

Current Hawaii Economic Conditions

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to the

Committee on Ways and Means
and
Committee on Finance

December 18, 2013

Historical Economic Growth and Projections

A historical review of Hawaii's Economic Growth

Indicator	Annual average growth, %	
	30 years, 1982 - 2012	20 years, 1992 -2012
Real GDP	2.1	1.0
Real personal income	2.2	1.7
Honolulu inflation rate	3.2	2.4
Wage and salary jobs	1.3	0.5
Unemployment rate 1/	4.5	4.7
Visitor arrivals	2.1	1.0
Real visitor expenditures 2/	1.4	0.1

1/ Average of 30 years, 1982 – 2012.

2/ Deflated by Honolulu CPI.

Key Economic Indicators

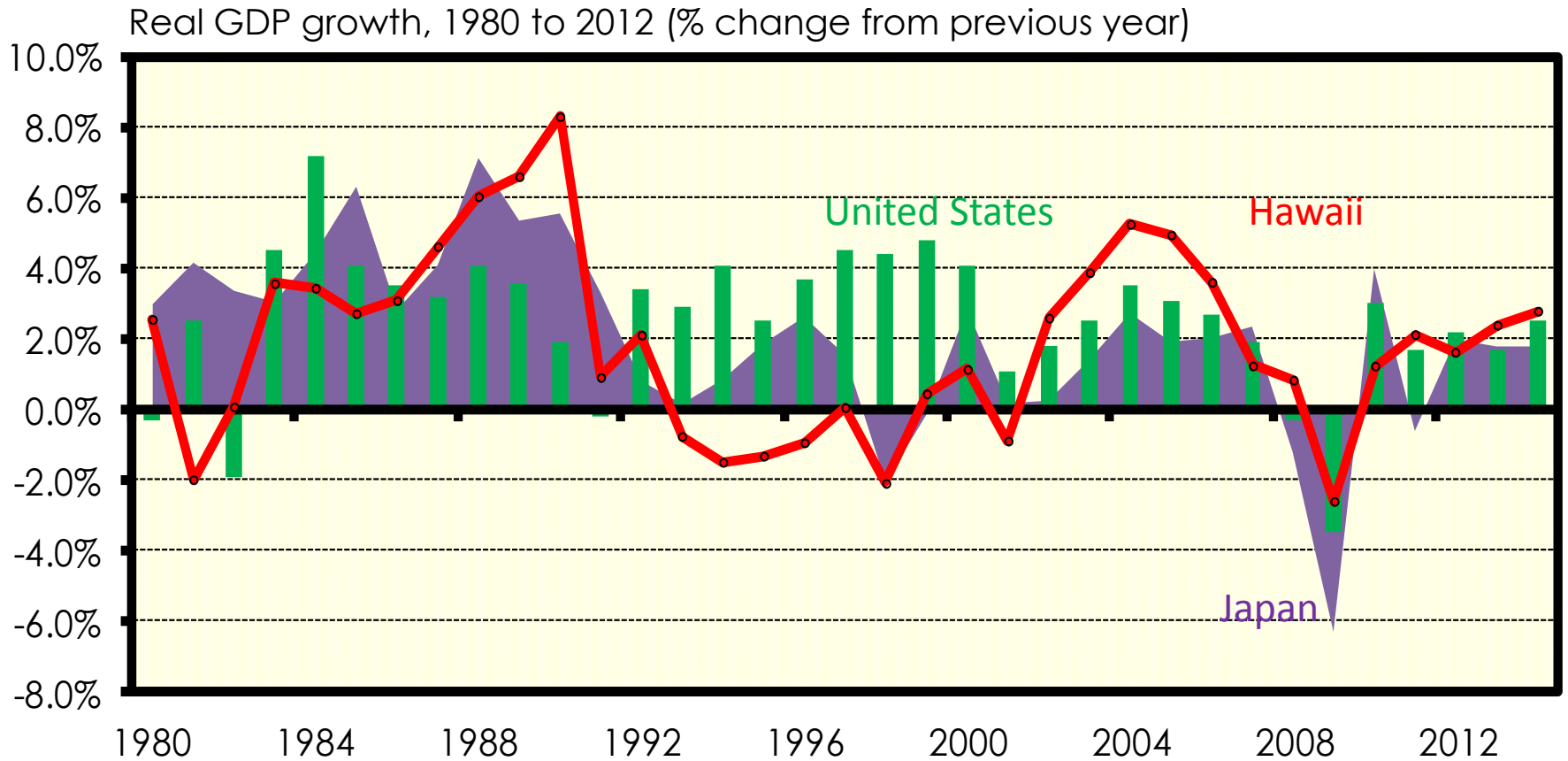
CY 2012 to 2014 (Annual % Change)

	Actual CY 2012	Forecast CY 2013	Forecast CY 2014
Total Population	1.0%	1.0%	1.0%
Visitor Arrivals	10.0%	2.9%	2.7%
Visitor Expenditures	18.1%	3.0%	4.2%
Honolulu CPI-U	2.4%	1.7%	2.1%
Personal Income	3.7%	4.0%	5.5%
Real Personal Income	1.9%	2.3%	3.3%
Total Non-Ag Wage and Salary Jobs	1.9%	1.3%	1.8%
Unemployment Rate (actual rate)	5.8%	4.6%	4.2%
Construction Completed	20.0%	15.8%	15.0%
Real GDP	1.6%	2.4%	2.8%

Source: Department of Business, Economic Development & Tourism.

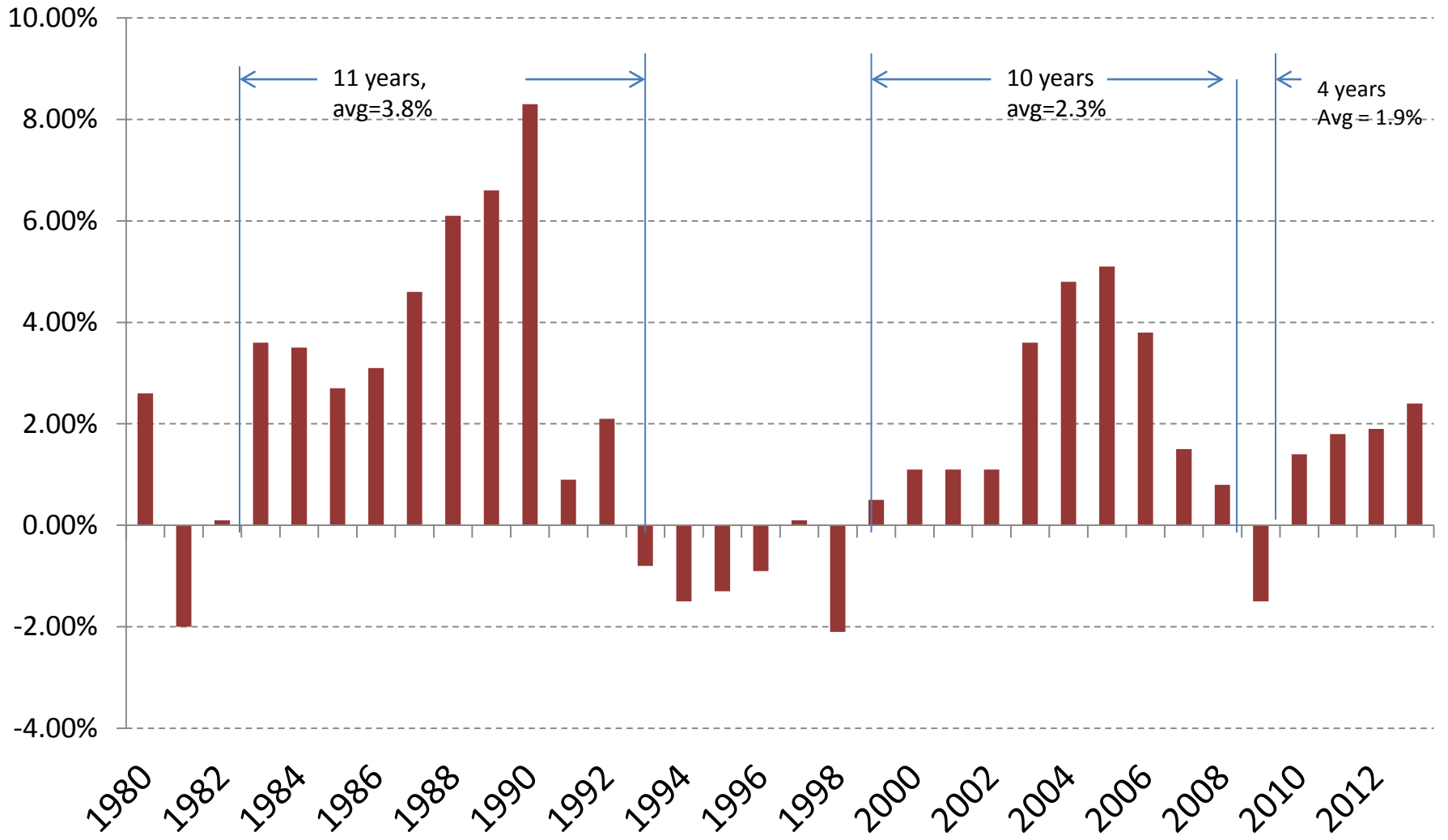
Hawaii Business Cycles

Hawaii's economy is influenced by the US and Japan, Hawaii's economic growth is expected to be higher than those of U.S. and Japan in 2014

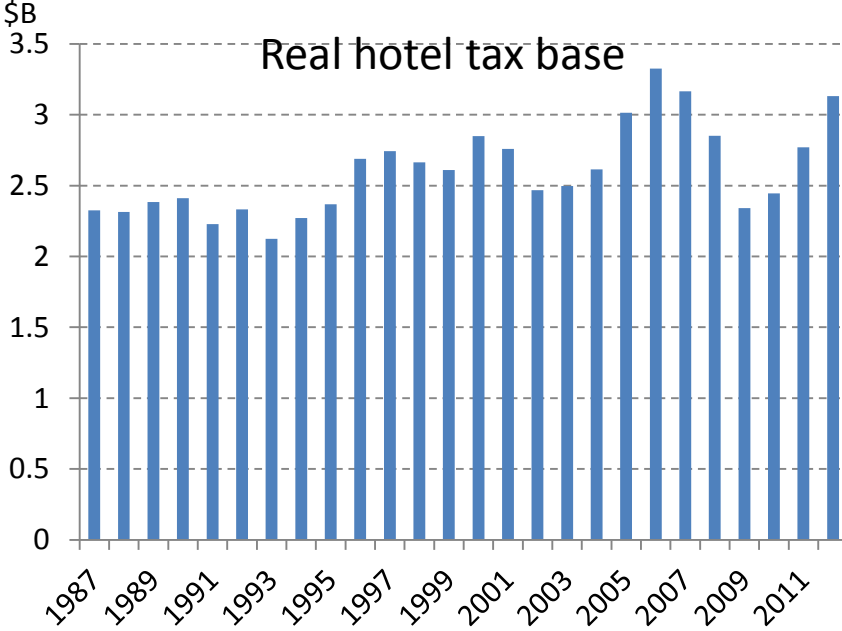
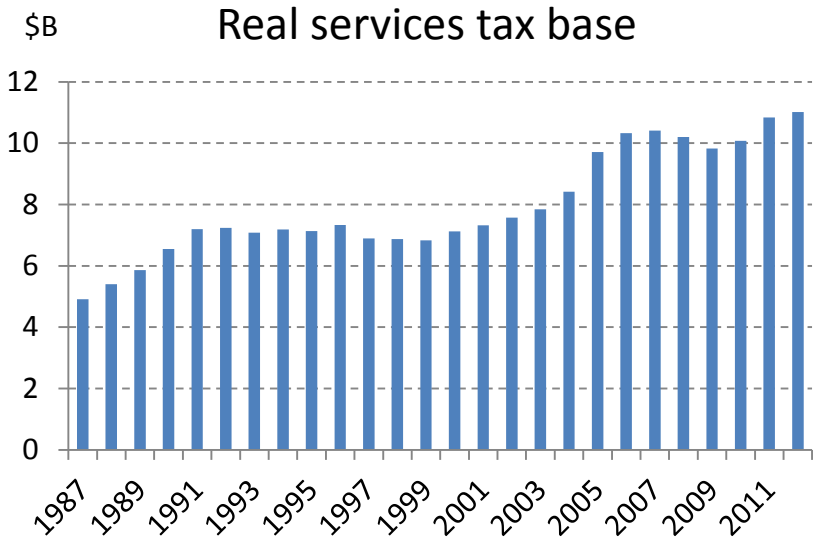
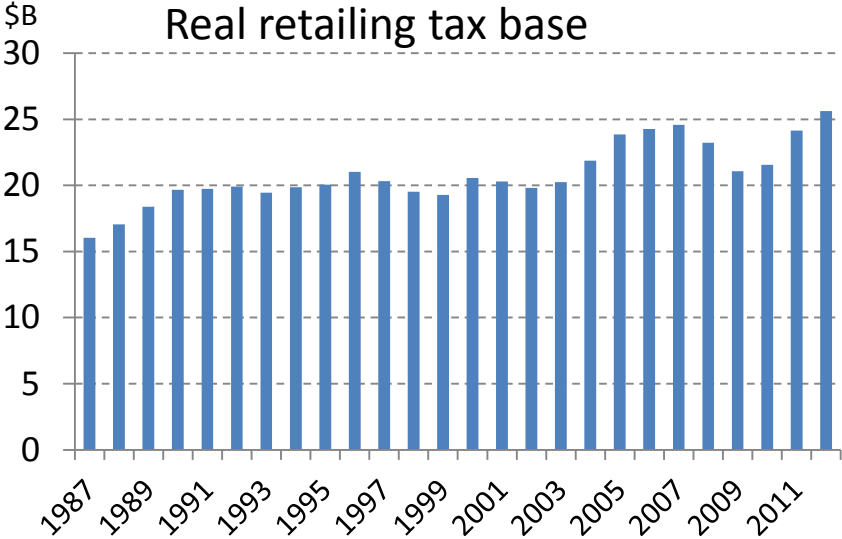


Source: US Bureau of Economic Analysis, Japan Ministry of Internal Affairs and Communications

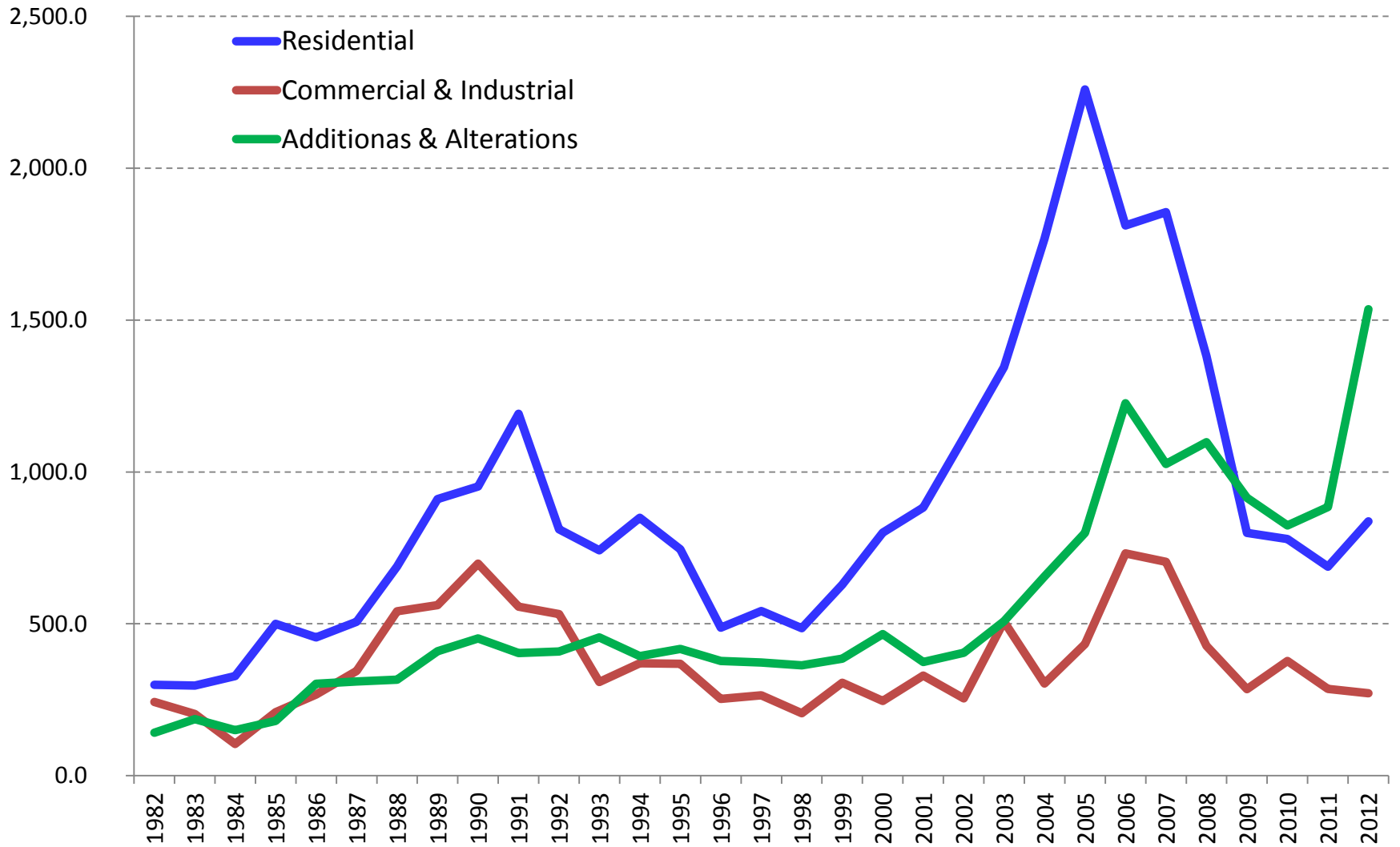
Hawaii Real GDP Growth



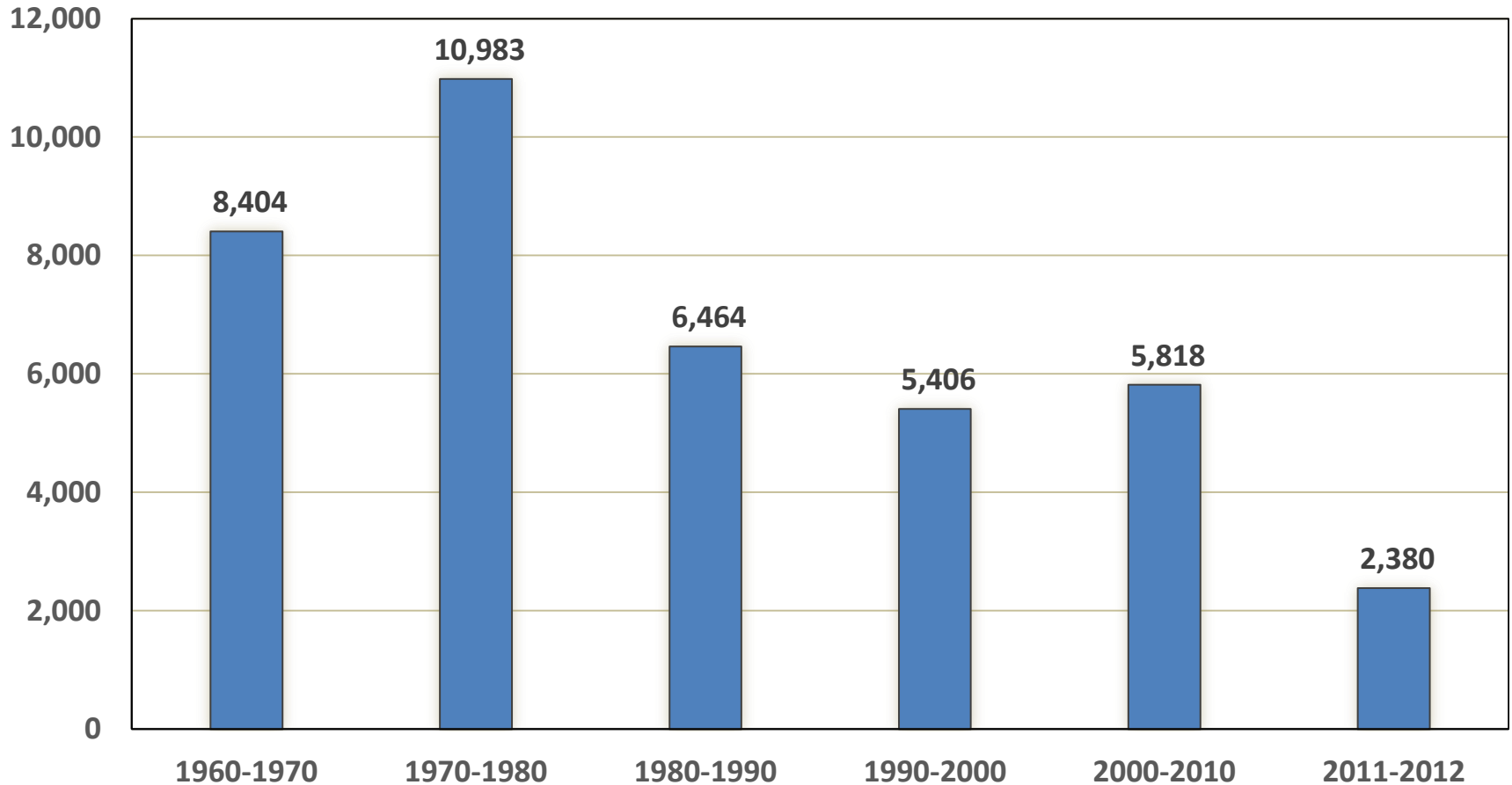
Construction activity was the cause for 1993-1999 economic downturn



