

E C O N O M I C F O R E C A S T

First Hawaiian Bank

Guam Outlook Brighter than in Several Years

Executive Summary

The outlook for Guam's economy in 2006 is brighter than it has been in a number of years. The primary reason for this is a recently announced military buildup on the island, a part of a global redistribution of U.S. forces throughout the world. The main sectors of the Guam economy that are analyzed in this report are its primary external drivers, because those in turn affect trends in the rest of the economy. These sectors are the military, real estate and construction, and tourism. The salient facts are:

- The military sector is about to take the lead among Guam's major growth engines. A total of perhaps \$15 billion in military spending has been announced for Guam, to be spread over a 10-year period. About \$10+ billion of this has been identified to fund the transfer of the III Marine Expeditionary Force, over 8,000 active duty personnel plus dependents, from Okinawa to Guam.
- Most of these funds will be spent on Marine housing in the Finegayan area, but augmentations will also occur at other military facilities, both Air Force and Navy, across the island. The move will require large upgrades to infrastructure, both by the military and the Government of Guam, to accommodate



Photo courtesy of R&R Pacific

the incoming military personnel. The Government of Guam has requested immediate Federal assistance in fulfilling its part of this.

- Meanwhile, Guam's real estate sector has been recovering from a recession in the earlier part of the 2000s decade, brought on by a series of negative economic and non-economic events that are summarized in the main body of the report. Real estate prices are rising also in anticipation of what the military buildup will do for the economy. Off-shore demand is fueling a significant part of this.
- The recovery in real estate, combined with the military plans, is stoking renewed interest in development and new construction on Guam. The earlier slump left builders with little confidence to start

new projects, but that is changing. Now construction will come to the forefront and help stimulate a recovery in the island economy.

(continued on page 2)

TABLE OF CONTENTS

Executive Summary	1
Introduction	2
General Structure of Guam's	
Economy	3
Recent Economic Performance	5
Analysis by Major External Drivers ..	6
<i>Tourism</i>	6
<i>The Military</i>	8
<i>Real Estate and Construction</i>	10
Outlook for the Future	12

Economic analysis by:

Dr. Leroy O. Laney Economics Consultant to First Hawaiian Bank. Professor of Economics & Finance, Hawaii Pacific University

Executive Summary

(continued from page 1)

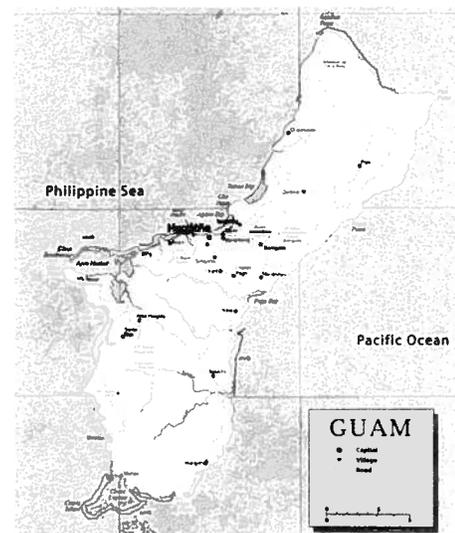
- Guam tourism has also seen some revival in the last several years. Its mainstay Japanese market has not yet reached the peak attained in 1997, but those in the industry are encouraged. Marketing efforts have been concentrated recently on recasting Guam's image as a more upscale destination, in order to improve both arrivals and spending. There is some preliminary evidence in 2006 that this may be succeeding.
- Even though precise macroeconomic forecasting of Guam's economy is difficult at this juncture, several things are fairly clear. Guam's inflation-adjusted economic growth over the next decade has the potential for reaching well into the double-digit range, when the sums mentioned above are added to an economy where aggregate economic activity is still only somewhere around the \$3.0 billion to \$4.0 billion level annually. At the same time, the unemployment rate will fall, as tight labor markets and worker shortages — especially in areas like construction — become increasingly acute. And inflation could also reach into the double digit range, as economic activity accelerates and bottlenecks emerge.
- Negative byproducts of this growth will undoubtedly be congestion in various forms, and the failure at least for a while of infrastructure to keep up. But overall, Guam's standard of living should improve as the multiplier effects of these injections ripple through the economy. 🌅

Introduction

The purpose of this report is to evaluate the present condition of the Guam economy. A qualitative outlook for that economy over the next several years will also be provided. Particular attention will be given to the implications of an increased U.S. military presence on Guam, a result of recently announced repositioning of U.S. armed forces worldwide.

The Territory of Guam, the largest and southernmost island in the Northern Marianas Archipelago, has been the westernmost possession of the United States since 1898. It is about 30 miles long, with a width varying between 4 and 12 miles. Its total land area is 212 square miles, excluding reef formations. The currency is the U.S. dollar.

Guam's economy is very much influenced by its geographic location, both in a positive and negative sense. The biggest negative factor is the island's extreme isolation, but its location also is an asset in various respects. The island is about 6,000 nautical miles (NM) west of San Francisco, 3,700 NM west of Honolulu, 1,500 NM southeast of Tokyo, 1,500 NM east of Manila, 2,100 NM east of Hong Kong, and 3,100 NM northwest of Sydney. Thus, relative nearness to Japan gives it one advantage over a place like Hawaii as a tropical Pacific vacation destination for that traveling nation. Perhaps more important, it is the U.S. soil closer than any other to important trouble spots in that part of the world — North Korea, the Taiwan Strait, China with its lack of transparency on military investments, and terrorism threats in various parts of Southeast Asia, among others — thus giving it a strategic military advantage.



Guam's current estimated population in 2006 was 171,019.¹ Another 82,459 persons occupied the Commonwealth of the Northern Marianas Islands (CNMI), a U.S. commonwealth as opposed to a territory.² The largest ethnic group on Guam is identified in official classifications as the indigenous Chamorro people, who account for about 37% of the population. The next largest group is Filipinos, about 26%. Caucasians are about 7%, and the remainder includes mainly Koreans, Japanese, Chinese, and other Pacific Islanders. Taking into account intermarriage among these groups over the years, Guam is a blend of many races, making it a community of various customs and traditions. The primary religion is Roman Catholic, a legacy of long Spanish possession, but many other Christian, Jewish, Buddhist, and Hindu religions and sects are represented also.

¹ Much of the background material for this report was obtained during a visit to Guam by the author in August, 2006. In this regard, the author would like to thank the following individuals for their time and provision of useful information: Mike Benito, General Manager, Pay-Less Supermarkets and President, Guam Chamber of Commerce; Colonel Michael R. Boera, Commander, 36th Wing, Andersen Air Force Base; Laura Dacanay, Vice President and Regional Supervisor, Guam and CNMI, First Hawaiian Bank; Christopher Felix, President and Principal Broker, Century 21 Realty Management Service; Gary Hiles, Chief Economist, Guam Bureau of Labor Statistics; Major General Donald J. Goldhorn, Adjutant General, Guam National Guard; Herbert J. Johnston, Education Director, Guam Construction Association Trades Academy; Andreas Jordanou, Administrator, Guam Economic Development and Commerce Authority; Maureen N. Maratita, Publisher, Glimpses of Guam; James A. Martinez, Executive Director, Construction, Guam Contractors Association; Darryl R. Oshiro, General Manager and Senior Appraiser, Micronesian Appraisal Associates; Gerry S. A. Perez, General Manager, Guam Visitors Bureau; Jay Baza Pascua, Editor, Marianas Business Journal; and Akihiko Tanaka, Vice President, Japan Business Development, First Hawaiian Bank.

