation</td>
<td>0.7</td>
<td>-0.26</td>
<td>-0.21</td>
<td>1.2</td>
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* Estimate

Empirical Model Overview

We use statistical methods to predict developments in key Hawai‘i economic indicators based on their own past behavior and paths of several external indicators. Our primary model focuses on important high-frequency indicators, including Hawai‘i real personal income, visitor arrivals, nonagricultural jobs, and the real general excise and use tax base on contracting, retail, and hotel rentals. We also include an interpolated quarterly Hawai‘i inflation rate in our core model as external "driving" variables, we use U.S. real personal income, the U.S. CPI inflation rate, Japanese real consumption expenditures, California nonagricultural employment, and the real yen/dollar exchange rate. Annual changes in gross state product (GSP) are projected based on their historical relationship with Hawai‘i income and jobs.

The primary Bayesian Vector Autoregression model (HI-BVAR) treats the set of eight local variables and five external drivers as an interdependent system of economic relationships, where each data series may in principle be affected by its own history and the behavior of the other series. Some structure is imposed on the estimation process to reflect prior beliefs about economic relationships and to limit implausible influences of Hawai‘i variables on the U.S. and Japanese economies. The model captures both long-run relationships and patterns of dynamic adjustment. For purposes of forecasting, external driving variables are taken as given, and likely paths are assumed for them.
Forecast Assumptions

Our forecast rests partly on assumptions about economic developments in the U.S. and Japanese economies. We expect the U.S. economic expansion to continue for the next two years, but at a somewhat slower pace in 2000 than in 1999, with U.S. real personal income expanding at an average rate of 3.6 in 1999 and 2.7% in 2000.

The California economy, which has expanded briskly for the last two years, may be challenged by weaker exports to Asia, and a slowing of the Silicon Valley boom. Construction activity is still expected to be strong, and we expect both job and income growth to rival 1998 numbers. Job growth should continue at the 2.7% pace set in 1998, with a very slight slowing in 2000.

The Japanese economy is mired in recession as predicted by UHERO in 1997. While the perennial fiscal stimulus package will provide support later this year and in 2000, it is far from clear whether real output and consumption will recover soon. We expect consumption to decline in 1999 by near one half of one percent, before resuming growth at a 1.6% rate in 2000.

Although the Japanese government should prefer a weaker yen, we expect the yen to trade at near 118 for the year as a whole.

Results

The recent strength in visitors from the mainland is expected to continue, posting 4% growth in 1999, and just over 2.6% in 2000. The first two months of 1999 have been very strong for westbound travel, and without significant weakening of the US economy, we may end up revising our westbound forecast upward in coming months.
In contrast, eastbound visitor arrivals currently fall well short of our forecast of -1.5% for 1999. Our forecast requires some strengthening in the Japanese economy, or at least, a slowing in the rate of decline of real income and consumption. Our outlook for the year 2000 has eastbound arrivals growing by almost 3.5%, as pent up demand and a return of the Korean market begins to buoy eastbound arrivals.

Total visitor arrivals will rise about 1.9% next year, a substantial improvement from 1998's 2% decline.

We expect no change in the construction picture for next year, with another small decline in the real contracting tax base of 0.6%. Our model is predicting a turnaround in the year 2000 consistent with a bottoming of the residential housing market in 98-99 and dwindling inventories in that sector. The real GET contracting tax base should expand at a 4.5% rate in 2000.

As we expected, Hawai‘i’s net job losses resumed in 1998. Continued weakness in the tourism sector (overall arrivals will remain below 1990 levels until 2000), and the perpetual drag of the construction industry on the local economy, implies continued loss of jobs in 99. We expect a decline of 0.4% in 99 before returning to growth of 0.7% in 2000.

Overall, we expect a "timid" expansion of both real personal income and real Gross State Product (GSP). In 1999 we predict personal income growth of 1.7%, down a bit from our estimate for 1998 of 2.1%. By 2000, real income growth will reach the 2% rate again.

Output in Hawai‘i, measured by GSP, should expand 1.6% in 1998, and 1.9% in 1999. The relatively slow growth in real output, steady job losses, and continual decline in real estate values, have combined with a disinflationary trend at the national level to produce deflation in Hawaii in 1998. Although there are some risks of higher inflation at the national level, we expect prices to continue to fall in 99 at a 0.2% rate before rising by slightly more than 1% in 2000.
Risks

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