Residential construction leads the way in business cycle and the last 2 expansion periods were about 8 years



**Planned housing units now is only 41% of what they were
during 2000s**
(average annual planned units, building permits approved)



There is currently a short supply in residential housing units

Year	Increase in residential housing units	# of persons per unit
2001	4,529	2.63
2002	4,426	2.63
2003	5,503	2.63
2004	6,867	2.64
2005	8,588	2.63
2006	9,278	2.62
2007	6,906	2.59
2008	6,389	2.59
2009	3,697	2.60
2010	2,107	2.62
2011	2,546	2.64
2012	1,861	2.66

Avg. = 2.62

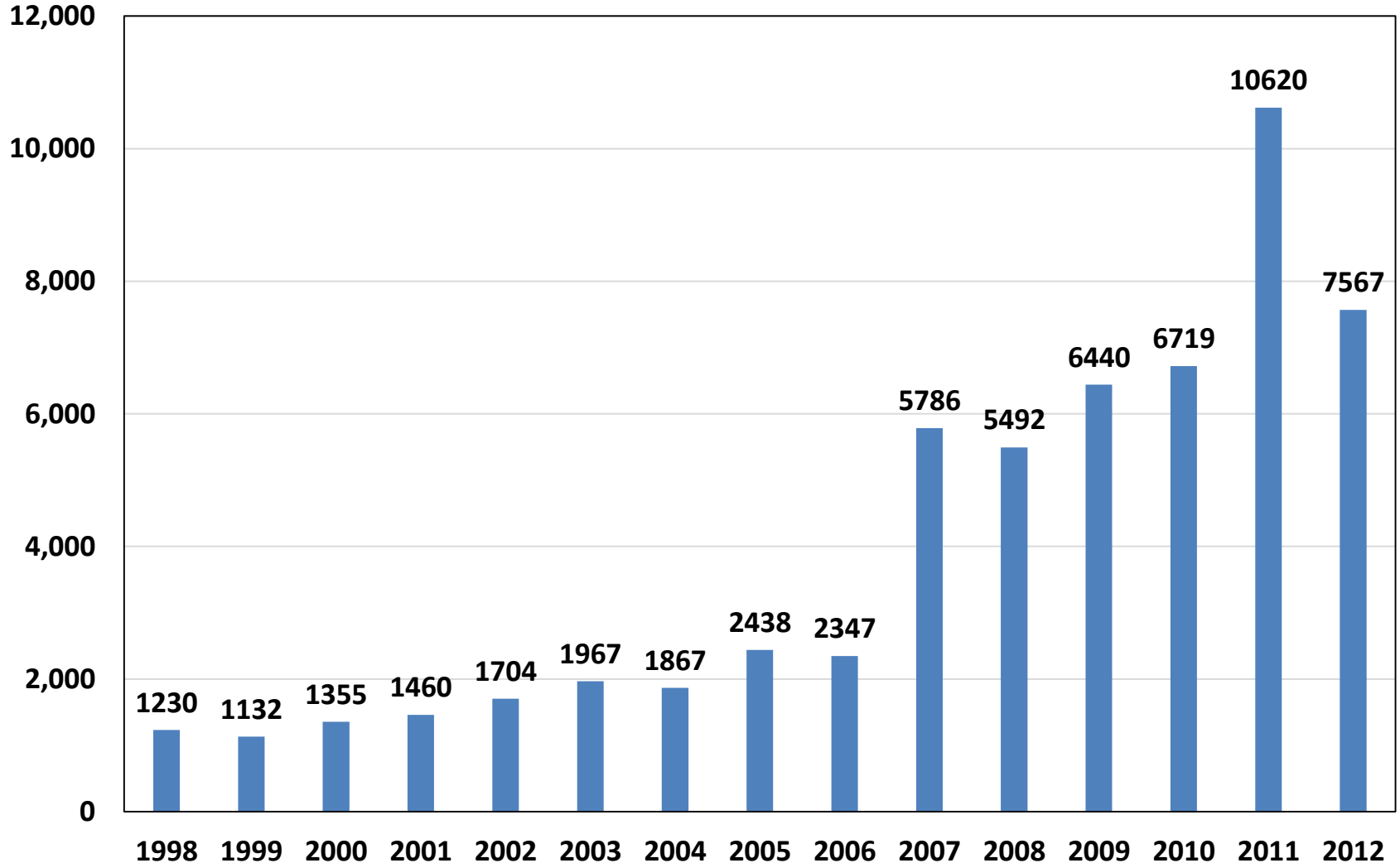
Short supply = $\text{population}/2.62 - \text{existing housing units}$
 $= 1,392,313/2.62 - 524,343 = 7,000$ units

Annual demand for residential housing units is about 5,700

$$\begin{aligned} \text{Annual residential housing units needed} \\ &= \text{population change}/2.62 \\ &= 15,000/2.62 \\ &= 5,700 \end{aligned}$$

More housing units are converted into visitor use in recent years

Individual vacation units for visitor use



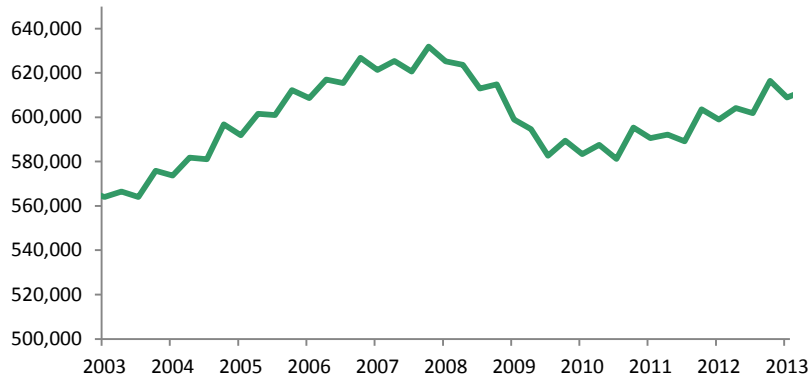
Personal Income And Labor Market Conditions

Stable and Diversified Economy

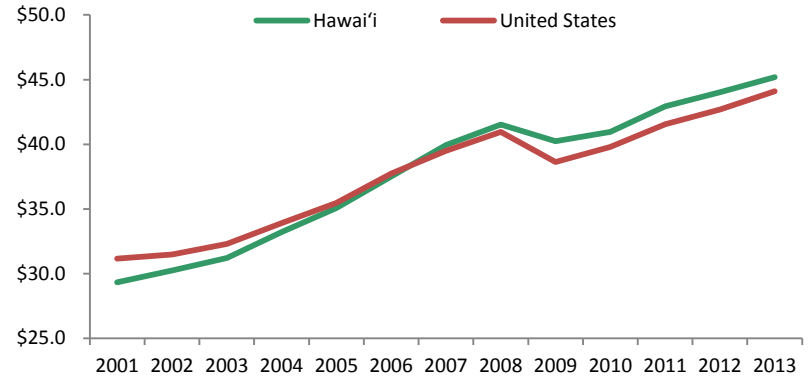
Wage and Employment Metrics

The employment sector in Hawai'i continues to improve

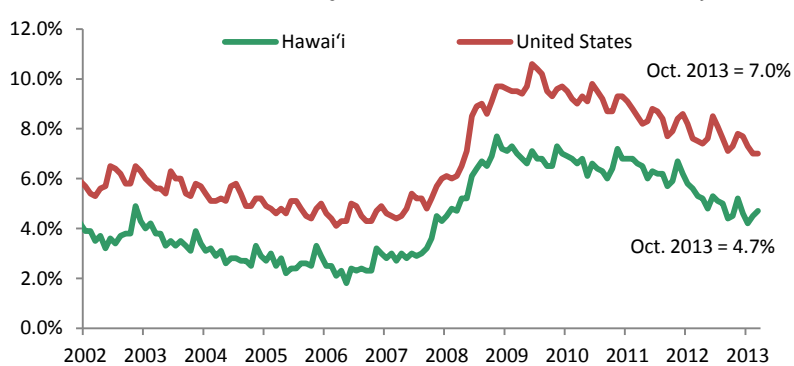
Non-Ag Wage and Salary Jobs



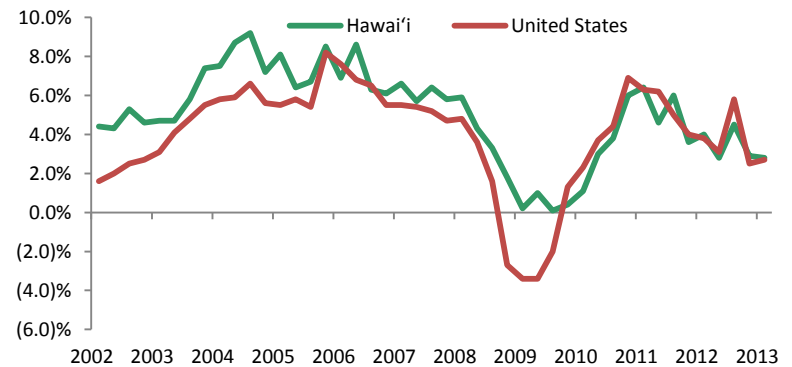
Per Capita Income (\$000)



Unemployment Rate, Not Seas. Adj.



**Quarterly Personal Income Growth⁽¹⁾
(Compared to Same Period in Previous Year)**

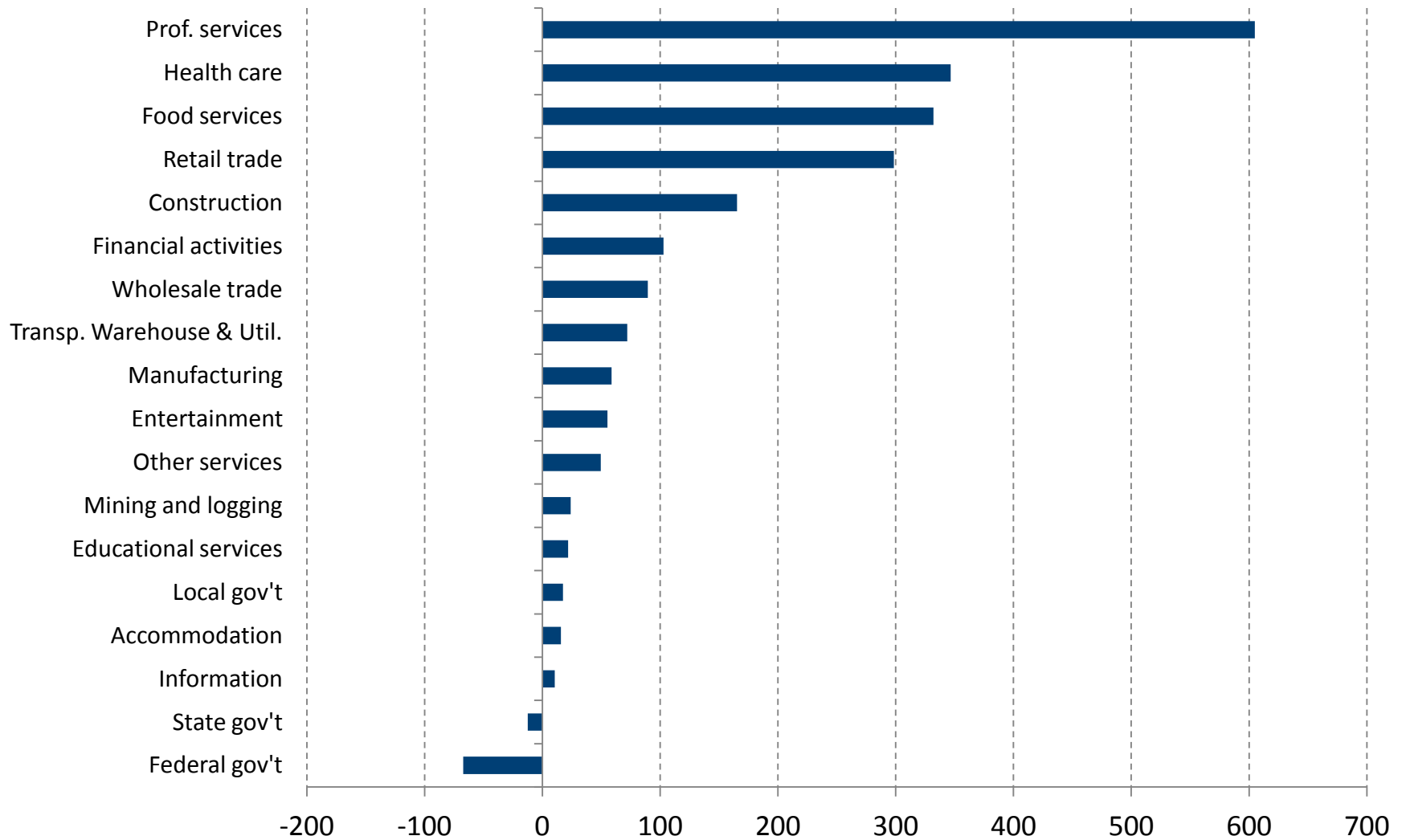


(1) As of 2Q 2013.

Source: Hawai'i Dept. of Labor & Industrial Relations; U.S. Dept. of Commerce, Bureau of Economic Analysis; U.S. Dept. of Labor, Bureau of Labor Statistics.

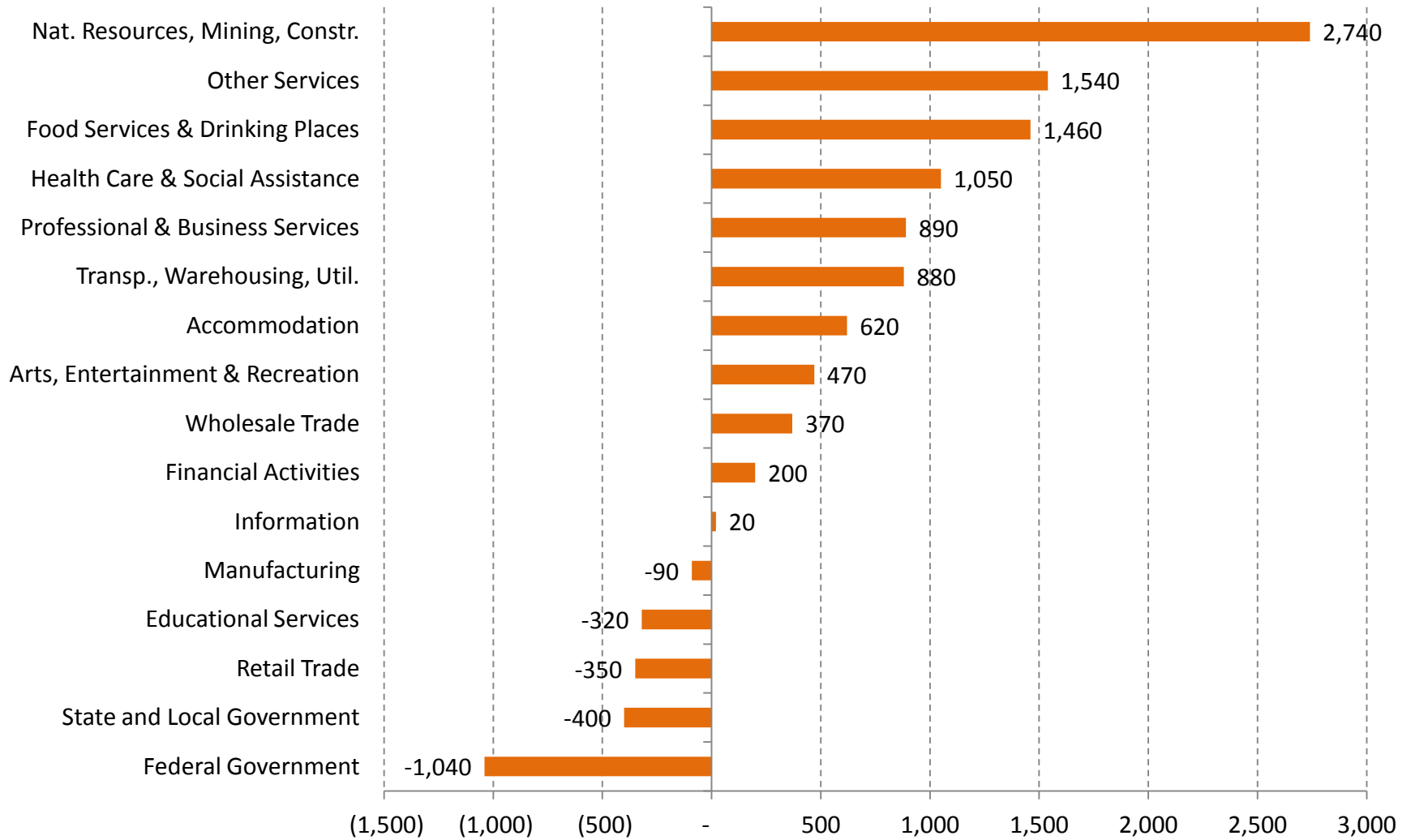
In the United States, other than Federal and State governments, all industries gained jobs during the 1st 11 months of 2013