² Office of Insular Affairs, U.S. Department of the Interior.

³ Technically, Guam is classified as a "unincorporated organized territory" of the United States, while CNMI is classified as a "commonwealth" of the United States. Among several differences, unincorporated territories are areas under U.S. jurisdiction with some protections under the U.S. Constitution and any other laws the U.S. Congress wishes to impose. (Unincorporated territories can become "incorporated" territories, but after that they cannot be de-corporated. There have been no "incorporated organized" territories of the U.S. since 1959, when Alaska and Hawaii were admitted to the Union as States.) Commonwealths have a looser relationship with the Federal Government, usually embodied in a written agreement. Commonwealths do have some advantages over territories. For example, CNMI can set its own visa policies and accept tourists from China, while Guam cannot. But Guam does have some political representation in the U.S. Congress — one (non-voting) member of the U.S. House of Representatives, with no Senate representation.

General Structure of Guam's Economy

Since the purpose of this report is economic analysis, one caveat should be mentioned at the outset. The publication of official macroeconomic data on the Guam economy lags considerably at this juncture. The Government of Guam has not been keeping current in its economic data publication in recent years.

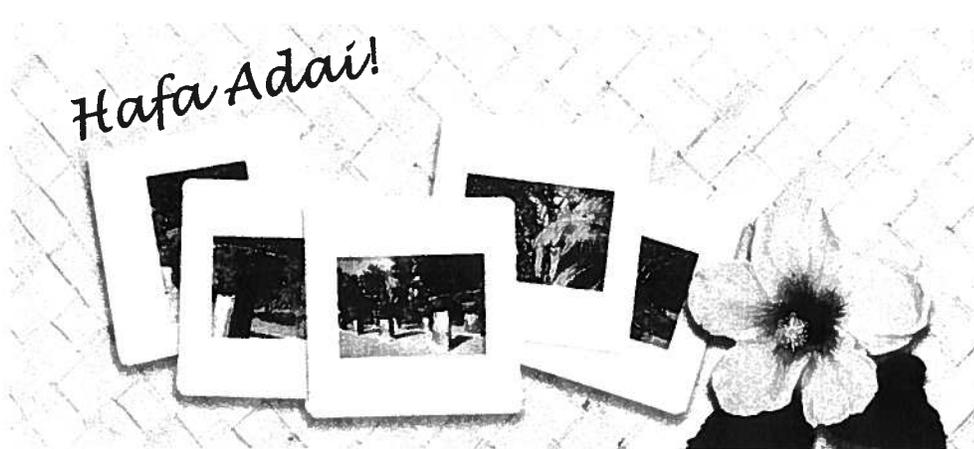
For example, the last published estimate of Guam's Gross Territorial Product, the broadest measure of the overall economy, was for the year 2002.⁴ The island unemployment rate was last published for March 2004,⁵ and the inflation rate is available only through September 2005.⁶ Without such basic macroeconomic inputs such as these, it is much more difficult to assess current economic trends. And any quantitative forecasting of the future obviously is harder if one cannot even measure the present. Economists are certainly not the only ones who need this data; off-island investors, local businesses and consumers, and local government require it also to make intelligent decisions.

Efforts are currently underway, headed by the U.S. Census Bureau and the Department of the Interior, to fill this information gap by training people to gather the data and generate the appropriate statistics according to acceptable U.S. standards. Just getting the process started again may not solve the complete problem, however. There is no assurance that historical data, even when it was accumulated, conformed to Federal standards. Thus, one cannot compare earlier data with newly created data, even by splicing it as if there were no missing data. So it will be some time after any new procedures are put in place before trends can be discerned and analyzed quantitatively. (Guam data on the visitor industry and real estate is much more current and consistent.) 🌺

⁴ At that time, it was calculated at \$3.4 billion in nominal, or current dollar, terms. There was no estimate for real, or inflation-adjusted dollar, Gross Territorial or Island Product. Yet the latter is necessary to assess economic growth that is not merely attributable to inflation.

⁵ The Guam unemployment rate was measured at 7.7% then. Historical data on the unemployment rate is available on Government of Guam websites, but there is no observation at all for 2003.

⁶ Some more recent inflation data can be obtained by contacting the Guam Department of Labor, even though it is preliminary in nature.



For a relatively small island, Guam has the potential for a fairly stable and diversified economy. The two major injections into its economy from the outside are tourism and the U.S. military. (There is also some offshore real estate demand, as well as hotel and other commercial investment.) This in itself does not create much diversification, but since these two sectors operate independently of each other, together they can impart some stability over time. (That was not the case during the 1990s, as will be discussed in the next section.)

The most recent aggregate estimate of Guam economic activity was a locally calculated \$3.4 billion in 2002, in current — not inflation-adjusted — dollar terms. To put that in some perspective, Hawaii's Gross State Product was just over \$43.4 billion in current dollar terms that same year. So Guam's economy by this measure is about 8% of Hawaii's. That is smaller than the economies of Maui or the Big Island, but slightly larger than that of Kauai. (The CNMI economy was estimated to be a comparable \$949 million in 2002.)

Taking the Federal government, including the military, and the Government of Guam together, Guam's public sector is larger than any single component of the private sector. This statement is at least true if one does not take the visitor industry to constitute a single separate sector. In the case of Guam as well as other island economies, there are strong arguments

for doing just that, but neither Federal nor local data classifications undertake it.

For example, job classifications exist for things like "leisure and hospitality jobs" — which obviously can be assumed to be all tourism. But how much of categories like retailing, transportation, and other classifications is tourism versus local is more problematic. That is why economists must always estimate the share of the economy that is attributable to tourism. It has been estimated that there are about 20,000 tourism related jobs on Guam, which was about 35% of total island jobs in 2006.⁷

Guam's hotels include international chains such as Hilton, Marriott, Westin, Hyatt, Outrigger, Okura, and Nikko. International retailers include Macy's, Duty Free Shoppers, Chanel, Gucci, Benetton, Esprit, and K-Mart. And restaurant chains include Planet Hollywood, Hard Rock Café, Roy's, Sam Choy's, Outback Steakhouse, Hye's, Capriccioso, Pizza Hut, Burger King, McDonald's, Wendy's, Tony Roma's, Lone Star, and Maxim's Jolly Bee. Both tourists and locals benefit from the presence of all of these.

Guam hosted 1,227,587 visitors in the most recent year of 2005, 96% of whom were civilians who arrived by air or sea.⁸ (This was not a record. There were 1,381,513 visitors recorded in 1997.) Just under 80% of Guam visitors nowadays come from Japan. About 9% came from South Korea last year, and the next highest national market was 2% from Taiwan. *(continued on page 4)*

⁷ According a 2001 Guam Economic Development Strategy report, tourism generated a much higher 60% of Guam's annual business revenue.

⁸ Guam Visitors Bureau statistics do include military arrivals in the total number, even when their arrival is by military transportation. The military has now replaced Taiwan as the third ranking category of Guam visitor.

General Structure of Guam's Economy

(continued from page 3)

The next most important sector of the economy is the U.S. military and activities related to its presence. Guam is home to the Commander, U.S. Naval Forces Marianas as well as Andersen Air Force Base. This military presence is about to get significantly larger. Washington has announced recently a major reallocation of U.S. military forces globally. Guam, with its strategic location, is to be a major beneficiary, receiving personnel from places like Okinawa and South Korea. This augmentation will be discussed in much more detail in the following sections.

Guam's economy also includes a diverse service sector. Though it is hard to separate some services from the main export drivers, the components are those found in any basically service economy — such as retail and wholesale trade, transportation, utilities, finance, insurance, real estate, and other services.

The construction sector also is important, but because it is such a cyclical industry its share fluctuates more than other components. It is this sector, driven by building booms and busts and factors like interest rates, that imparts much of the cyclicity to any economy.

Guam also has a developed financial sector. Some of the financial institutions on Guam are locally based, and others are branches of institutions headquartered elsewhere. As one indicator, in 2005, five banks on the island had real estate lending activity that topped \$10 million: First Hawaiian Bank, Bank of Hawaii, Citizens Security Bank, Bank of Guam, and Citibank. The leader in market share last year in this category was First Hawaiian Bank, with \$ 69.7 million, or 22.1% of the market. That was followed by Bank of Hawaii, with \$ 48.8 million, or 15.5% of the market.

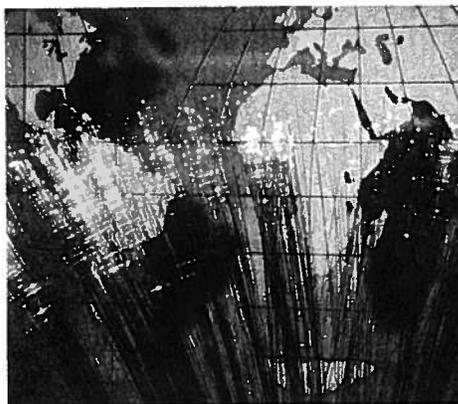
Economic development authorities on Guam also hope to cultivate other service industries that will further diversify the economy. Among these are bonded warehousing, because Guam is a logical place for storage of goods in transshipment. Another sector with potential is legal arbitration. U.S. companies on Asia encounter



legal issues, but they prefer to arbitrate on U.S. soil, and Guam is the closest location.

There is only one legal tax authority in the Territory, no separate municipal or district taxes. The tax structure includes an income tax levied on U.S. citizens, which is paid either to the U.S. Government or to the Government of Guam, depending on where they reside on the last day of the calendar year. Businesses incorporated in Guam also pay a corporate income tax on all worldwide income. Other corporations doing business in Guam pay an income tax only on Guam source income.

Local taxes are also levied on things such as gasoline, real estate, alcohol and tobacco, hotel occupancy, and vehicles. Also, a 4% gross receipts tax is applied to local transactions, and another 4% use tax applies to all personal property imported into Guam for local use or consumption. Real property taxes on land or improvements are lower than those in the United States generally — 1% of assessed value for land and one-fourth of 1% of assessed value for improvements. (The assessed value is 35% of the appraised value.)



Regarding communications, Guam has the most advanced telecommunications infrastructure in its area of the Pacific. Fiber optic cables that span the Pacific converge on Guam, which makes it a hub for many international service providers. Both MCI and AT&T make Guam their regional headquarters. The Telecommunications Act of 1996 gave Guam a U.S. area code and included the territory in U.S. domestic rate integration patterns. Guam is thus a prime location for U.S. firms moving into the Pacific Rim — to do business with countries such as China, Malaysia, Indonesia, the Philippines, and Vietnam — because these firms need advanced telecommunications.

In other infrastructure, Guam's electric utility is the Guam Power Authority (GPA). With recent investments in a new generation of facilities and refurbishment of existing assets, GPA's power generation capacity is 552 megawatts. The utility provides power to 43,000 customers.

The Port Authority of Guam is the entry point for 95% of all goods entering Guam, and it serves as a transshipment center for Micronesia, with over 20 cargo ships outbound monthly. The Port Authority receives over 160,000 twenty foot equivalent containers, 5 million barrels of fuel, up to 100 fuel tanker port calls, and 27,000 passengers annually.

Guam's educational system is patterned after those in the United States. There are 37 public schools, 18 private schools, one university and one community college. Both the university and the community college are accredited by the Western Association of Schools and Colleges (WASC).

Health care on the island is provided by two hospitals. There is a developed network of clinics, as well. A broad selection of general and specialized physicians is present on the island, and medical evacuations are provided to Hawaii the U.S. Mainland, and the Philippines. 🌅

Recent Economic Performance

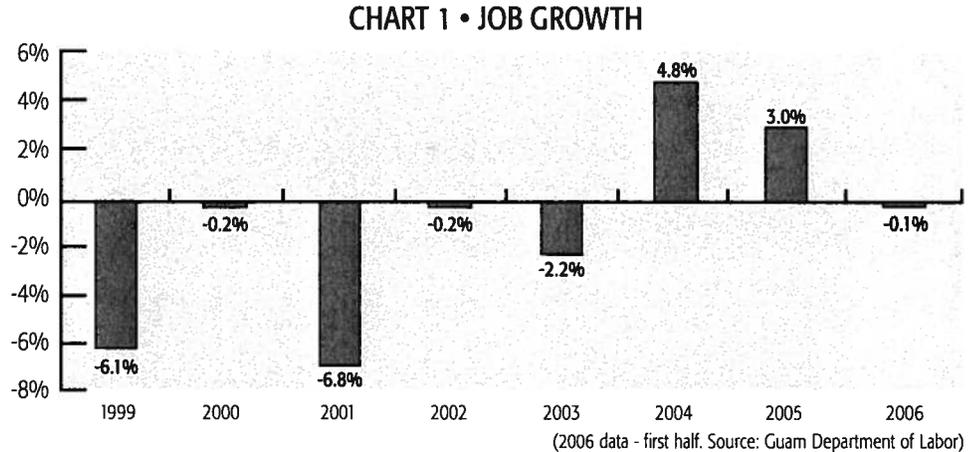
Going back over the decades, the military has been a critical component of the Guam economy ever since the aftermath of World War II. Tourism started to take off, as it did for Hawaii, in the 1960s. Five years after a naval security ban on Guam was lifted, in 1967, Pan American Airways started flying to Guam from Tokyo with tourists. Other airlift followed.

Tourism grew over the years, and it benefited immensely from the Japan-financed investment in hotels along Tumon Bay in the late 1980s and early 1990s. In fact, that investment wave — and the economic boom generally then — was the biggest the Guam economy has experienced to date. After the collapse of the Japan speculative bubble in the early 1990s, Guam's economy traveled a path similar to that of Hawaii's. The investment inflow dried up, and the economy felt it palpably.

About the same time, the Base Realignment and Closure (BRAC) initiatives of the U.S. military in the wake of the end to the Cold War hit the economy. Guam did not fare well in BRAC decisions, perhaps at least partly because it lacked the political clout in Washington of U.S. states — only one non-voting member in the U.S. House of Representatives. Andersen Air Force Base lost its B-52 squadron, among other cuts. So the overall economy took hits in both its major pillars of support.

Tourism held up for a while. Visitor arrivals from Japan continued to increase through 1997. But then that faltered also, and the peak in arrivals of that year has not been seen again to date. There were several reasons for this reversal, some economic and some natural. The 1997-1998 Asian financial crisis was a pervasive example of the former, and the U.S. economy itself had a recession in 2001.