(change in jobs from same period in prior year, in 1,000 jobs)



Source: BLS, **Employment, Hours, and Earnings – National**(Current Employment Statistics - CES) <<http://www.bls.gov/data/>>

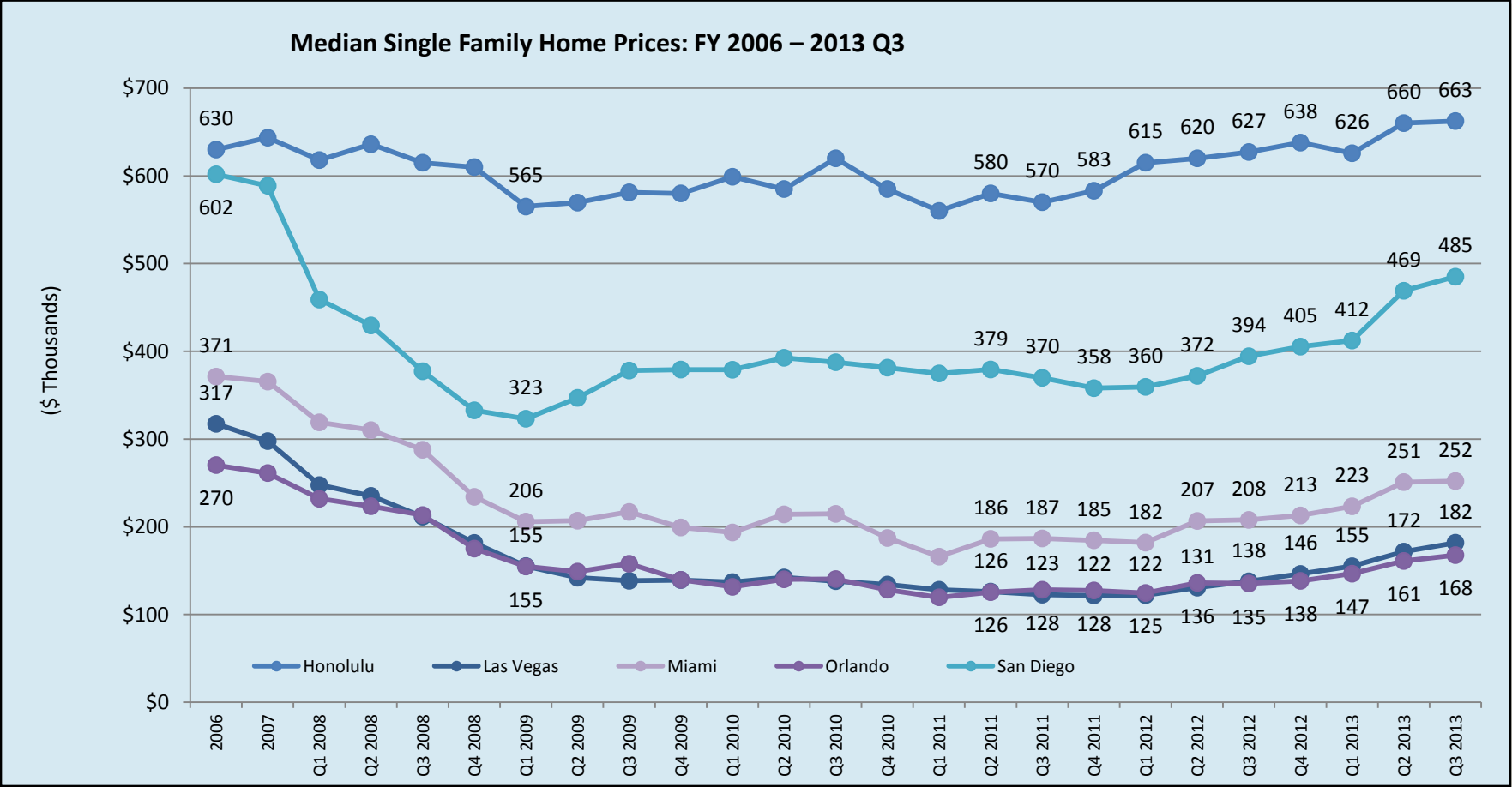
During the 1st 10 months of 2013, Hawaii gained 8,000 jobs



Real Estate Market

Honolulu Home Prices

Honolulu Home Prices Have Been Higher & More Stable Than Other Major Vacation Destinations



Source: www.realtor.org, National Association of Realtors [for Honolulu from 2012Q3] and Honolulu Board of Realtors

Real estate markets are booming on all the islands

(% change during 11 months of 2013)

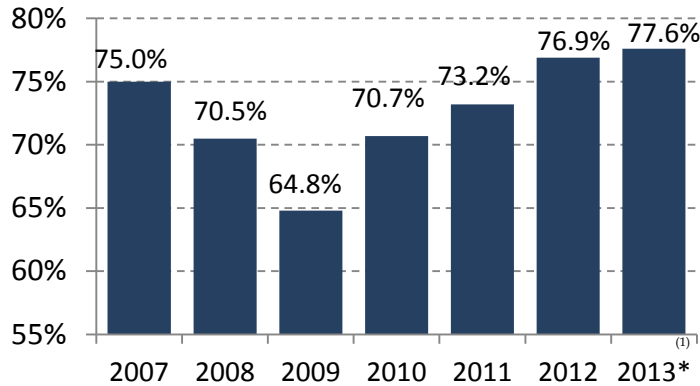
Island	Single Family Homes		Condo Homes	
	Closed sales	Median price	Closed sales	Median price
Honolulu	5.7%	3.2%	13.9%	4.8%
Maui	6.0%	14.0%	10.0%	6.0%
Hawaii	19.5%	17.1%	11.4%	4.1%
Kauai	7.7%	16.9%	12.0%	2.4%

Source: Property Profiles Incorporated, and Honolulu Board of Realtors

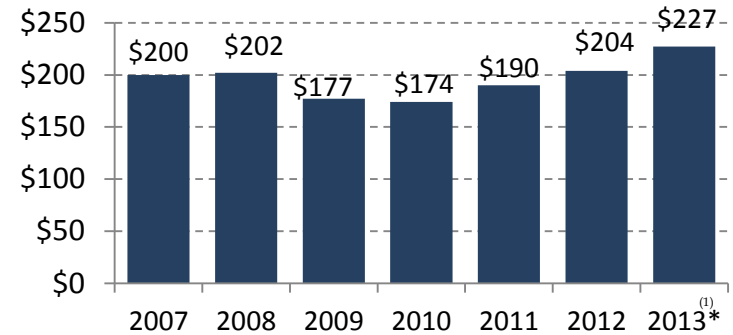
Tourism

Visitor Accommodation Statistics

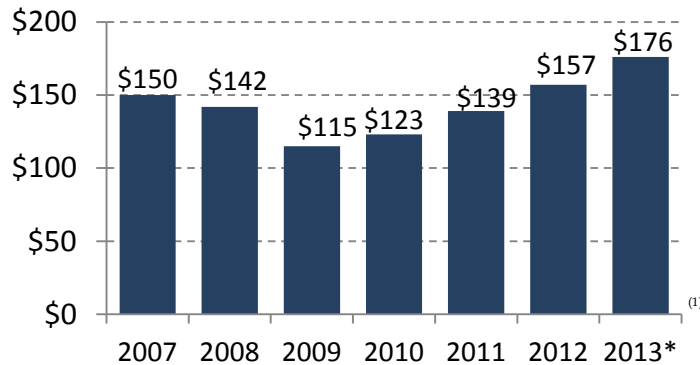
Occupancy Rates



Average Room Rates

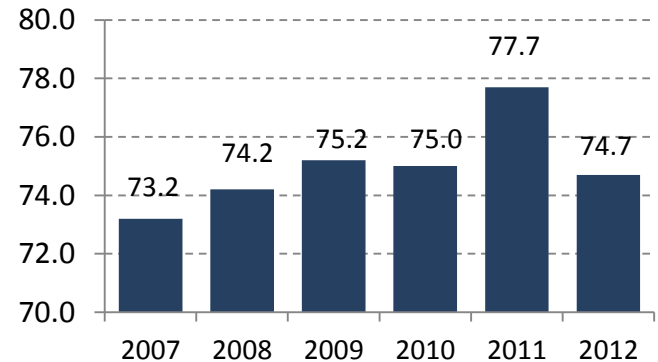


Revenue Per Available Room



Room Inventory

(thousands)

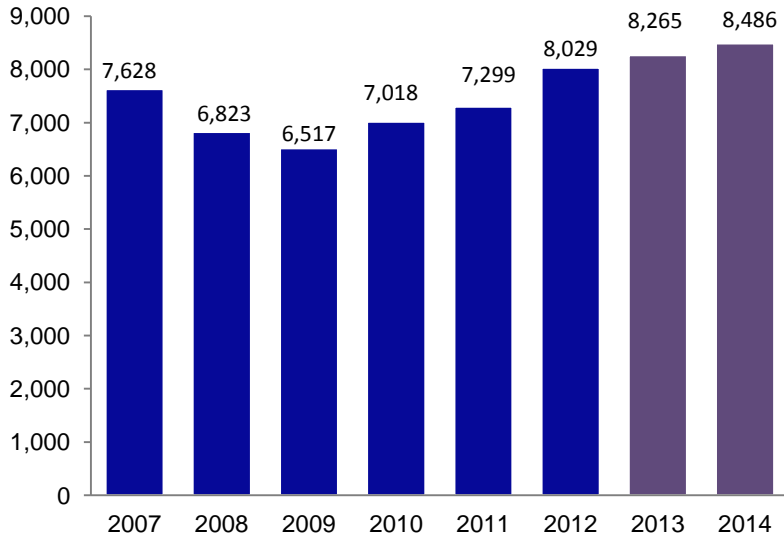


Source: Smith Travel Research, Hospitality Advisors LLC and Hawaii Tourism Authority.

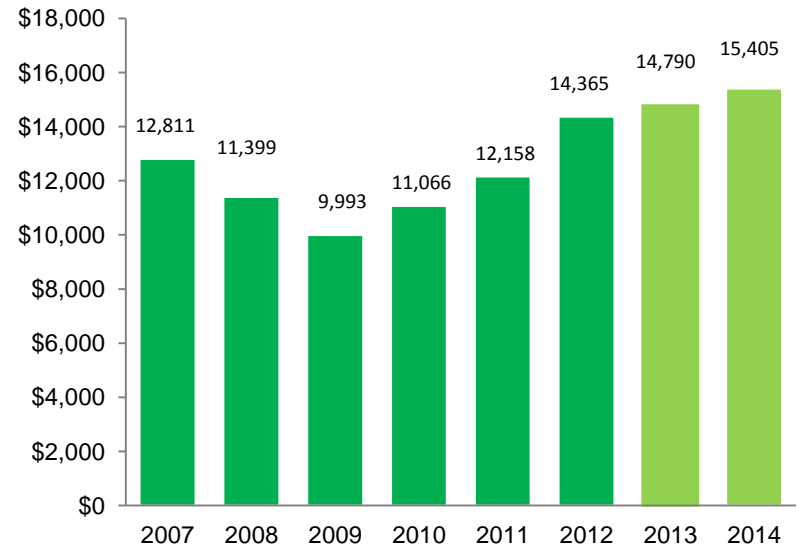
* First 9 months of 2013

Hawai'i's Tourism Industry Continues to Show Remarkable Strength

Visitor Arrivals Over the Last 7 Years (000)¹



Visitor Expenditures Over the Last 7 Years (\$mm)¹



Source: DBEDT, Smith Travel Research, Hospitality Advisors LLC

¹ 2013 & 2014 figures are projections

Smaller markets are creating new records while big markets are recovering

Region	Historical peak level	2008 Arrivals	LTM Arrivals ¹	% Change
US Mainland	5,173,264	4,452,343	5,019,119	12.7
Japan	2,216,890	1,175,199	1,498,975	27.6
Canada	477,564	459,580	509,588	10.9
China	81,738	54,235	132,579	144.5
Korea	122,902	38,110	175,318	360.0
Taiwan	88,193	11,482	17,217	49.9
Australia	237,808	137,812	290,804	111.0
Europe	231,604	115,172	138,780	20.5
Latin America	22,116	18,896	29,546	56.4

Source: Department of Business, Economic Development & Tourism, Hawaii Tourism Authority

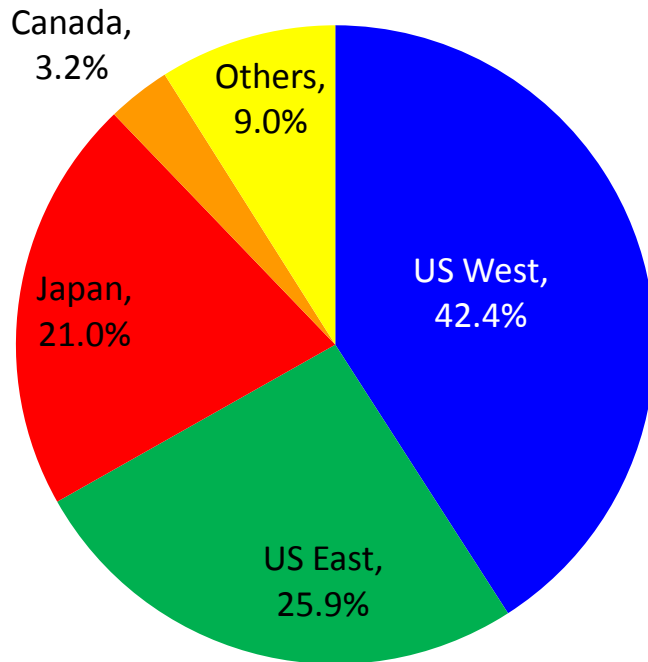
¹ Last Twelve months from November 2012 to October 2013

Visitor Activity

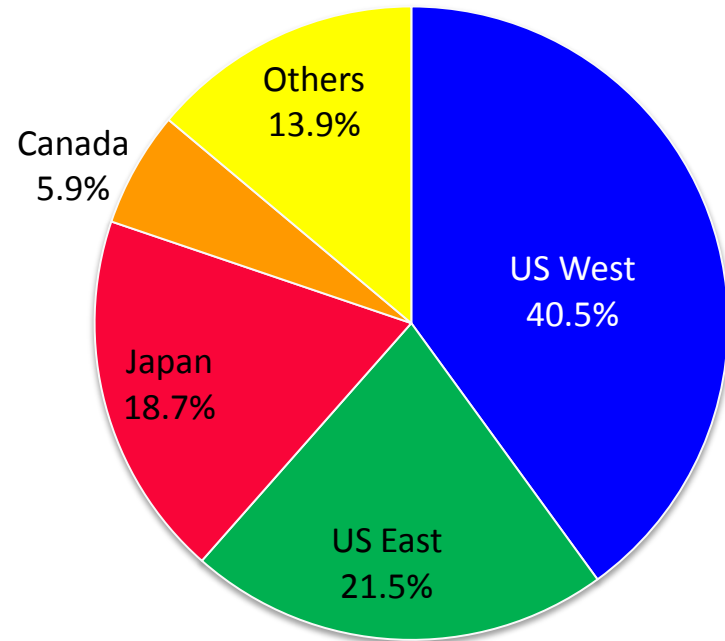
For the First 10 Months of 2013, 62.6% of Hawaii Visitors Were From the U.S. with Japanese Visitors Accounting for 17.8%

- Visitors from Canada and other markets are increasing

2003



First 10 Months of 2013



Source: DBEDT and Hawaii Tourism Authority

The economies of Hawaii visitor origin countries will look better in 2014

	2012	2013	2014
USA.	2.2	2.0	2.6
Canada	2.1	1.9	2.5
Japan	1.8	0.7	1.2
S. Korea	2.3	3.1	4.0
Hong Kong	1.7	3.2	4.1
Taiwan	1.3	3.1	4.1
China	7.7	8.0	8.1
United Kingdom	-0.1	1.0	1.7
Germany	0.9	0.9	1.4
France	0.1	0.2	1.0
Eurozone	-0.4	0.0	0.9
Australia	3.5	2.7	3.1
Brazil	1.5	3.4	4.1

Source: Blue Chip Economic Indicators, December 10, 2013

New Airs seats for 2013*

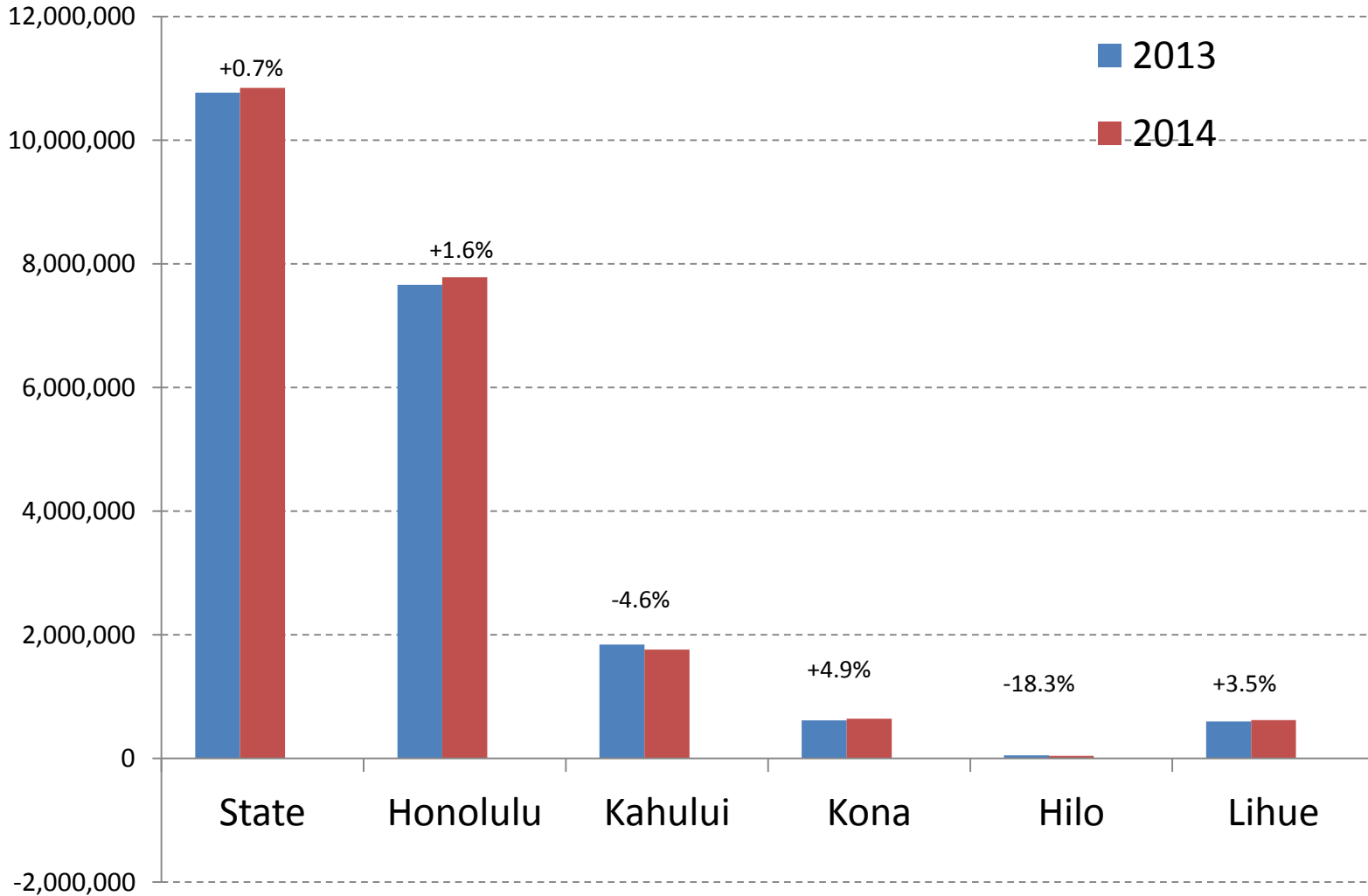
New airseats added in 2013 on scheduled flights

MMA	STATE	HONOLULU	KAHULUI	KONA	HILO	LIHUE
TOTAL	524,939	465,350	62,609	-10,653	-9,306	16,939
US WEST	154,435	89,760	70,941	-13,735	-9,306	16,775
US EAST	66,075	75,698	-9,623			
JAPAN	120,415	120,415				
CANADA	159	-4,378	1,291	3,082		164
OTHER ASIA	68,239	68,239				
OCEANIA	115,124	115,124				
OTHER	492	492				

*1st 10 months of 2013

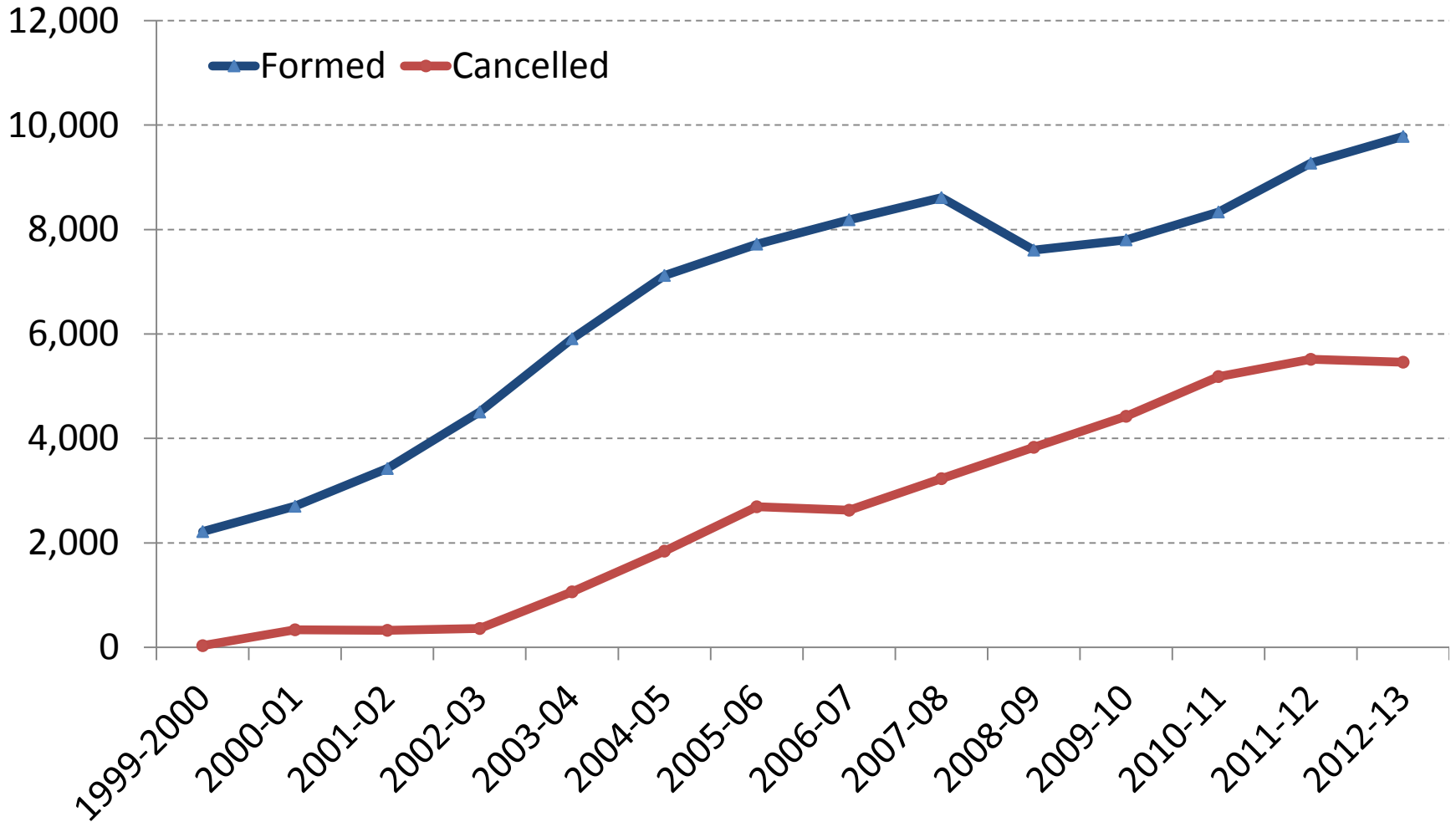
Source: HTA and OAG

Air Seats Will Increase by 0.7% in 2014



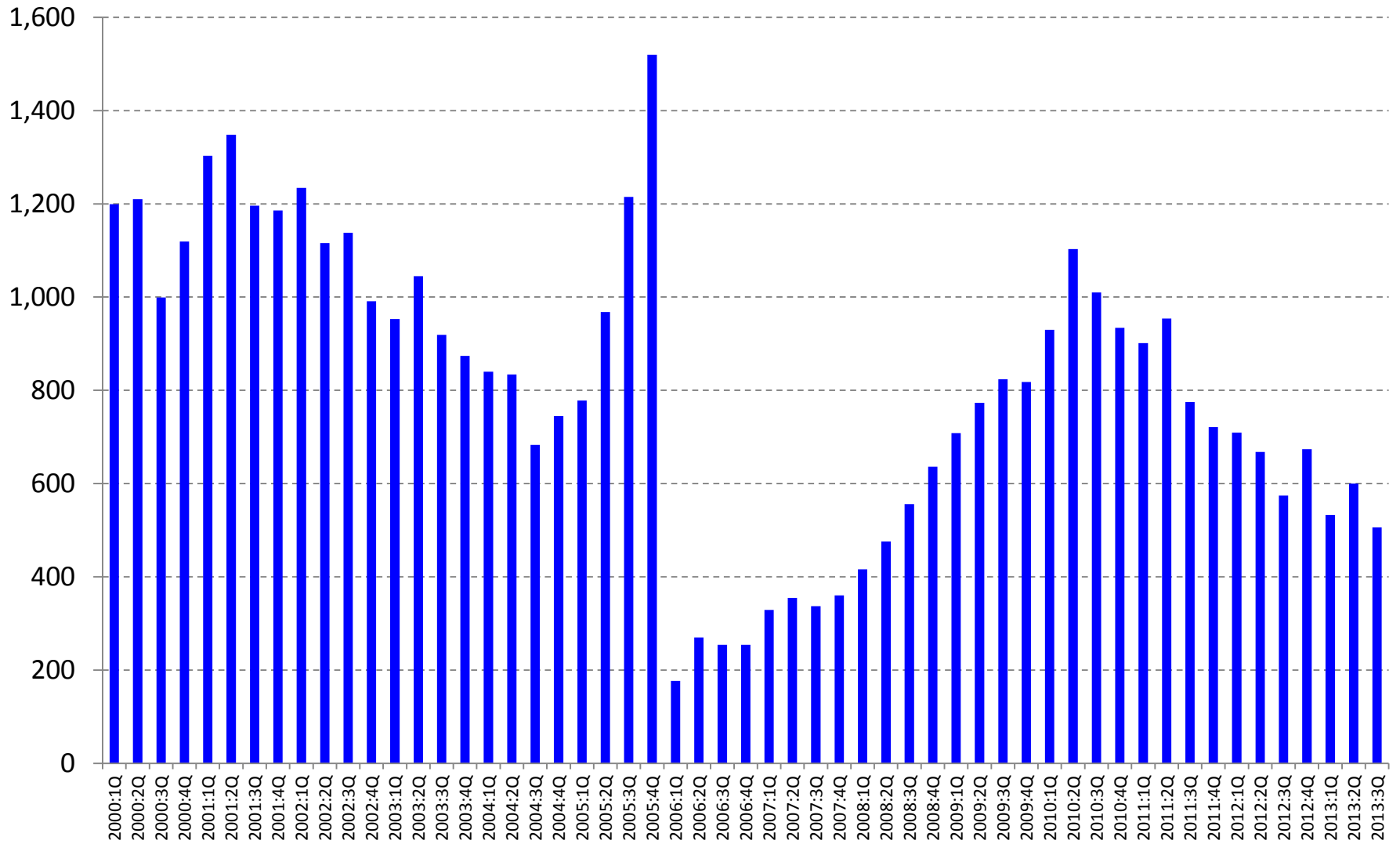
Business Formation

LLC and LLP Firms Registered in Hawaii



Source: Hawaii State Department of Commerce and Consumer Affairs

Hawaii bankruptcy filings has been declining since the 3rd quarter of 2010



Summary

- All the economic indicators show that Hawaii's economy is on a normal growth path
- Visitor industry growth will be slowing down due to capacity limit
- Labor market will continue to improve in 2014
- Construction industry will be the main driver for economic growth in 2014, probably a new record year
- Personal income will continue to grow at a rate similar to the national average
- Hawaii's economy will grow at a higher rate than the nation in 2014
- Hawaii's unemployment rate will still be better than the nation in 2014



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AT THE UNIVERSITY OF HAWAII

Forecast Project

No Shutdown for Hawaii Growth

Dr. Byron Gangnes
Chair, UH Department of Economics
Senior Research Fellow, UHERO

Senate Committee on Ways and Means
House Committee on Finance
Honolulu, Hawaii
December 18, 2013

No Shutdown for Hawaii Economy

US performance in the face of fiscal austerity

- ▶ Federal damage significant this year
- ▶ Areas of private sector strength

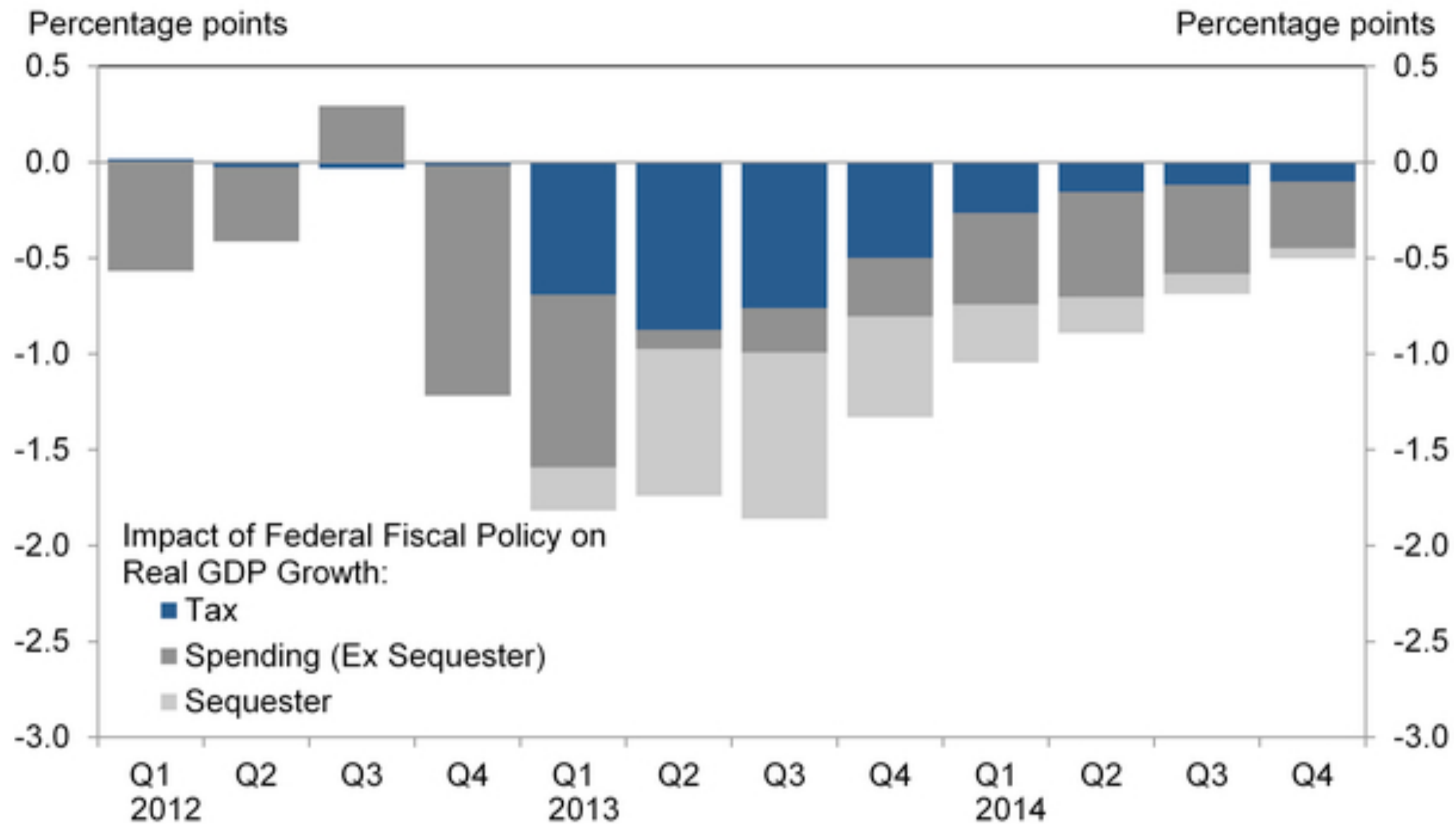
Prospects for the US and the Asia-Pacific region

- ▶ What's on tap?
- ▶ What are the concerns?

Hawaii conditions and outlook

- ▶ Is there room for more tourism?
- ▶ Construction boom developing

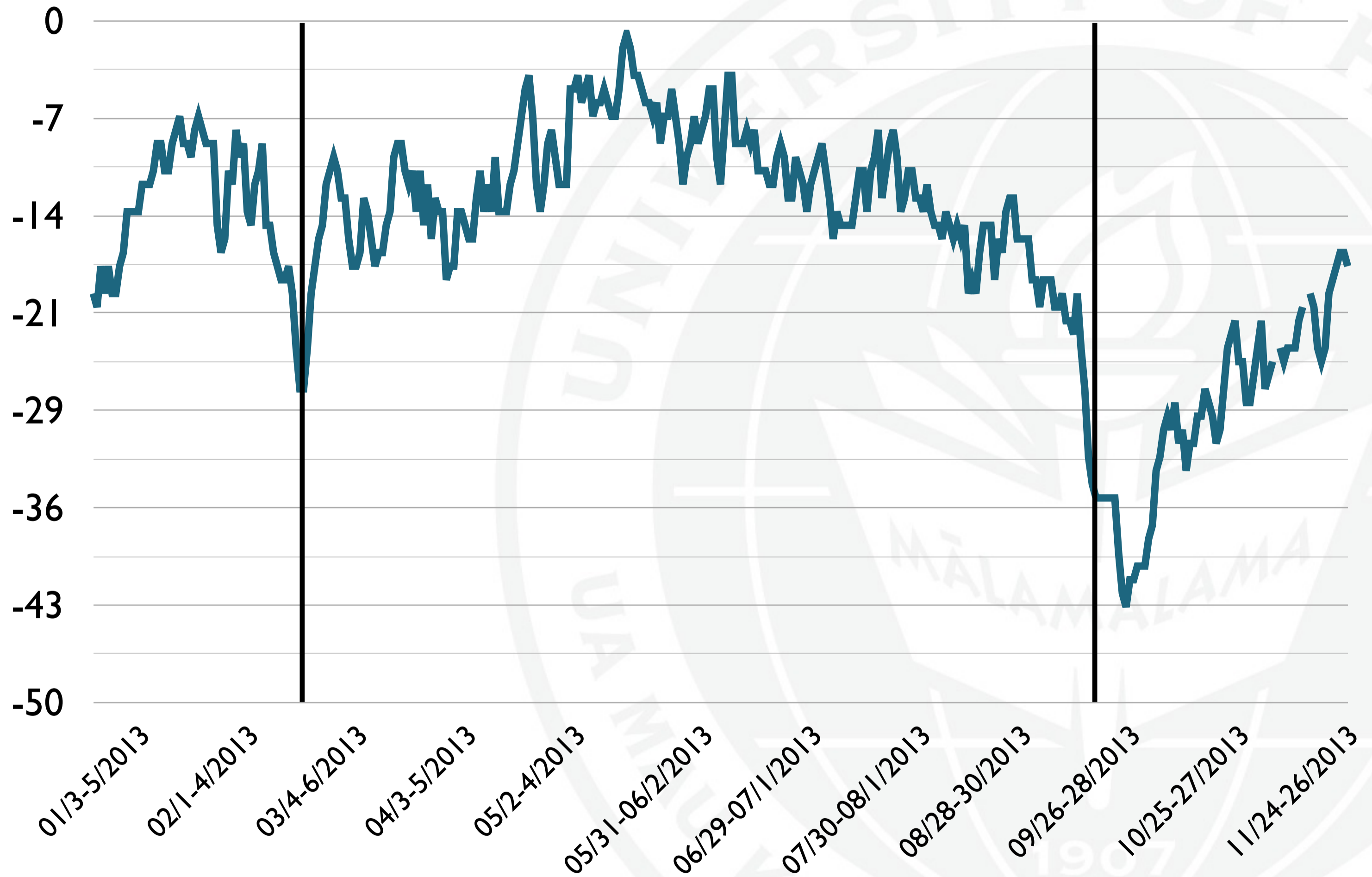
Excessive austerity, even before shutdown