Also, Guam's mainstay Japanese market proved to be a fickle one, as Hawaii has learned, too. One underlying cause is that the Japanese have reduced outbound travel generally, and their spending habits have declined. It also reacts en masse to various negative developments more than some other markets. Examples are the 9/11/2001 terrorist attacks on the U.S., disease scares such as Severe Acute Respiratory Syndrome (SARS), and the Iraq War. Add to that the



non-economic disasters that hit Guam one after another, such as Super-Typhoon Paka and a Korean Airlines crash in 1997, then Super-Typhoon Pongsona in 2002. Strong typhoons can affect the entire economy of Guam for several months, with loss of electric power. The introduction of FEMA and Red Cross funds helps stimulate some additional spending.

All this combined to cause an economic recession that lasted several years. Business bankruptcies, bank foreclosures, and unemployment rates soared. One of the few comprehensive measures of the overall economy that is available back a few years without gaps is shown in Chart 1 above.

Total job growth was in negative territory until 2004, when it recovered and increased by almost 5.0%, a welcome change. The 2005 number declined slightly, but a closer examination of jobs by category shows that this can be more than accounted for by a decline in construction jobs. That construction job drop has continued through the first half of 2006. Local observers point out that this is a temporary lull. Construction jobs are expected to increase significantly in the future, especially with military injections discussed below.

Another sign of better economic times for Guam in the last few years is found in its labor market, which has tightened some. The island unemployment rate, after peaking in 2000 at 15.3%, was half that at 7.7% when last published in March 2004.

Although this report is concerned almost entirely with the Guam economy, brief attention

to CNMI is in order. There the news is not good. Saipan has been dealt a heavy blow by the contraction of its garment industry, employing mostly immigrant workers from the Philippines and China who can be paid less than the U.S. minimum wage. This has come to pass mainly because of the relaxation of quotas on clothing manufactured in even cheaper locations worldwide.

The contraction of Saipan's garment industry is staggering. For example, so far this fiscal year (October 2005 through June 2006) garment certification user fees have fallen 25.2% from the same period last fiscal year, and 44.3% from the same period in fiscal 2001.

At the same time, Saipan's visitor industry is not doing well. Japan Airlines has totally discontinued service to the island, and other carriers have reduced flights. Even though CNMI, as a U.S. commonwealth, has control over its own immigration and visa policy, its access to the China market has been disappointing.

On Tinian, the comparative economic advantage has been casino gambling in recent years. But its casinos have proven to be too isolated and transportation to the island too long (mostly by ferry) and undependable (the airport there is not long enough to accommodate larger jets) for gambling to be the attraction that it was hoped to be.

The CNMI fiscal deficit has been rising. As a result, the government has reduced working hours for public sector employees, with some exceptions, furloughing them every other Friday. ☀

Analysis by Major External Drivers

One can gain deeper knowledge about recent economic trends in the Guam economy, as well as insight into its immediate and longer term future, by examining individually the major sectors that inject money into the economy from the rest of the world. That is done in this section, starting with tourism, then moving on to the military, and finishing with real estate and construction.

Tourism

The overall history of Guam tourism was discussed some in the previous section on overall economic trends, but that is not the entire story. Chart 2 at right traces it explicitly. Total visitor arrivals rose to a 1997 peak, then fell. The year 2003 was the low point after that. The last three years have seen encouraging increases, even though the previous peak has not been attained. At the same time, Guam's market share of total Japan overseas travelers rose from 4.4% in fiscal year 2003 to 5.5% in 2004 and 5.4% in 2005.

Other visitor industry indicators also help tell the story of the evolution of Guam tourism over the years. Chart 3 illustrates the big expansion in Guam's visitor plant that came with the Japanese investment boom that began in the late 1980s and continued into the 1990s. It was that surge that fueled the last genuine expansion of the Guam economy, and the addition of rooms in the Tumon Bay area continued through the 1990s. Room inventory was reduced as tourism fell on harder times in the early 2000s, but has come back some in the last couple of years.

For comparison, Chart 3 also shows hotel occupancy. Increased room inventory first caused the occupancy rate to fall, but it rose again as tourism peaked. After that peak, there ensued a decline in occupancy with lower arrivals. Again, the last several years have seen some recovery in occupancy as tourism has rebounded some.

Unsurprisingly, average hotel room rates have followed suit. They were high when arrivals were up in the late 1990s, but they fell as demand dropped after that. As before, in the last three years there has been a little improvement, as tourism generally has gained some steam and occupancies have risen. See Chart 4. (This chart presents all available data for room rates.)

CHART 2 • TOTAL VISITOR ARRIVALS

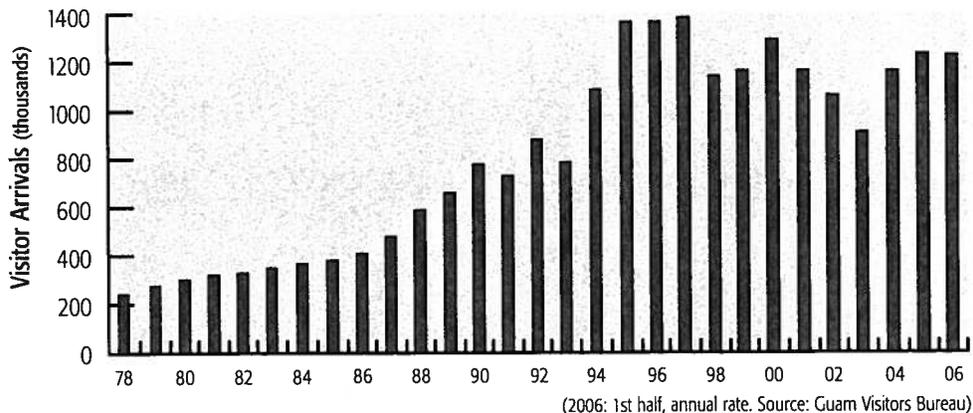


CHART 3 • HOTEL ROOMS, HOTEL OCCUPANCY

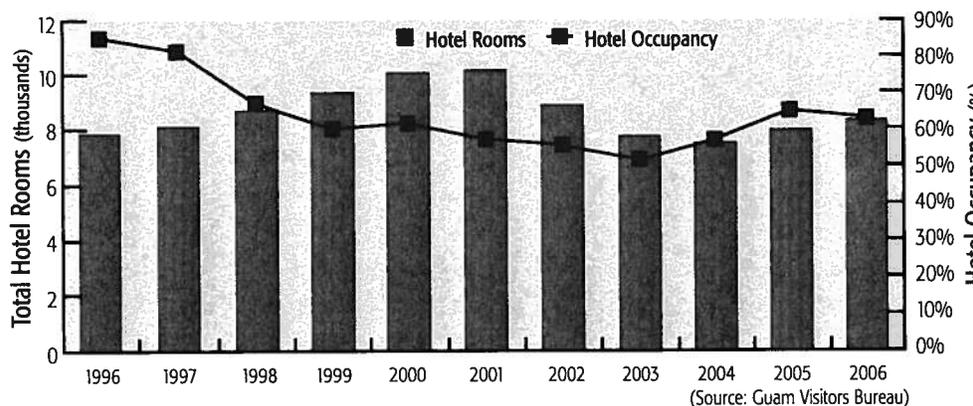
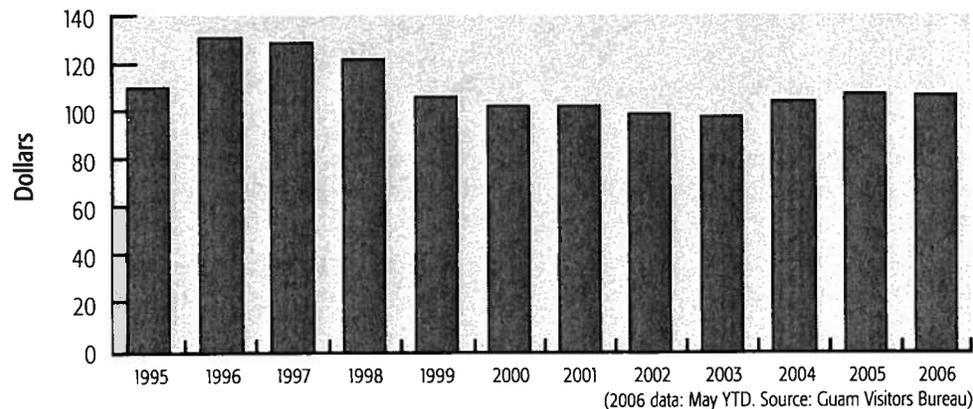


CHART 4 • AVERAGE ROOM RATE



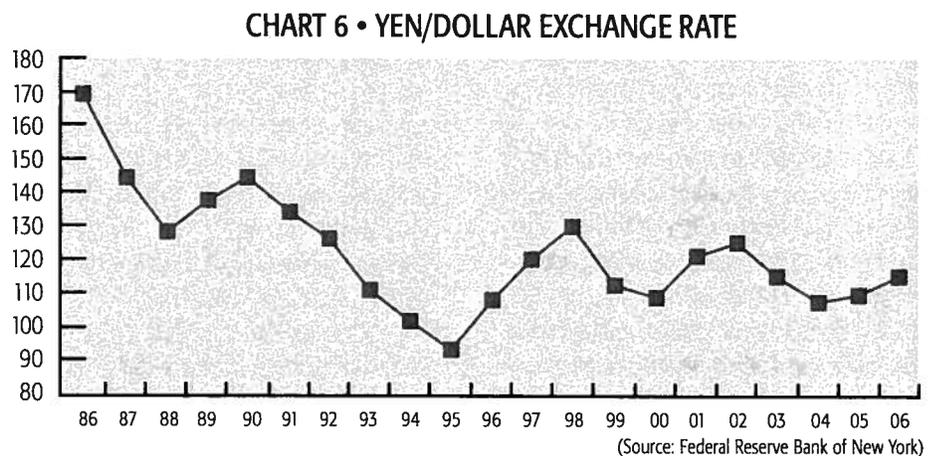
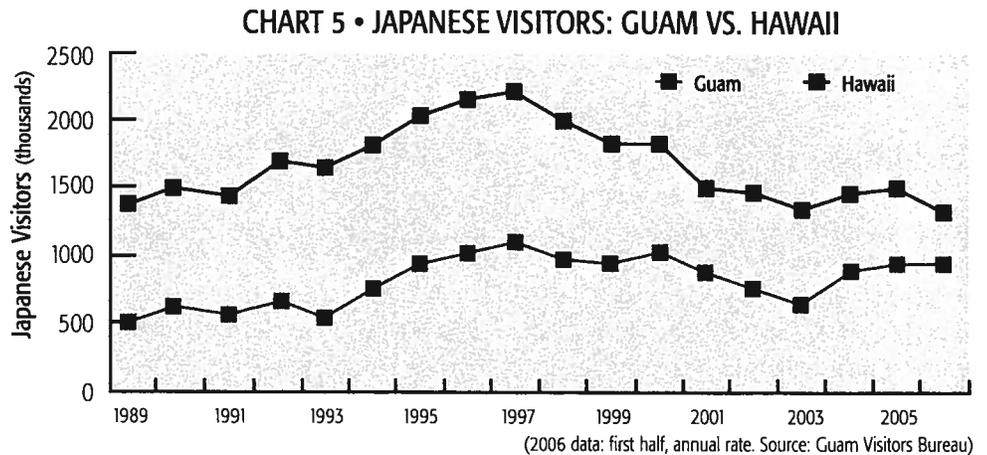
Interestingly, Guam and Hawaii compete in the same market for Japanese visitors. As far as product differentiation is concerned, Guam is often seen as the budget destination and Hawaii as more upscale. Part of this simply reflects the fact that Guam is closer to Japan, and the flight time and cost of airfare is less expensive.

Yet that should not be taken to mean that Guam and Hawaii are two entirely distinct markets. There have been far easier tourism markets for any destination to court over the last decade. Chart 5 at right compares Guam's Japanese visitor arrivals with Hawaii's. Even though the correspondence is not exact, the similar path of the two lines is striking. Both markets rose until 1997, peaked, and then declined. Neither market has achieved its previous peak. The biggest difference, of course, is that the Japan market is far more important to Guam than to Hawaii. Last year, Japan accounted for 78% of Guam's total visitor arrivals, but only 21% of Hawaii's.

This indicates that both Guam and Hawaii visitors from Japan are influenced by some of the same market forces. Both have felt things like the Asian financial crisis and SARS scares, as well as other developments.

The yen/dollar exchange rate is also a shared economic factor, plotted in Chart 6. In 1995, a couple years before the market peaked for both destinations, it took only an average of 94 yen to buy one dollar. In 2002, the year before the most recent low in tourism was reached and people may have been planning their vacations, it took 125 yen to buy the same unit of U.S. currency. And a slightly stronger yen in the last few years is likely to have encouraged some rebound in the Japan market for both destinations.

There is something to the differences in the two markets, of course, and Guam Visitors Bureau (GVB) is well aware of this in formulating its marketing plans. Recently it has been attempting to reposition Guam as a more sophisticated and upscale destination, hoping to increase spending as well as arrivals and capture market share from places like Hawaii and Australia.



GVB market surveys have shown this repositioning is needed to an increasing degree. Even though Japanese visitors have been rising since 2003, this masks some unsettling trends. There is evidence in market surveys that Guam as been attracting lower income tourists. For example, in 2003 visitors earning less than 3 million yen annually accounted for 14% of the total; by 2005, that share had risen to 34%. Those with annual incomes in the 3 to 7 million yen range were about stable over the same interval. But those falling in the 7 to 10 million yen range fell from 20% to 5%, and those earning over 10 million yen annually fell from 14% to 4%. Clearly, these are signs that Guam is becoming even more of a budget destination.

There are encouraging indications so far in 2006 that this trend is reversing. In the first half of the year, the less than 3 million yen category

fell to 27% from 34%. The 3 to 7 million yen range fell from 40% to 29%, the 7 to 10 million yen category rose to 10% from 5%, and the over 10 million yen category rose to 20% from 4%.⁹ GVB believes that the changed marketing strategy is a cause of this, and is watching closely to see if this newer trend continues. (One segment of the Japan market that has remained strong through thick and thin is the wedding market, which continues to thrive.)

The first part of 2006 was off to a strong start in arrivals, but the remainder of the year may be more of a challenge. The third quarter of 2005 was quite strong due to several factors that drove Japanese travelers away from Asia — such as Avian flu fears and chilled Japanese political relations with China and Korea. So that quarter last year may be hard to top. Now there is also an \$80 per ticket fuel surcharge in place.

(continued on page 8)

⁹ Shares do not sum to 100% due to some non-responses to the question in the survey.