Source: Goldman Sachs via calculatedriskblog.com

Budget turmoil took toll on confidence

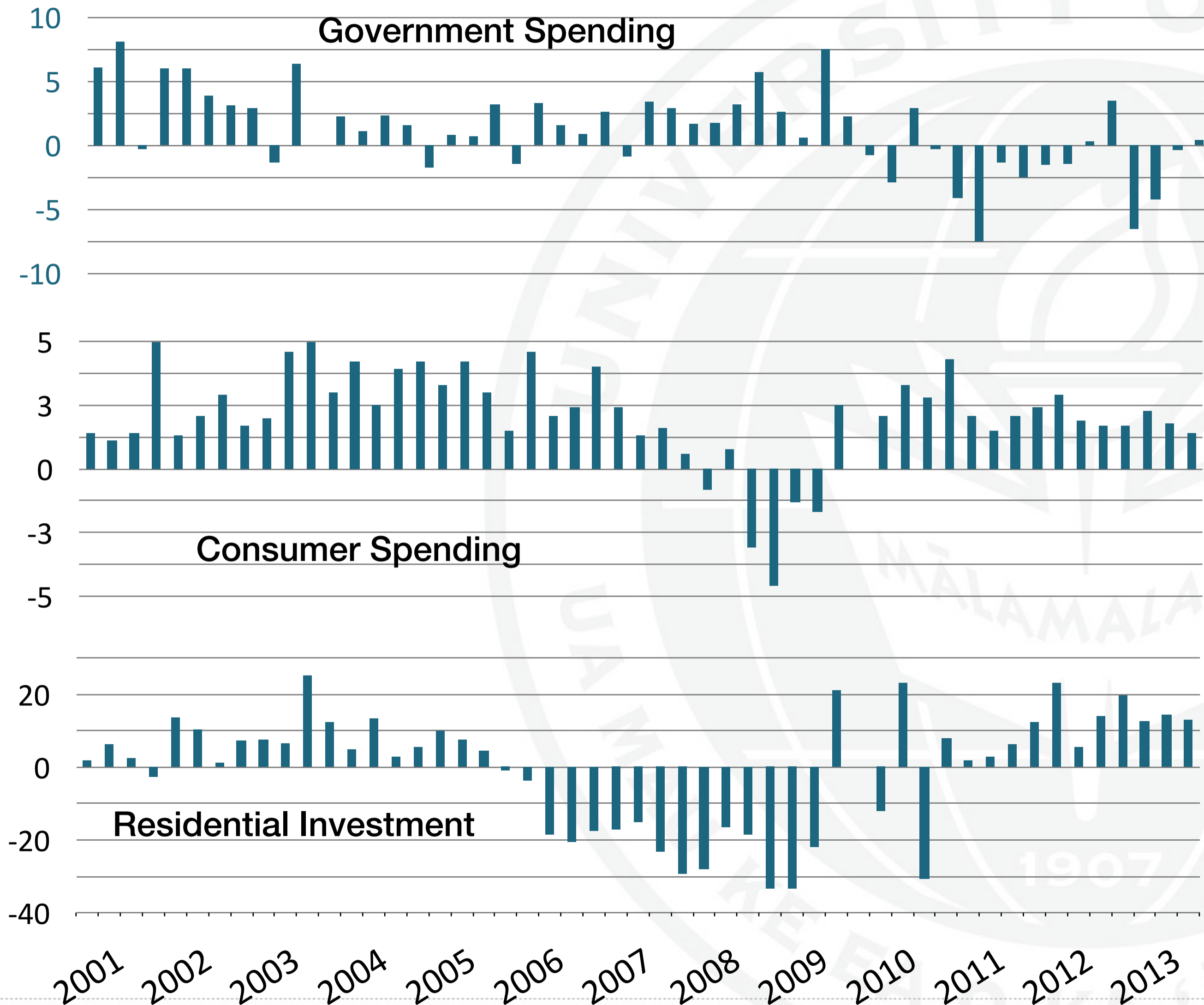
Gallup Daily: U.S. Economic Confidence Index



Source: Gallup, <http://www.gallup.com/poll/151550/gallup-daily-economic-confidence-index.aspx>

No surprise that consumer spending is weak

Percent



The US and Asia-Pacific Forecast

2013 has turned out to be another weak year

- ▶ Slow US and Europe hit exports
- ▶ China's lower growth path

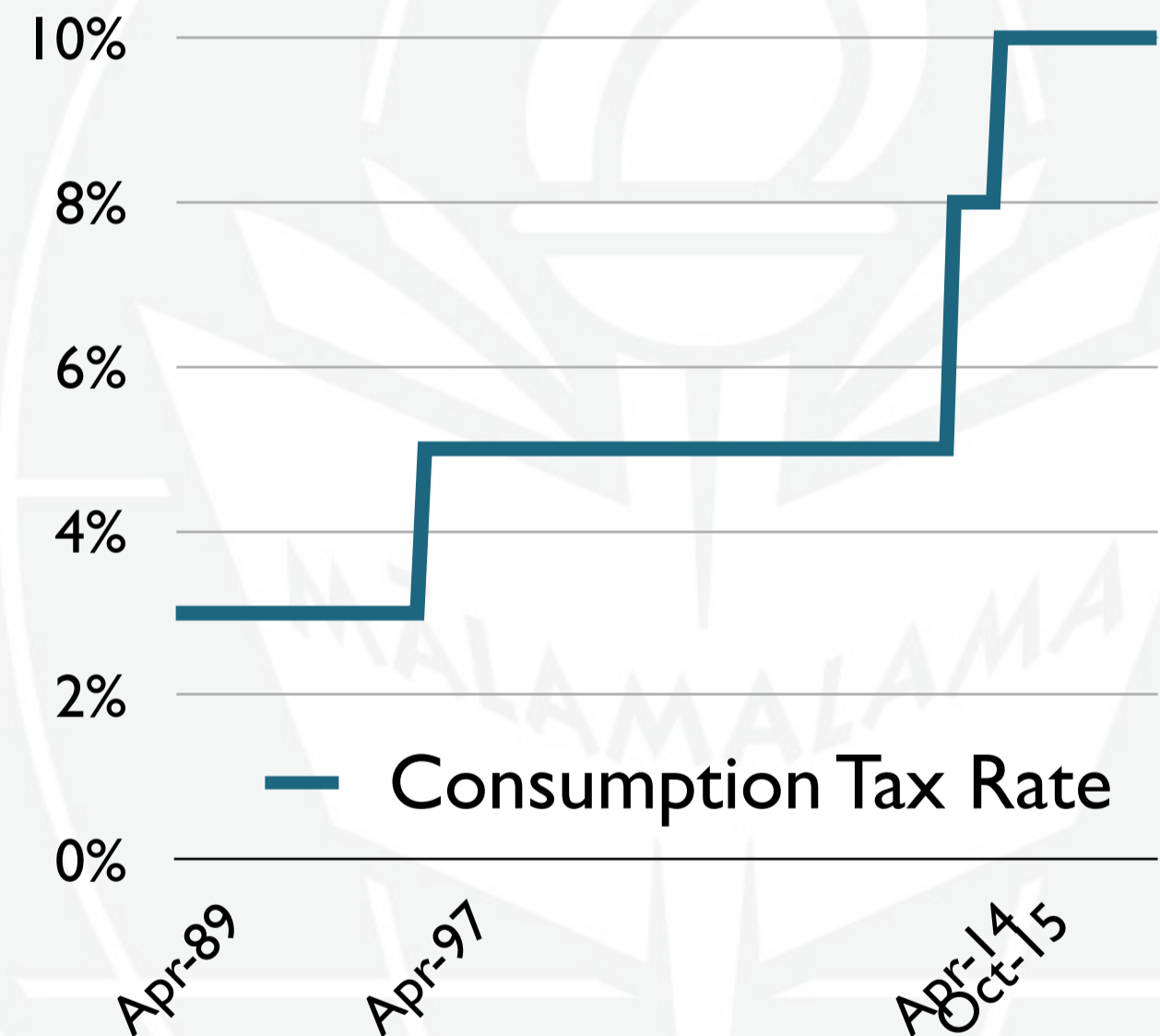
Picture appears to have stabilized

- ▶ Europe has exited recession
- ▶ US growth expected to firm

Big risks are policy related

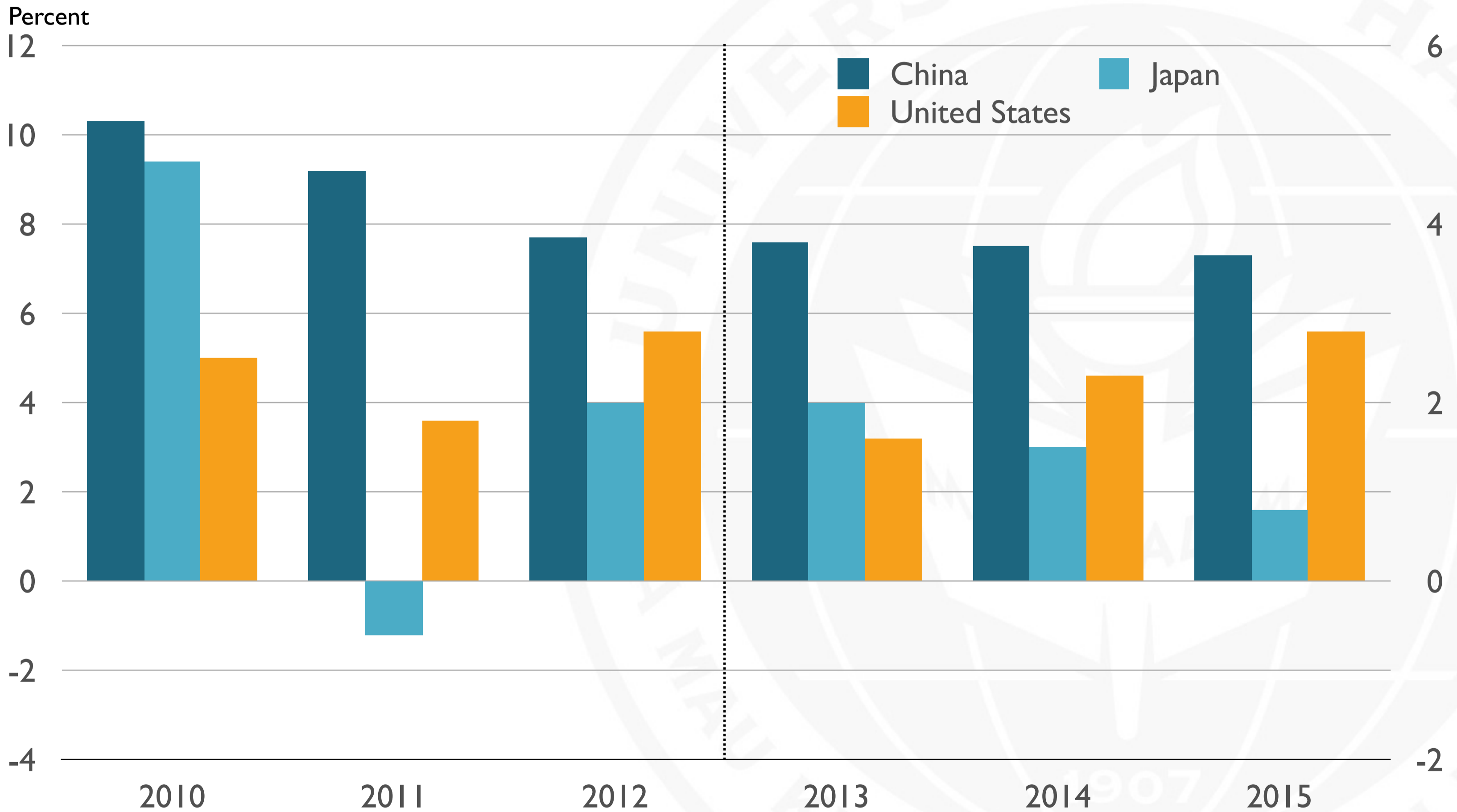
- ▶ Are we out of fiscal woods?
 - ▶ Backend of *Abenomics*
- ▶ How will Fed manage tapering?

Japan fiscal contraction in the pipeline



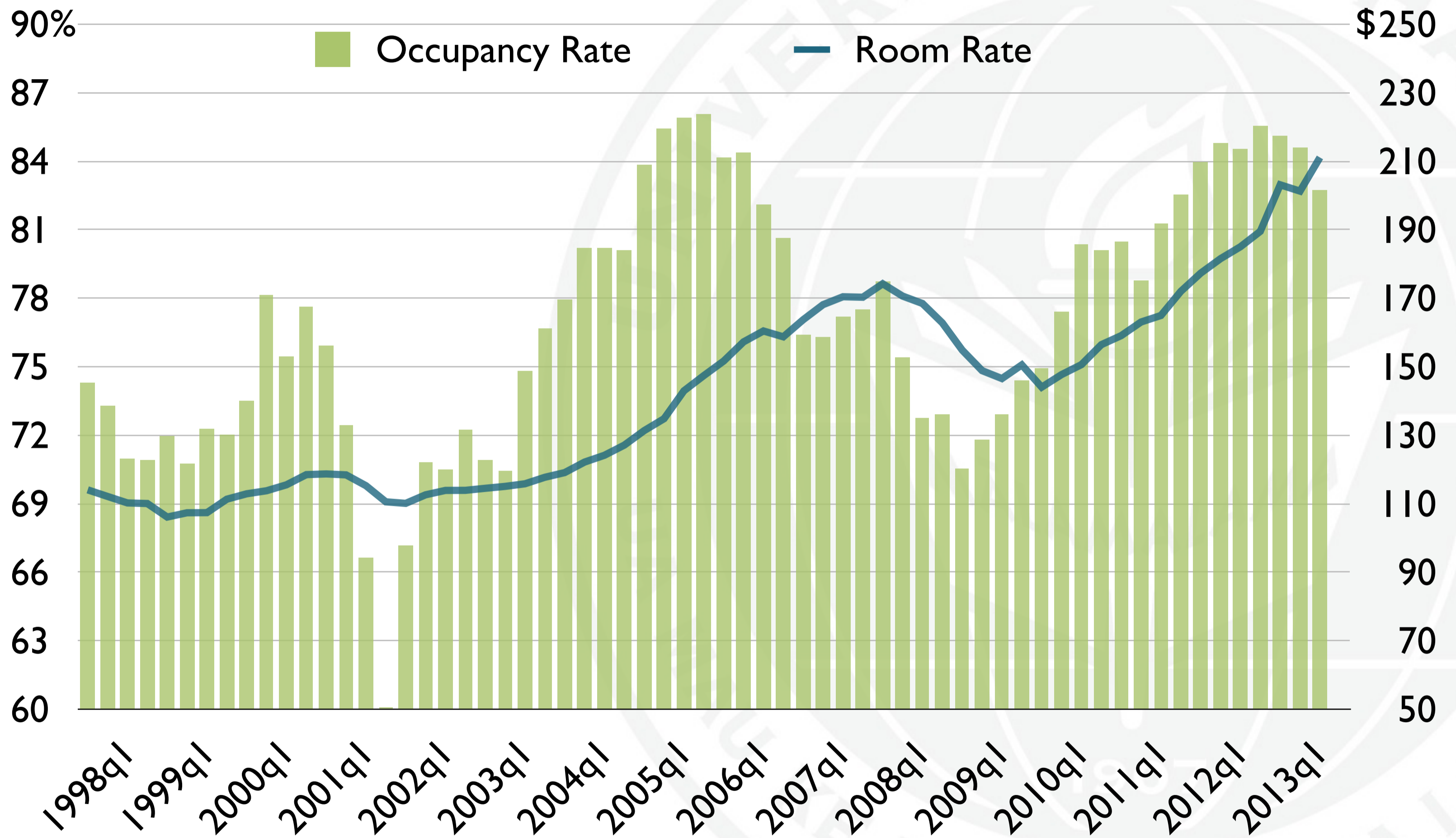
Stronger US, but Japan at risk

Growth of Real GDP



Not much headroom for Hawaii tourism

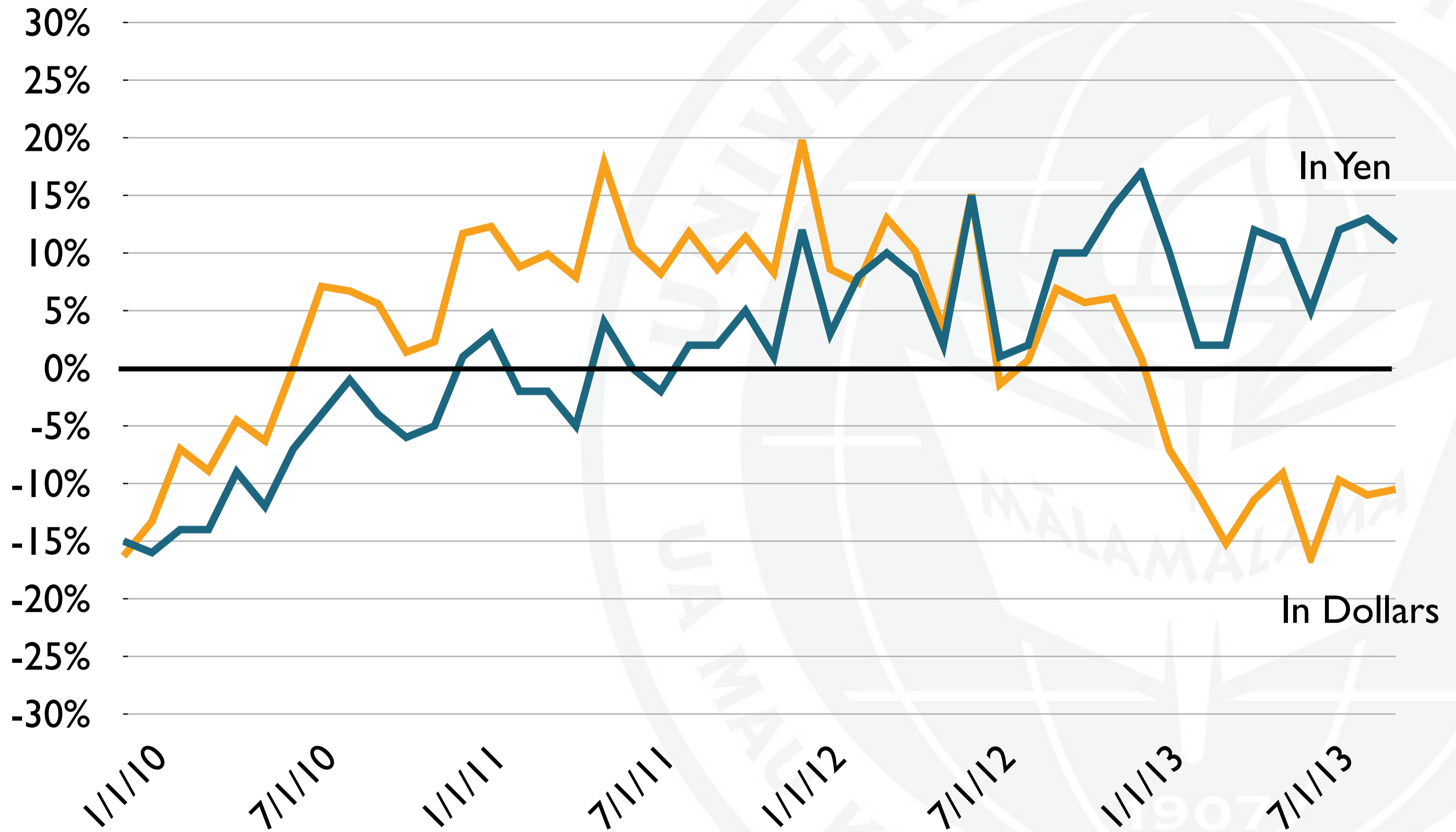
Oahu Room Revenue and Occupancy Rates



* Source: Hospitality Advisors & UHERO

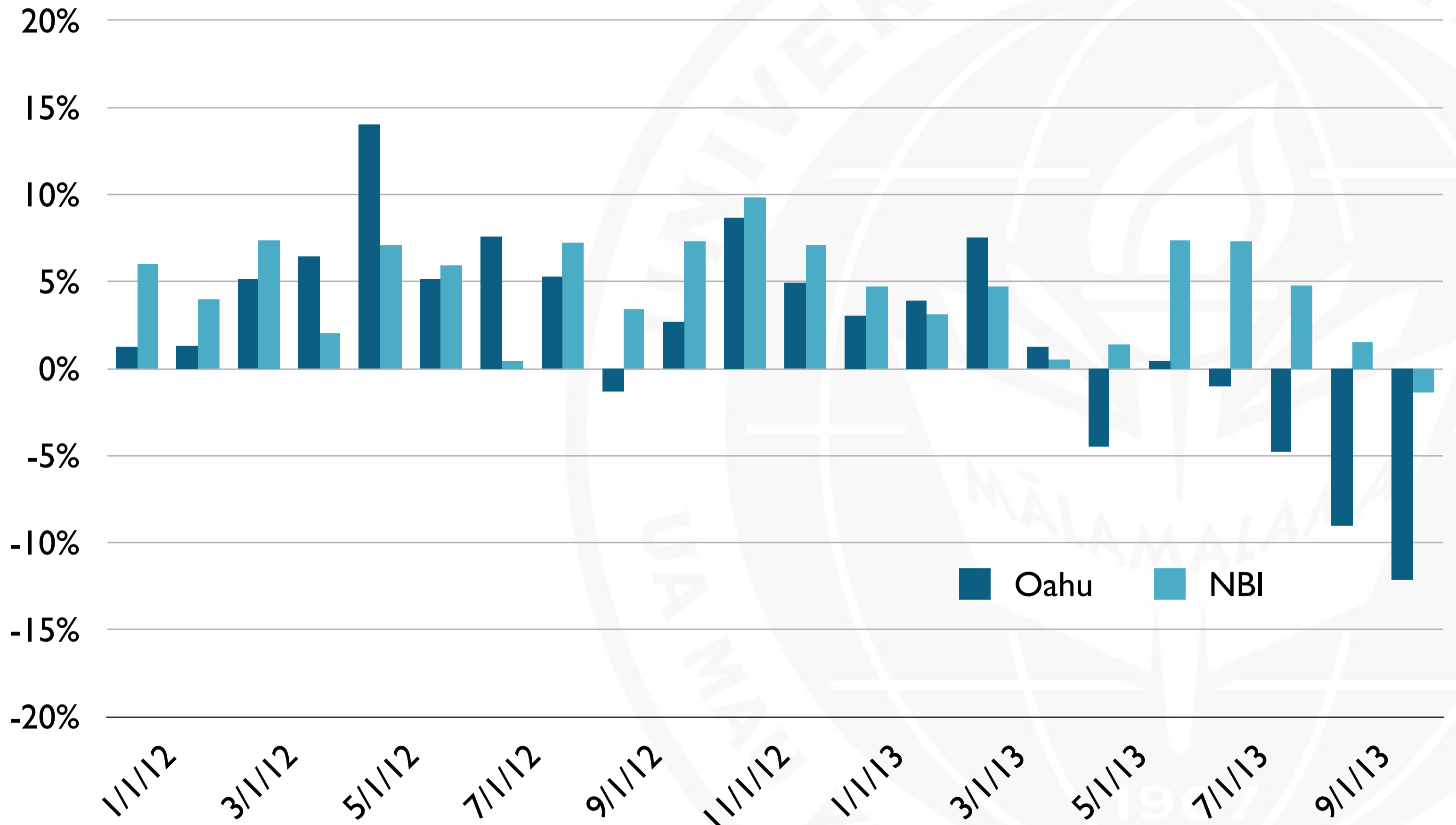
This year's slowing: Lower Japanese spending

Year-on-year growth in per-person, per-day spending



This year's slowing: Neighbor Islands faring better

Year-on-year growth in US visitor days



Arrivals growth slowdown

Statewide Visitor Arrivals

Thou. (SA)

2,200

2,000

1,800

1,600

1,400

1,200

1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

History

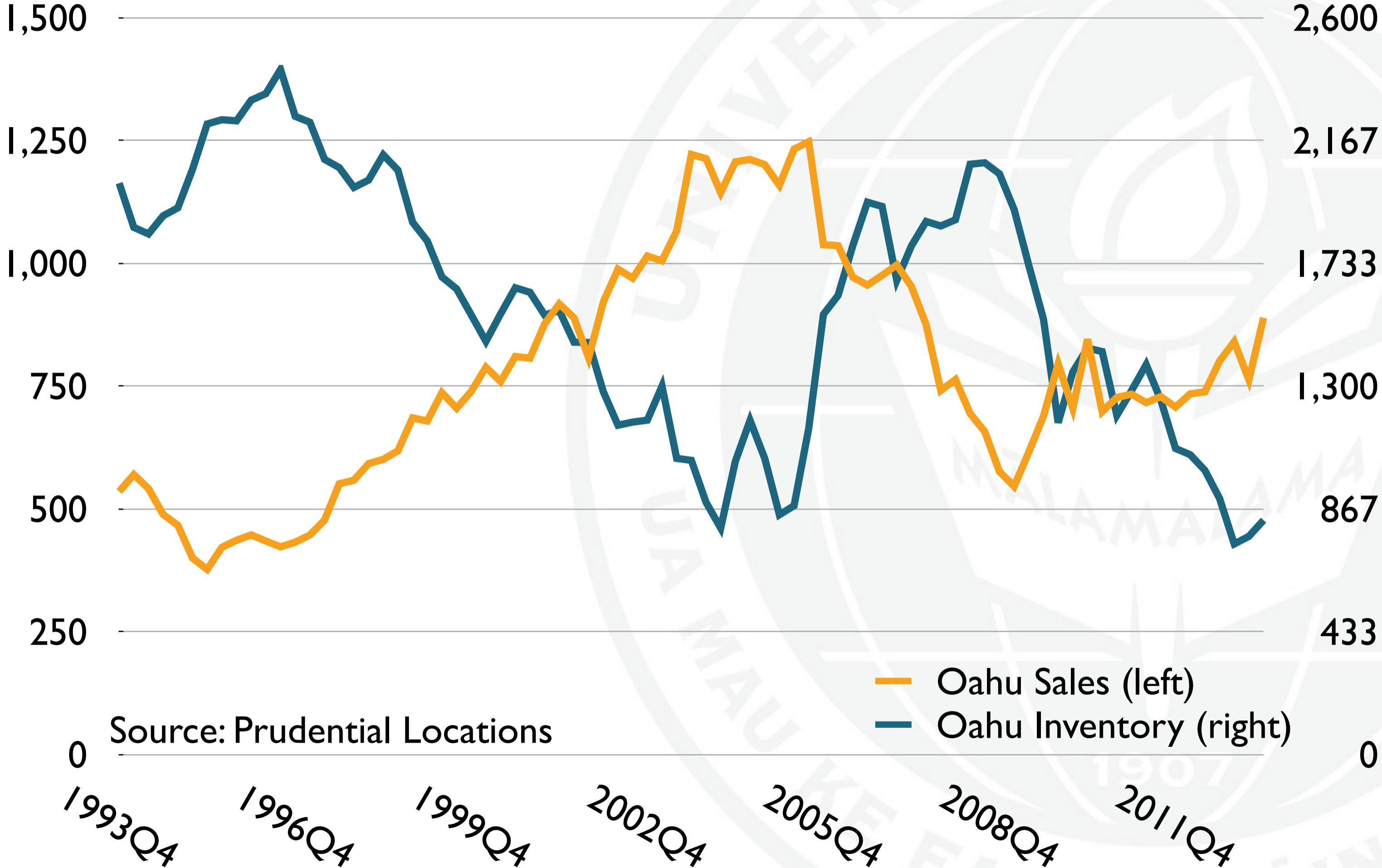
I3Q4 Forecast

Updated Forecast

* Source: Hawaii Tourism Authority
Seasonal Adjusted—UHERO

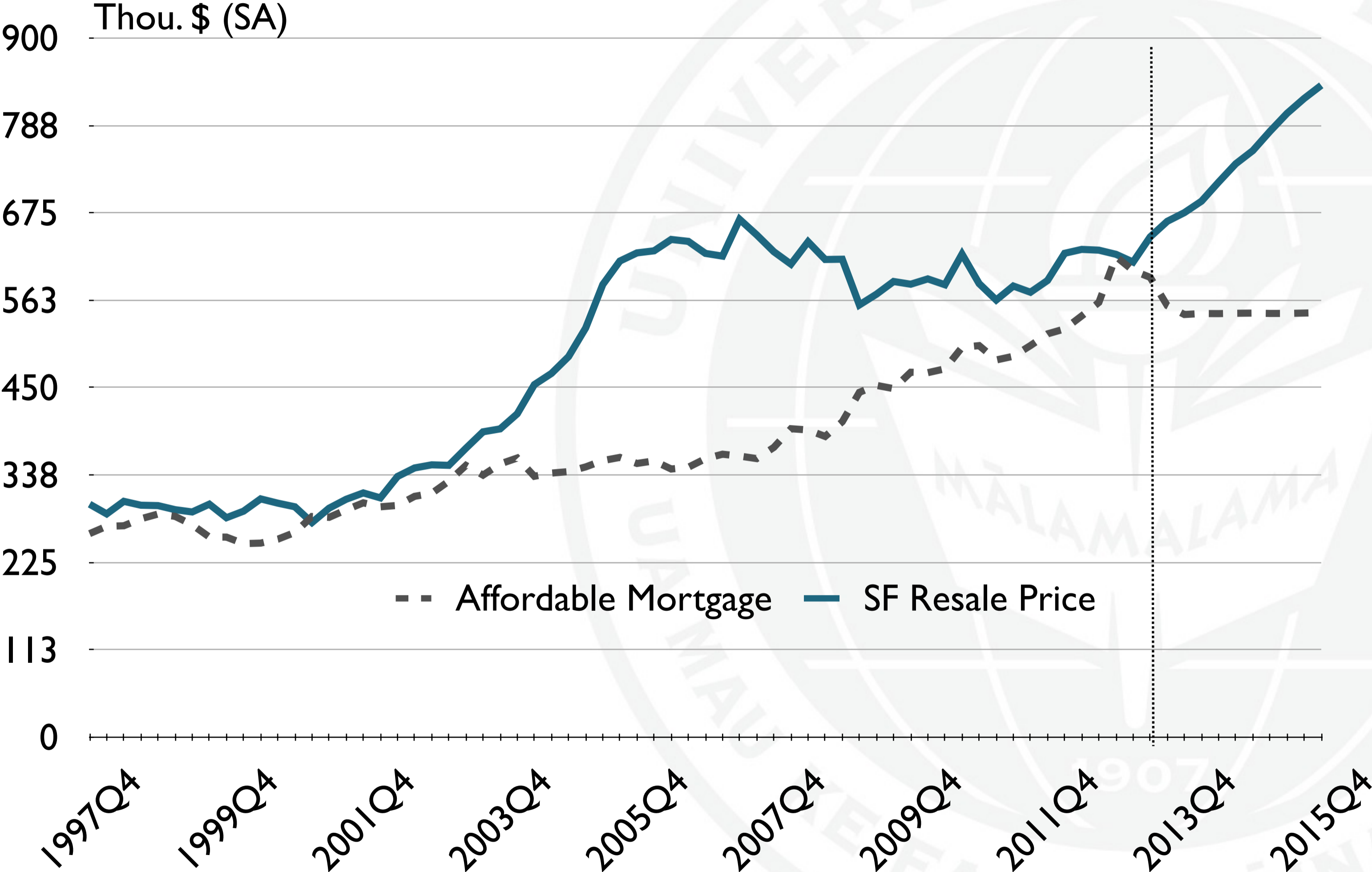
Don't bet against the cycle

Oahu Single Family Sales and Inventory



Don't bet against the cycle

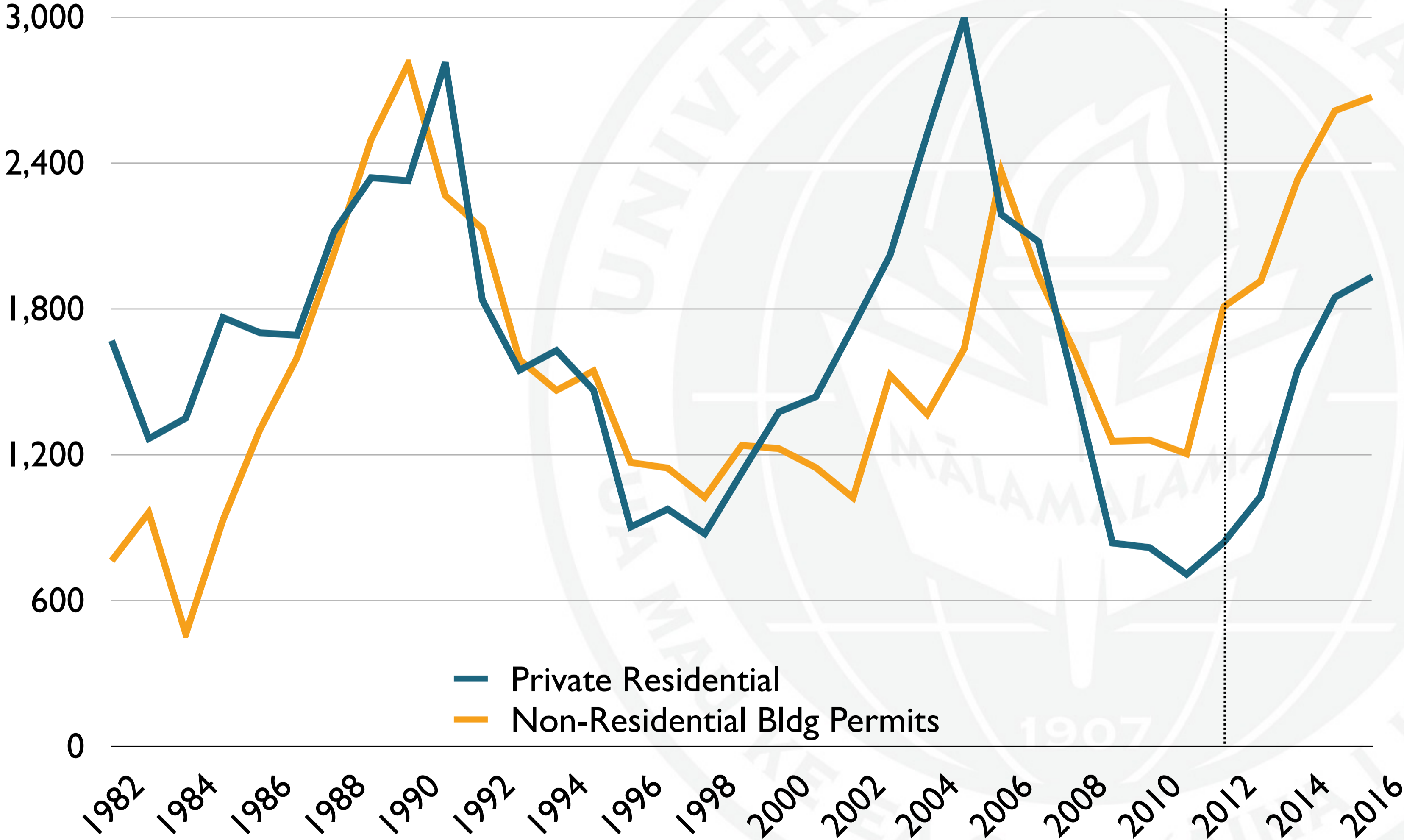
Oahu Home Price Dynamics



Don't bet against the cycle

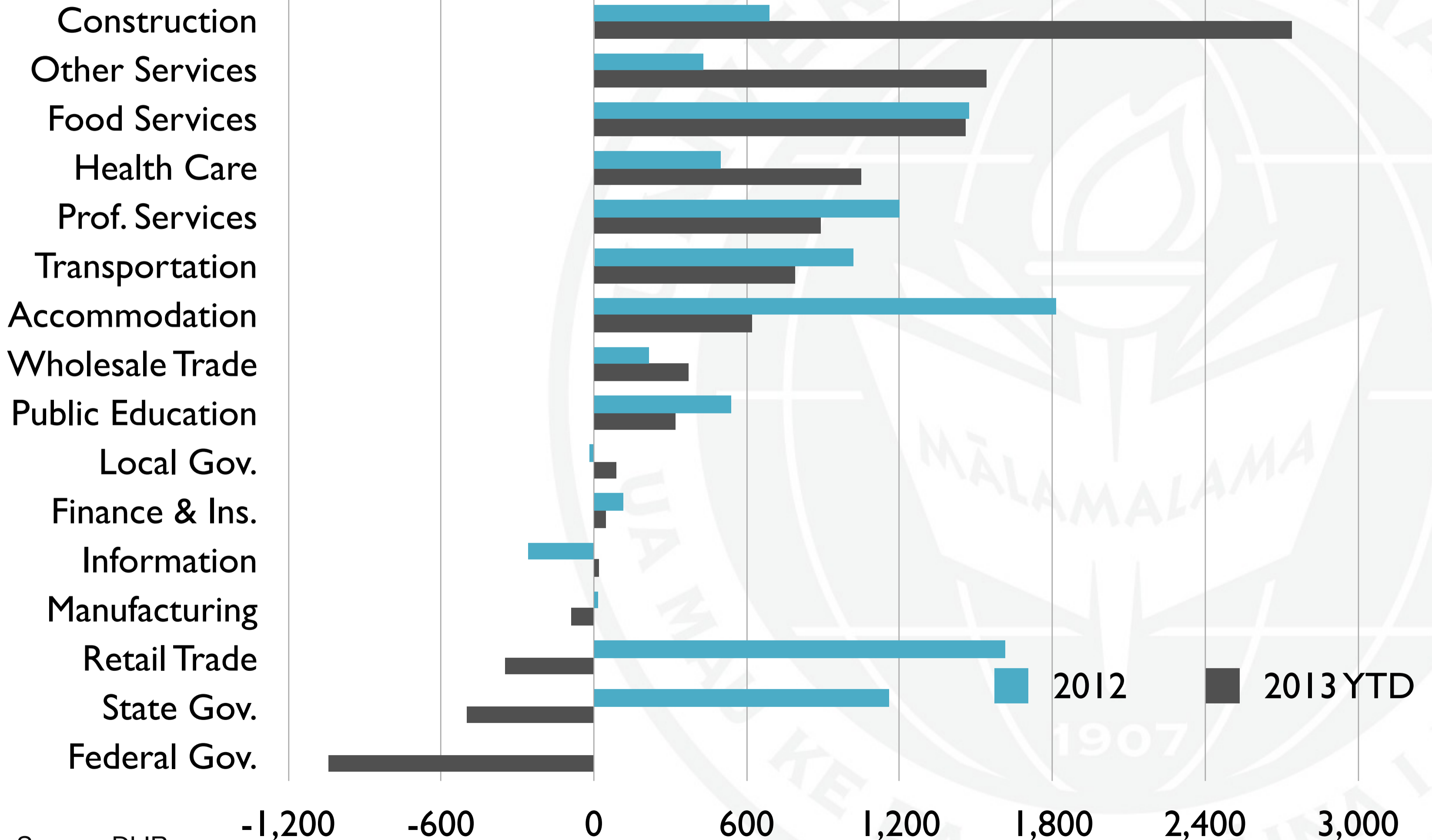
Real Building Permits—Statewide

Mil. 12\$



Growth leaders changing

Change in State Job Counts



Source: DLIR

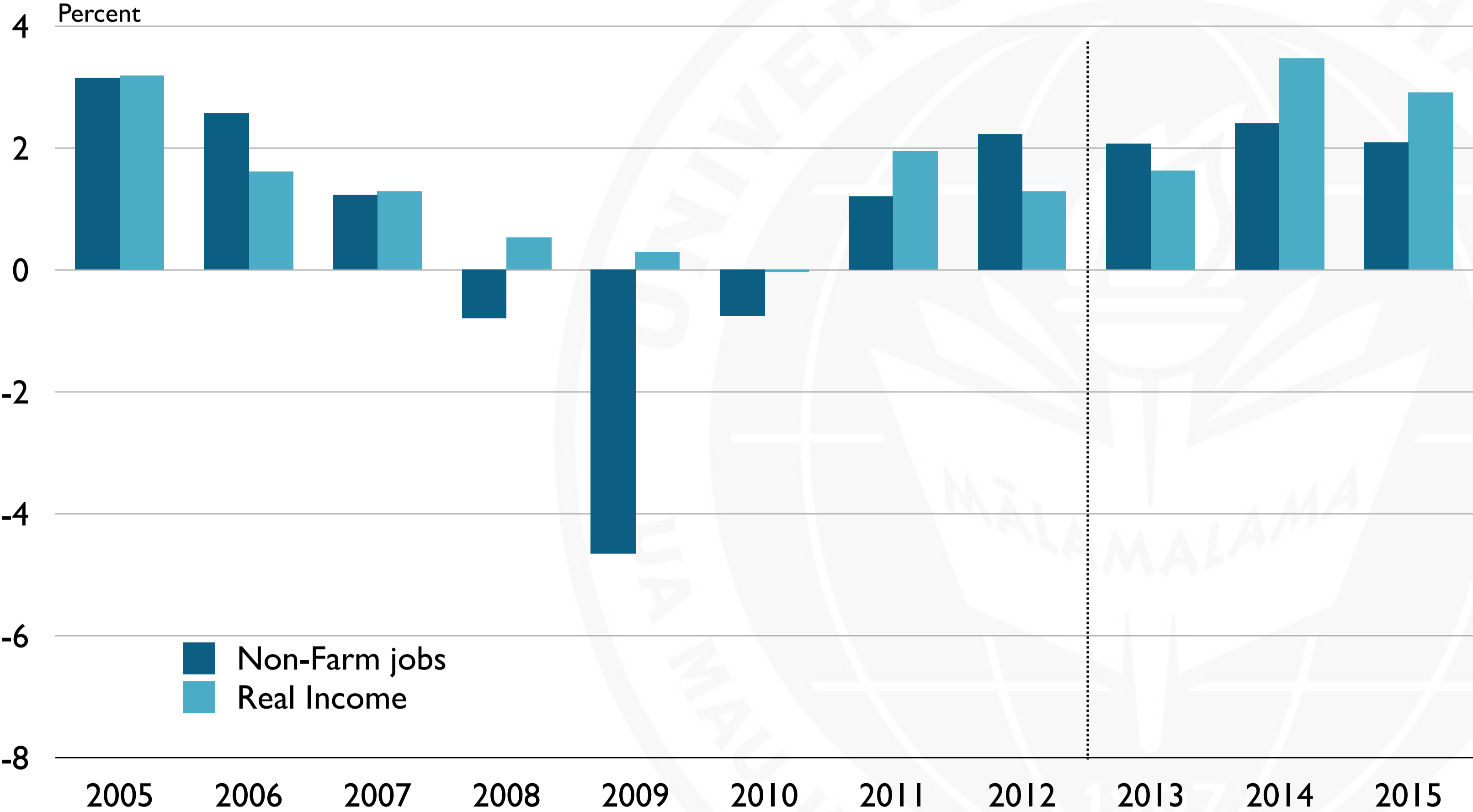
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Expansion expected to gain speed

Hawaii Job and Income Forecasts



No Shutdown for Hawaii Economy

The environment for growth is improving

- ▶ The worst of the federal drag is behind us
- ▶ Private sector conditions will strengthen
 - ▶ Improving confidence and labor market gains
 - ▶ Housing and construction
- ▶ Apart from Japanese worries, Asia-Pacific will strengthen

Hawaii's expansion will continue

- ▶ Tourism upside is limited
- ▶ But the construction upswing has staying power
- ▶ Moderate economic gains will continue to spread

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BLOG

Almost four years after the start of the great recession total output of goods and services in the US has surpassed its pre-recession peak.

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Median Airfare from US Mainland to Hawaii

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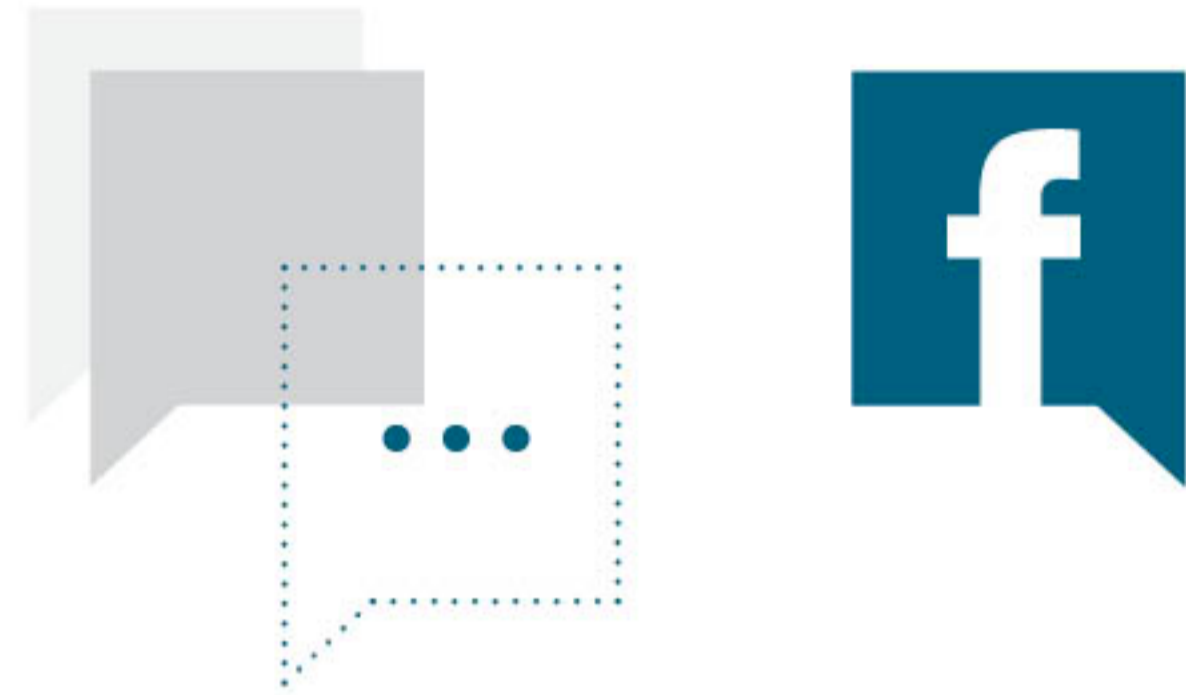
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Tax Credit Incentives for Residential Solar Photovoltaic in Hawai'i

FEBRUARY 7, 2013

Q & A Summary: The Impact of Marriage Equality on Hawai'i's Economy and Government

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UHERO FORUM

RESEARCH DRIVEN DIALOGUE

The Inaugural UHERO Forum, held on October 29, was a success with more than 160 people in attendance. Critical issues facing the State of Hawai'i were highlighted, including energy policy, economic development, and sustainability.

VIEW PROGRAM

LATEST FORECAST

Developing Countries Buoy Asian Growth

December 7, 2012

[Read the Public Summary](#)



MORE UHERO FORECASTS



Mahalo

December 18, 2013