Analysis by Major External Drivers

(continued from page 7)

The Military

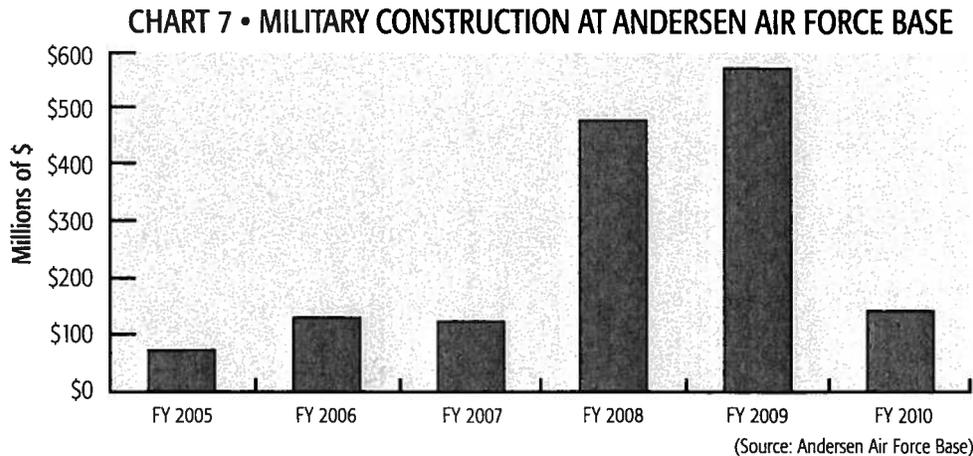
Yet even if Guam tourism were to improve dramatically in coming years, that is not where Guam's next big economic thrust is likely to reside. In early 2006, as part of a global reallocation of U.S. armed forces, Washington finalized plans to move significant military resources to Guam. This move will constitute the largest military buildup on Guam since the end of World War II, and it promises to boost Guam economic growth beyond anything it has experienced in modern times, potentially well exceeding the tourism investment boom discussed in the previous section.

The news has literally everyone in the Guam business community contemplating how it will affect them and their own business over the next several years. Major opportunities obviously exist for local construction firms, environmental services, facilities maintenance, food services, and administrative jobs, among other things.

Perhaps the biggest problem in analyzing and quantifying the impact is some continued



Photo courtesy of Cpl. Will Lathrop, 31st MEU



uncertainty concerning funding and timing. As might be appreciated, anything of this magnitude often changes in committed dollar amounts and time-line. Some local sources conflict on the details even now, and some military decisions are still pending. With those caveats, the following is what seems to be the received consensus wisdom at present about what is going to happen and when.

Let's start with the present. Currently, there are 39,000 acres of existing military-owned real estate on Guam, 29% of the island's land area. All of the future military growth is expected to take place on that existing acreage, so no additional land will need to be acquired.

For the Navy, this land now includes Naval Base Guam (headquarters of the Commander, Naval Forces Marianas or COMNAVMAR), the Naval Magazine in the south of the island, the Naval Hospital, Nimitz Hill Officers Housing, Barrigada Naval Communication Station, and the Naval Computer and Telecommunications Station. For the Air Force, it includes Andersen Air Force Base at the north end of the island (AAFB, home to the 36th Air Wing, Maintenance Group, Medical Group, Mission Support Group, and other squadrons), Northwest Field, and Andersen South, below the main AAFB.

At present, AAFB has 2,168 military personnel and 2,335 dependents, for a total of 4,503 persons. COMNAVMAR lists 4,400 military and 7,500 dependents, for a total of 11,900. (The Navy does not homeport that many ships in Guam. It now lists two submarines, with another to return shortly, and one surface ship, the USS Frank Cable, a submarine tender. Homeporting of more subs in Guam has been a subject of discussion, and there are an estimated 250 Naval ship visits per year.) Finally, the Guam Army and Air National Guard lists 2,200 military and 3,000 dependents on the island.

To this will be added approximately 8,000 Marines of the III Marine Expeditionary Force now stationed in Okinawa. These Marines will be accompanied by an estimated 12,000 dependents for a total of 20,000.¹⁰ These personnel will be added over a period of six years, and the move is expected to be complete by 2012. At that time, there will thus be an estimated total of about 42,000 military and dependents on Guam, almost a doubling of present levels.¹¹

Note, however, that this does not include any additional military personnel to be moved to Guam. Other moves are also planned or being discussed. Other troops may be moved from South Korea, and AAFB will be adding a Rapid

¹⁰ One estimate of dependents is derived from documents furnished the author on a recent visit to Guam puts the Marine dependents at 24,000, which would be 3.0 dependents per Marine. Given dependent ratios of active duty personnel now on the island given above, from the same source, this seems high. It would be surprising to find that many dependents on Okinawa now. If one uses dependent to active duty personnel ratios of those now on Guam, about a 1.5 ratio rather than 3.0 is found. This yields the 12,000 dependent estimate cited above. The figure 20,000 is also found in another document furnished to the author. See the presentation of Governor Felix P. Camacho, "Infrastructure Improvement Forecast, A Partnership between the People of Guam and the U.S. Military," April 2006, p. 2. Yet even that may be an overestimate. Some recent news reports put the number of Marine dependents at only 9,000.

¹¹ These figures on personnel do not include military transit or throughput passengers passing through the Guam International Airport terminal, which is also expected to grow by one-third over the next five years, and arrivals from the Military Air Command Terminal on Andersen Air Force Base.

Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE) squadron, among other units. There has even been some (unconfirmed) mention of an Army battalion. And Guam still makes the list when the Navy discusses moving another aircraft carrier to the Pacific, along with places like Hawaii and San Diego. That, along with ships in the accompanying carrier battle group and dependents, would be something that Guam would be challenged to accommodate.

For economic analysis, dollar amounts are more important than numbers of people involved. The Marine move to Guam will cost an estimated \$10.27 billion. Of this, Japan will cover \$6.09 billion and the U.S. will fund the remaining \$4.18 billion.

The Japan portion will include:

- \$2.8 billion in grants for projects not directly related to military exercises (barracks, headquarters, administrative buildings, and schools).
- \$1.5 billion for investments in a new company to build family housing, to be reimbursed from rents.
- \$1.79 billion in loans from the Japan Bank for International Cooperation to build family housing, also repaid from rents, and for infrastructure such as electricity and sewage.

The U.S. portion includes:

- \$1.0 billion to construct roads.
- \$3.18 billion for training sites, runways, and recreational facilities.

Note, however, that the \$10+ billion figure broken down above is only part of the total spending designated for Guam that has been estimated by the military recently. A total sum of \$15 billion is the number that COMNAVMAR reported to the Governor in late July, 2006. It is currently estimated that this total will be spent



Photo courtesy of Sgt. Eaton E. Roake

over a period of ten years. Thus, an average of \$1.5 billion per year will be pumped into the Guam economy.

The military anticipates that most of the identified funds will be spent on housing for the Marines in the Finegayan area, on military held land at the Naval Computer and Telecommunications Station and in South Finegayan. That could increase Dededo's population by about 40% when all the Marines and their dependents are moved in. But Defense officials also expect to expand and upgrade facilities at Apra Harbor, Andersen South, Naval Magazine, and Barrigada Naval Communication Station.

Sometimes lost in the discussions about the Marine relocation is the fact that the Air Force has been planning, independently, expansions of its own. Information from AAFB indicates the sums plotted in Chart 7 at left have been budgeted for military construction at the base in coming years.

The implications of all this for Guam economic growth are enormous. That will be discussed in the concluding section to this paper.

Just how much of the money will find its way into Guam's civilian economy is unclear. It is clear that the activity will take place on-island, however, even if it is conducted by military or

off-island civilian contractors. There will certainly be some "multiplier" effects on the broader economy, and the local construction sector will undoubtedly have its hands full. It would be incapable of providing all that is needed in any case.