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Mid-cycle hiccups? Hawaii's economic expansion risks losing momentum

slides prepared for a joint informational briefing of the

**Senate Committee on Ways and Means
House Committee on Finance**

Hawaii State Capitol Auditorium

by Paul H. Brewbaker, Ph.D.
TZ Economics, Kailua, Hawaii

December 18, 2013

TZ ECONOMICS

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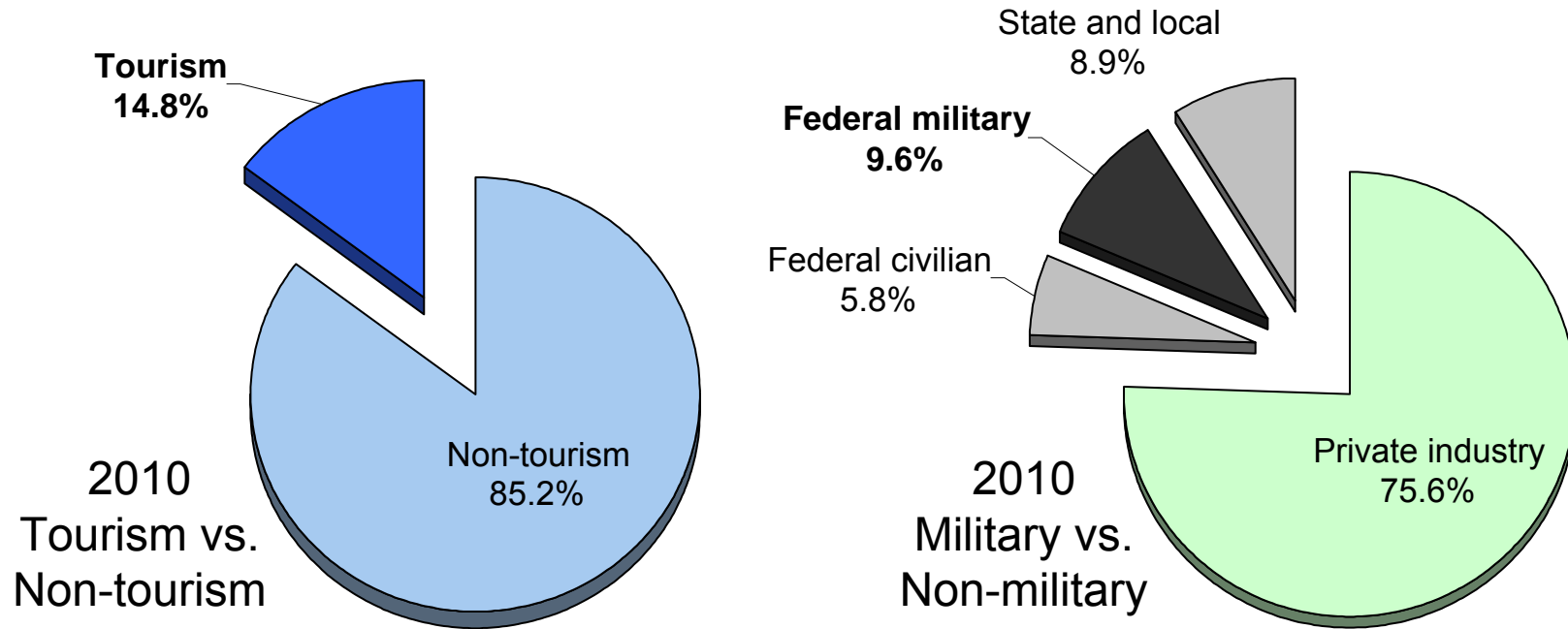


Outline and preface

Preface-three key points:

- Tourism share 15-20% of value-added (GDP)—what happens really matters
- Government share 25%: 10% military, 6% civilian, 9% state and local
- Average duration of post-1982 U.S. economic expansion is 8 years; this is year 5

Hawaii economic value-added (GDP) shares in tourism and military: *combined* approx. 25%



See also:

James Mak, 2005. "Tourism demand and output in the U.S. Tourism Satellite Accounts: 1998-2003," *Journal of Travel Research*, **44** (1), pp. 4-5
 Eugene Tian, James Mak, and PingSun Leung, "The direct and indirect contributions of tourism to regional GDP: Hawaii," *UHERO Working Paper No. 2011-5* (July 28, 2011) (http://www.uhero.hawaii.edu/assets/WP_2011-5.pdf)

DBEDT *State of Hawaii Data Book* (<http://hawaii.gov/dbedt/info/economic/databook/2010-individual/07/073410.xls>)

James Hosek, Aviva Litovitz, Adam C. Resnick, 2011 "How Much Does Military Spending Add to Hawaii's Economy?" *Rand Corporation Technical Report TR-996* (http://www.rand.org/pubs/technical_reports/TR996.html); note that this report incorrectly *doubles* the military share of Hawaii GDP to inflate its "association" with other industries using input-output multipliers, which is like doubling everything.

Slide copyright 2013 TZ E C W O N O M I C S

U.S. economic expansions, contractions: odds are this expansion is half over

Duration of economic expansions and contractions
from NBER troughs to peaks and back again

<i>in months</i>	Expansions			Contractions		
	Mean	Median	Max	Mean	Median	Max
1857-1928	25.5	22	46	20.5	18	65 *
1929-1982	46.2	39	106 **	13.8	11	43 †
1983-2010	95.0	92	120 •	11.3	8	18 ^Δ

*The Panic (Oct. 1873 - Mar. 1879)

†The Great Depression (Aug. 1929 - Mar. 1933)

**Camelot (Feb. 1961 - Dec. 1969)

•dot.com (Mar. 1991 - Mar. 2001)

^ΔThe Great Recession (Dec. 2007 - Jun. 2009)



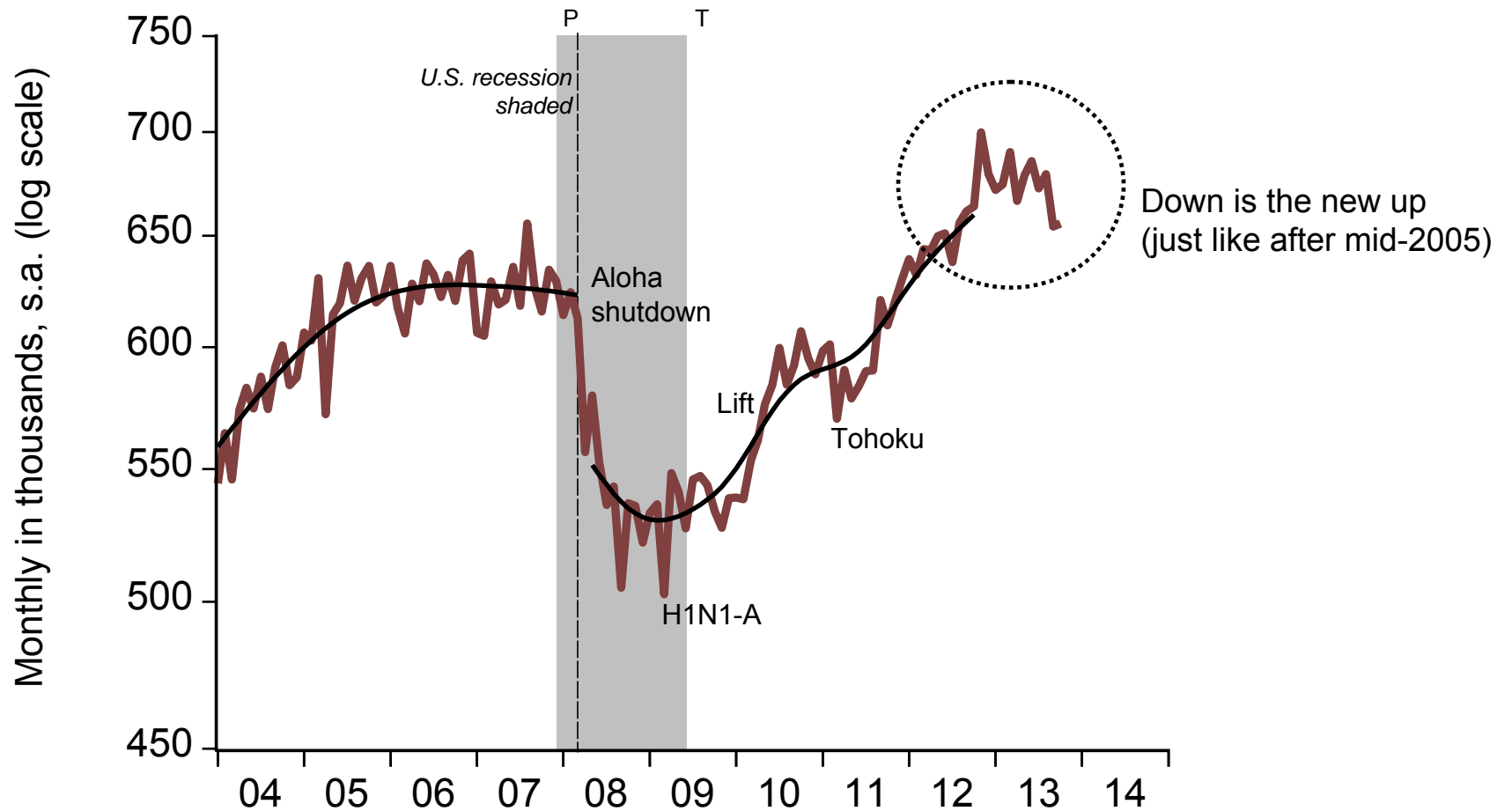
1. Tourism
2. Housing
3. Construction
4. Macroeconomic outlook



Hawaii tourism was *declining* during 2013

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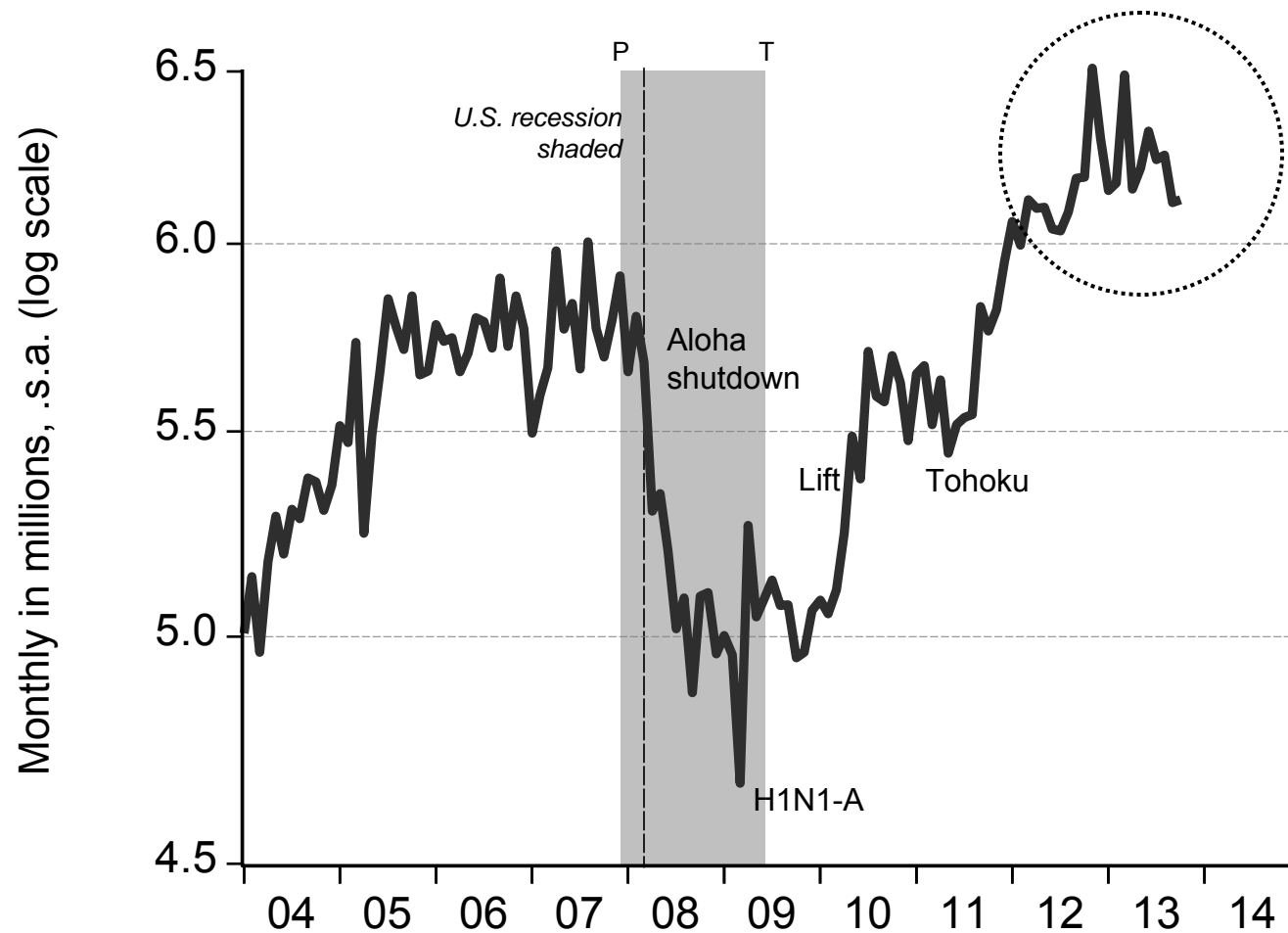
Seasonally-adjusted statewide visitor arrivals declined since late last year: demand or supply?