The Government of Guam has estimated that the island's population will increase from current levels (see the 171,019 estimate for 2006 above) to 180,692 in 2010, a 5.7% increase, even without the military increases. It has begun planning to accommodate both that increase and the increased military population, projecting that \$2.6 billion will be necessary to improve infrastructure and accommodate both civilian and military growth. Preliminary infrastructure to support the military move alone, outside military reservations and in the local economy, has been forecasted to be \$945 million.¹² The Government of Guam has made a case that Federal assistance will be needed immediately to meet these goals.

There is a strong case for outside assistance, because the military on Guam certainly is not self-sufficient. For example, the Department of Defense accounts for 20% of Guam Power Authority (GPA) energy sales and 16% of its energy revenues. A baseline scenario projects that

(continued on page 10)

¹² See Camacho, op.cit., for a detailed breakdown of these needed infrastructure improvements.

Analysis by Major External Drivers

(continued from page 9)

GPA installed capacity will be exceeded by 2011. Guam Waterworks Authority (GWA) handles Air Force on base and most Navy off base wastewater. Highways will need to be upgraded for military use. The Port Authority of Guam (PAG) reports that 25% of all domestic containers received there are associated with military commissary, household goods, and construction activities. And while the military owns 80% of the pier space at Apra Harbor, all construction materials needed for military expansion and military household goods pass through the 4,349 linear feet of pier space owned by PAG in the harbor.

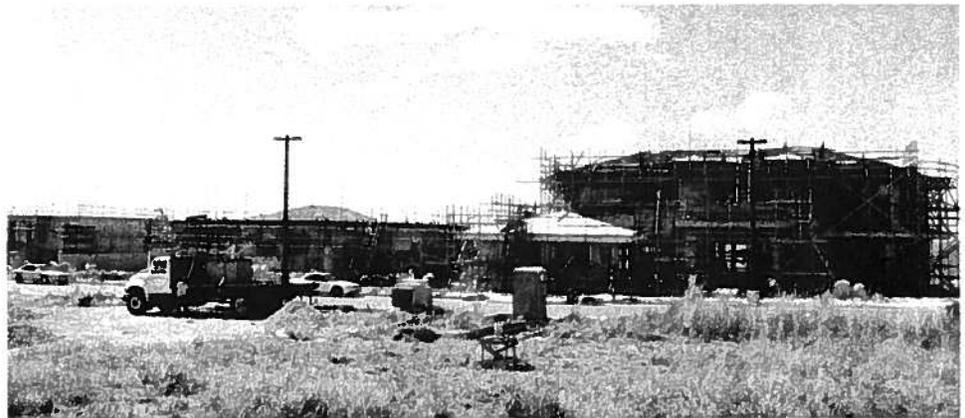
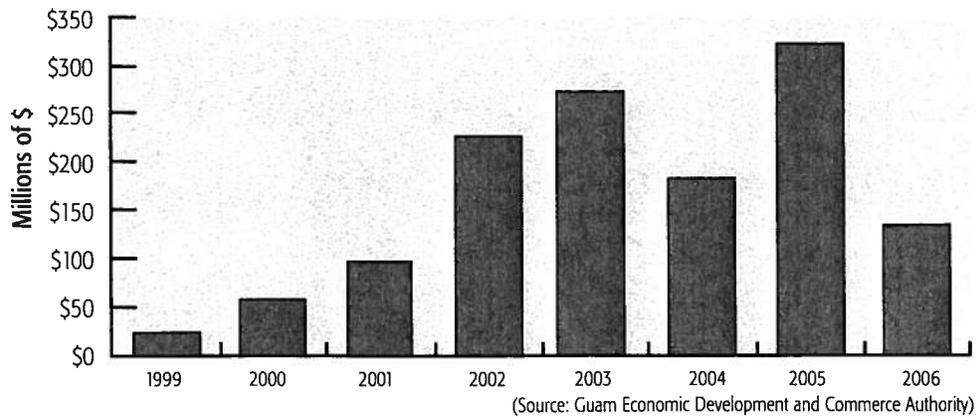
Finally, it should also be noted that military contracts on Guam have been increasing at a rapid pace in recent years anyway. See Chart 8. Ostensibly, none of this can be identified with the recently announced buildup, even though it is impossible to say how much of it might have been influenced by the same strategic mindset that identified Guam as the location for that buildup. (The buildup has at least been discussed for several years.) Thus, Guam could have counted on substantial injections even before this year's announcements.



Antonio B Won Pat International Airport, Guam.

Photo courtesy of the Marianas Business Journal

CHART 8 • MILITARY CONTRACTS AWARDED



Stella Vista Estates construction in Maite, Guam.

Real Estate and Construction

Guam real estate prices have just recently attained pre-recession levels. That story is told clearly in Chart 9 at right. As the economy sagged in the earlier part of this decade — under the weight of lackluster job growth, faltering tourism, and major typhoons — so did real estate prices, even though the number of transactions continued to climb. See Chart 10.

There are some underlying reasons that real estate prices are accelerating even aside from expectations about the military buildup. Like everywhere else, low interest rates in recent years have made home ownership more affordable. And even though job growth has been flat recently after the 2004 pickup, the overall economy has been improving some, adding to confidence

about the future. Also, it is fairly clear by now that the housing boom on the U.S. Mainland and in Hawaii has peaked. The stock market still does not promise much, and investors are looking for a place to put their money.

Moreover, Guam is still quite a bargain relative to places like Hawaii and various Mainland hotspots. With the tough times the economy went through several years ago, real estate prices were hit hard. Many view the price increases now as just a return to normal. So investors are selling in markets that are peaking, and buying at a low point in a market that they believe still has legs. Add to these factors the expectations that Guam is about to undergo a huge growth surge because of the military infusions, raising demands for shelter as well as

CHART 9 • MEDIAN TRANSACTION PRICE

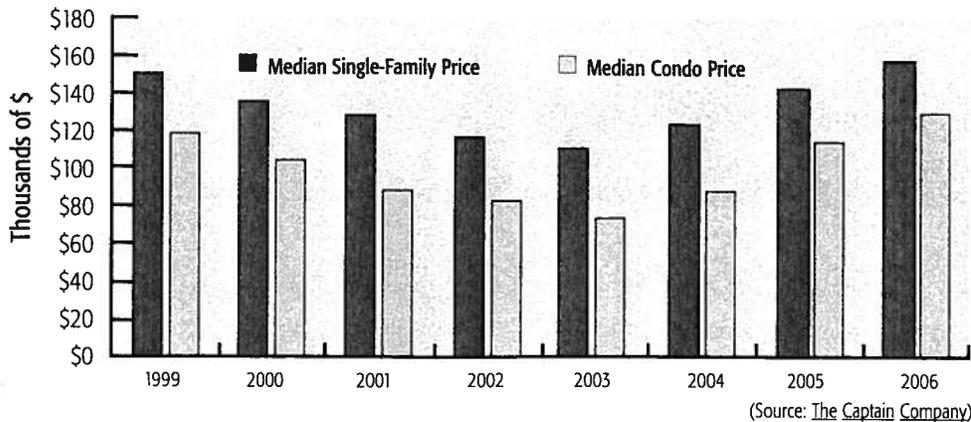
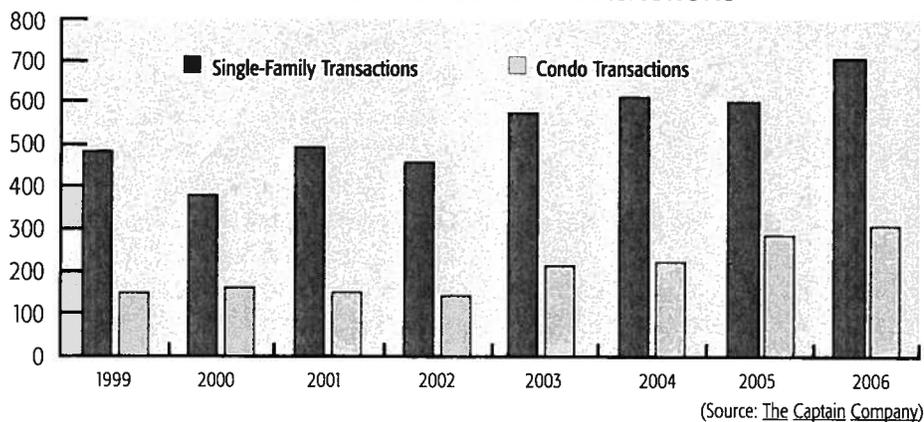


CHART 10 • NUMBER OF TRANSACTIONS



other things, and it's no surprise that real estate prices are climbing.

Much of the increased demand comes from off-shore. Traditionally, Guam off-shore demand has mostly come out of Asia, but now more of the players are from the U.S. Mainland and Hawaii. Realtors observe that inquiries from the U.S. really are not so unusual, but more of that interest is now culminating in actual sales. Asian demand is still important, driven by improving economies there. But the advantage for U.S. investors in Guam real estate is that it is a dollar-denominated investment in what is essentially an Asian economy. Guam's "America in Asia" image seems to be paying off.

The military move that has now been confirmed has been a subject of speculation

for some time, so market observers see what has been going on recently as a sort of pre-surge. Most investors are aware that the actual military presence will not begin to show up for a couple of years, but if they have staying power some of them foresee renting to military families or those involved in accommodating that influx.

The increased interest in Guam real estate will also translate into higher construction activity. In Guam's slumping economy of the early 2000s, developers simply were not willing to risk new construction. But now landholders may be thinking more seriously about joint venturing with developers to add to Guam's housing supply. Significant supply growth is now being anticipated for the first time in a decade. That has already started with some

residential sub-divisions and smaller scale apartment projects. And interest is rising in larger scale projects.

Increased supply also helps keep a lid on runaway price increases fed by speculation. Hawaii and other areas have experienced some of that recently, and in the long run it is not good for the economy. In-migration will be necessary to fill all the jobs created by the future military build-up. An increasingly tight labor market will be a hurdle in any case, and it will only be exacerbated by an unaffordable housing market. Overall Guam inflation has already been accelerating in the last several years, with the improvement in the economy.

Since real estate prices bottomed out in 2003, single-family home prices have risen 41% through the first half of 2006, and condo prices are up 74% over the same period. Several new projects are now going up, and developers are raising prices in them even as they are constructed. A sample from island appraisers of recent prices and increases in new projects:¹⁵

- In Paradise Estates, the first significant new sub-division in ten years, 90 units in Phase I sold out within two months in early 2005. The original pricing was in the \$185-205K price range, and the developer is re-pricing second phase and first phase fall-outs at \$200-240K.
- In Villa Carmen in Tamuning, a 34-unit executive sub-division, several units have sold in the \$350-430K range.
- In Talo Verde Estates in Tumon, cliff-line lots are going for \$575K and higher.
- In Stella Vista Estates, a land sub-division in Maite, 1/4 acre cliff-line lots have been going for \$250K and interior lots for \$150K.

Prices are also increasing in existing projects:

- In Villa Canton Tasi, oceanfront condos in Tumon, units that were selling for \$670K in September 2004 were up to \$1.25 million in April 2006.

(continued on page 12)

¹⁵ The prices quoted here were obtained from Micronesian Appraisal Associates.

Analysis by Major External Drivers

(continued from page 11)

- In Alupang Cove Condominiums, one bedroom units that sold for \$88K in March 2006 were up to \$128K in April 2006.
- In San Vitores Gardens Condominiums, 3 bedroom 2 bath units that sold for \$95K are now pending for \$199K.

Also pushing up prices are increasing construction costs, something builders everywhere are having to contend with nowadays. In addition, upward price pressures come from new regulations and the time required to bring new product to market. But in short, what is going on now in Guam is a rapid increase in demand, with supply slower to respond. Longer term risks for builders include uncertainties in the future total supply, and possibly military housing decisions.¹⁴

One of the things that concerns Guam builders the most with respect to the military buildup is a potential labor shortage in future years. Industry estimates indicate that perhaps 20 to 25 thousand construction workers may be needed on Guam eventually, but only 5,000 are on the island now. Guam relies heavily on alien workers, mostly from the Philippines and China, in boom times. But for military construction an added concern is security. After the boom eventually winds down, it is likely that a large proportion of these workers will remain on Guam.

Finally, as a longer term consideration, military leaders speculate that at some point there might be privatization of military housing on Guam. This is something that has the potential for providing a major long term underpinning for the construction and housing maintenance sector, especially in an island environment. Hawaii is a current example of this. 🌅

Outlook for the Future

It is difficult to forecast specific growth numbers by year at present for the Guam economy, because there is still some uncertainty about the amount of military spending and the timeline involved. We can, however, be certain that the impact will be very large, perhaps larger than any single evolution in Guam's modern history.

While magnitudes are problematic to specify exactly, the direction of movement in major macroeconomic variables is much clearer. Real economic growth will accelerate significantly. Inflation will continue to accelerate, and the island unemployment rate will decline markedly.

A basic exercise in arithmetic is instructive in this regard, even though it requires some assumptions. Let us take a "best estimate" of Guam Gross Territorial Product (GTP) to be \$3.4 billion in 2002, when it was last published. Then, just for illustration and to get to a current figure on this number, let us also assume a 3.0% contraction in 2003 in the aftermath of the typhoon, a 4.0% increase in 2004 as the economy recovered, and a sustained growth at this same rate in the 2005-2007 interval. In round numbers, that brings GTP to a level of \$3.9 billion in 2007. Then let us also assume that the military buildup will not begin until 2008, but at that time the dollar amount spent will be \$1.5 billion (\$15 billion spread evenly over 10 years). This is in

accordance with most recent estimates at the time this report is written.

If one adds only that \$1.5 billion to the economy in 2008, not even considering any other growth that might occur, then the growth rate of Guam's economy will be about 38% in 2008. Now, the GTP is in current dollars, not adjusted for inflation. So let us also assume that inflation in a confined island environment also takes off, and reaches 20% in 2008. That still leaves Real GTP growth at around 18%. Few economies ever experience that kind of growth without major growing pains — inflation, failure of infrastructure to keep up, congestion in various forms, and labor shortages among them.

So it is not all good news. This hypothetical exercise also does not take into account how much of the military spending will leak into the "domestic" economy. A major portion of the construction might go to military or off-island civilian contractors. We should recall that a number like GTP is just an aggregate measure of economic activity; it says nothing about its distribution. But any "trickle down" — even under modest assumptions — will be considerable.

On the positive side, there will be plenty of work to go around, Guam homeowners will be seeing major appreciation of their homes, and on balance the standard of living on the island should rise. The future of Guam's economy thus looks very bright at this juncture. 🌅

¹⁴ Some on Guam have not forgotten that when the Navy closed Subic Bay Naval Base in the Philippines in the early 1990s, Navy housing was constructed on Guam that was never occupied.