Slide copyright 2013 TZ ECGVO N O M I C S

Source: Raw monthly data through October 2013 from HTA, Hawaii DBEDT; seasonal adjustment using Census X-12 ARIMA filter by TZE

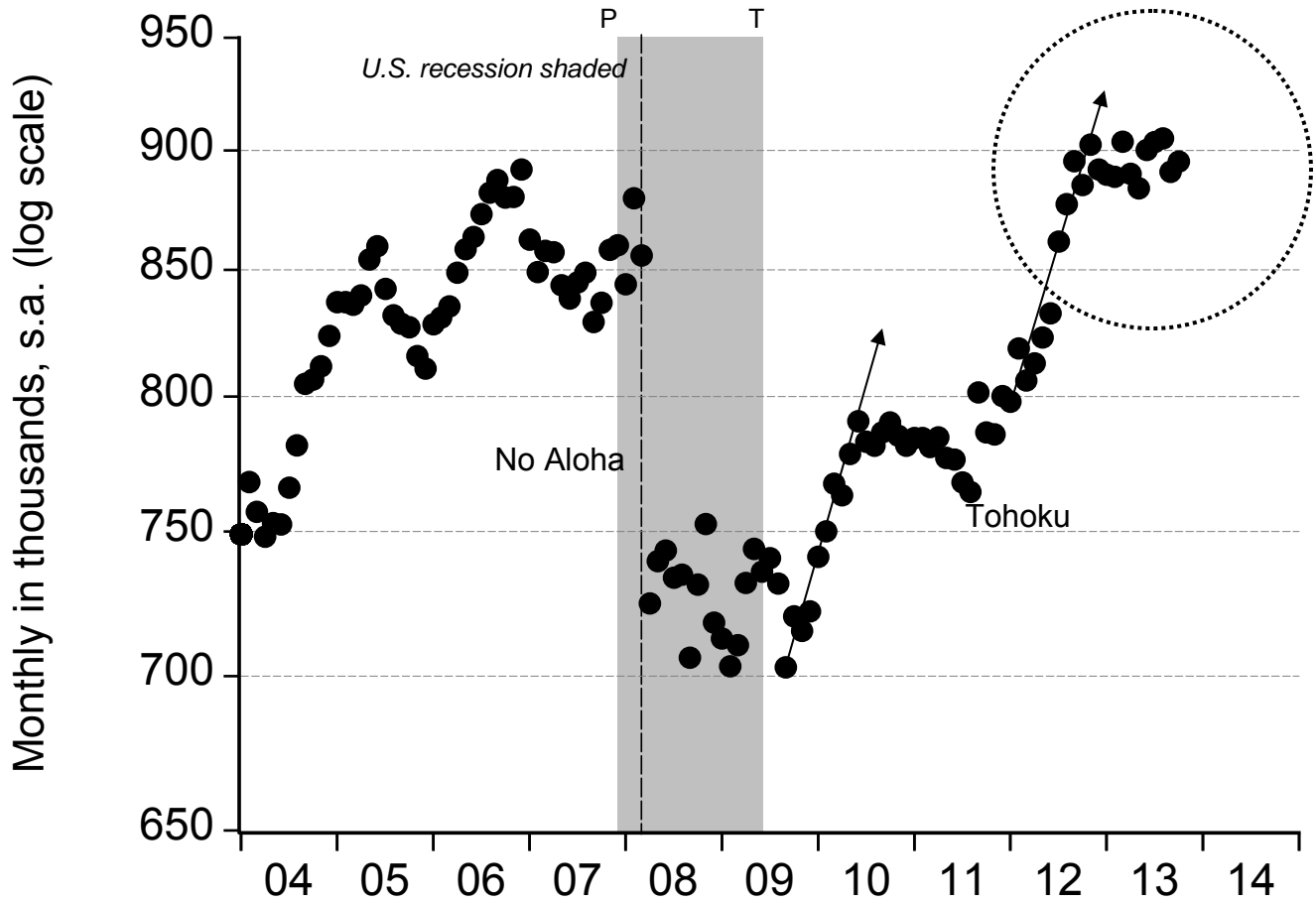
Statewide total visitor days (s.a.): growth stalled



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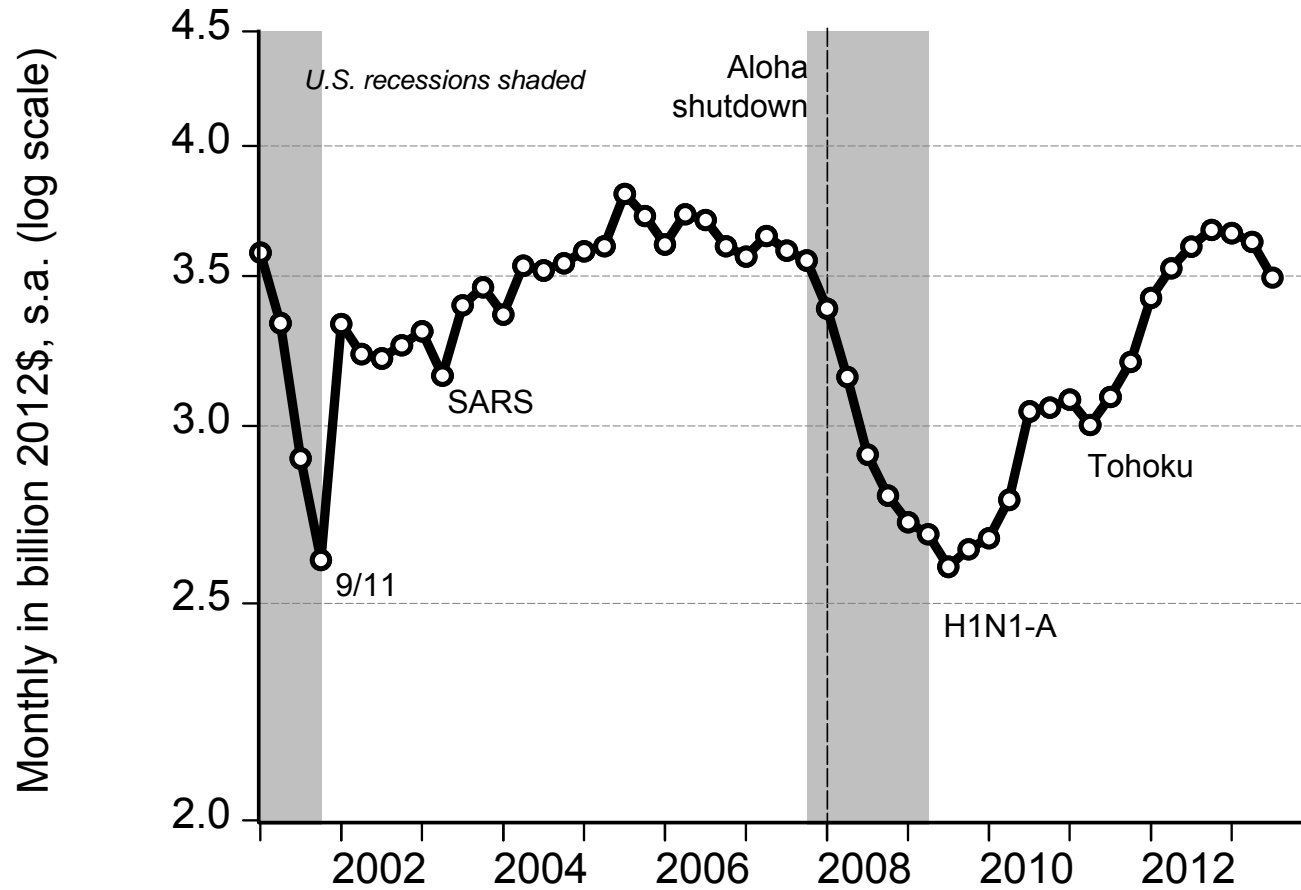
Source: Raw monthly data through October 2013 from HTA, Hawaii DBEDT; seasonal adjustment using Census X-12 ARIMA filter by TZE

Total seats to Hawaii through October 2013 (s.a.): after two pushes (2010, 2012) capacity flattened



Source: Data through October 2013 from HTA, Hawaii DBEDT; seasonal adjustment by TZE

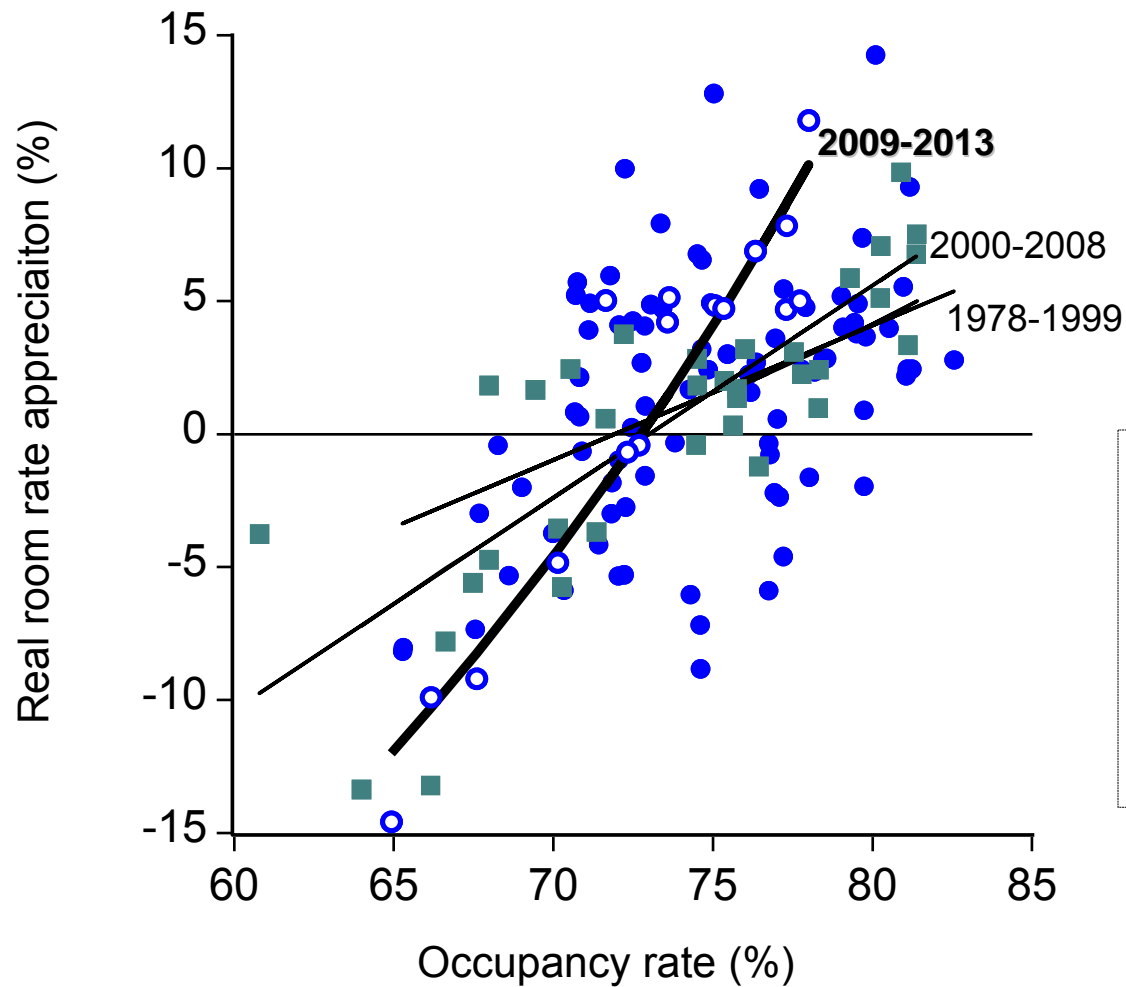
Real Hawaii visitor expenditure (s.a.) through 2013Q3



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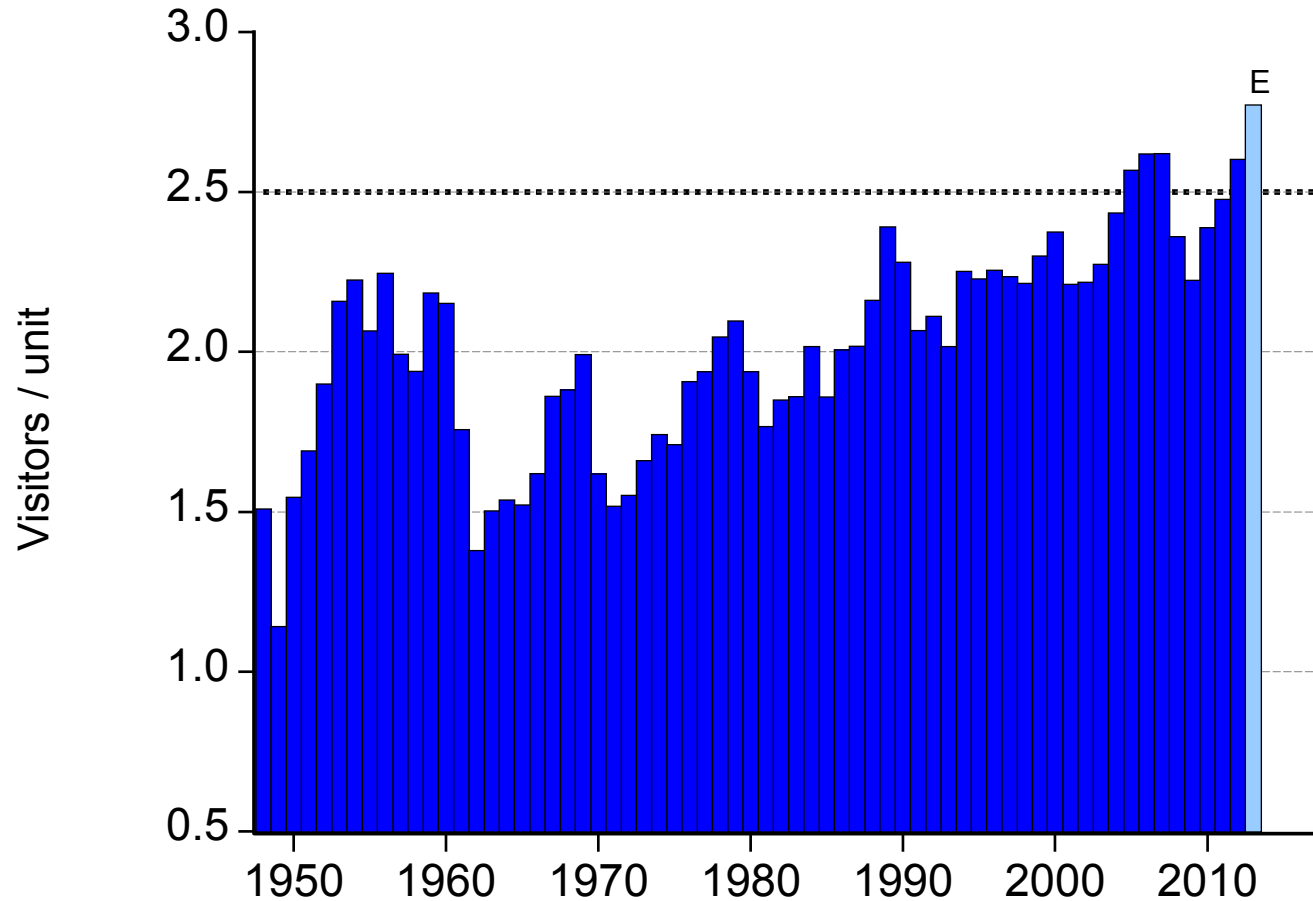
Sources: Hawaii Tourism Authority, Hawaii DBEDT, Bureau of Labor Statistics; deflation calculations by TZE

Relationship between hotel occupancy rate and real hotel room rate appreciation getting “steeper”



*Each tourism cycle, for a given rise in hotel occupancy, real room rates appreciate *faster* than before because *new* accommodation supply is constrained by regulatory barriers

Visitor days growing faster than capacity (more highly-utilized): past 2.5 visitors/room “sold out”



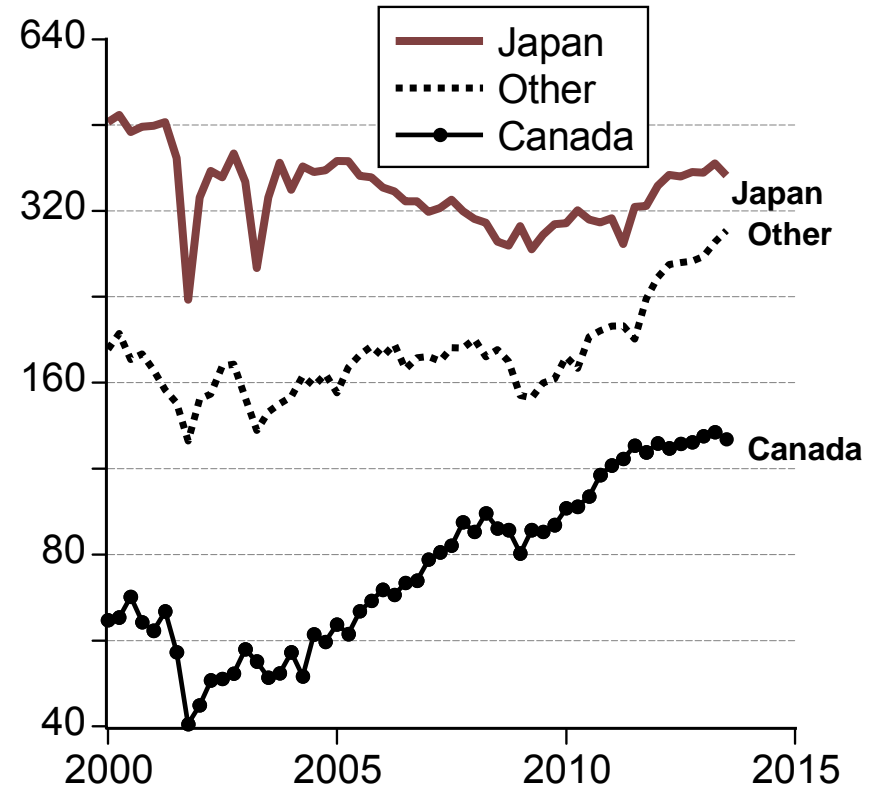
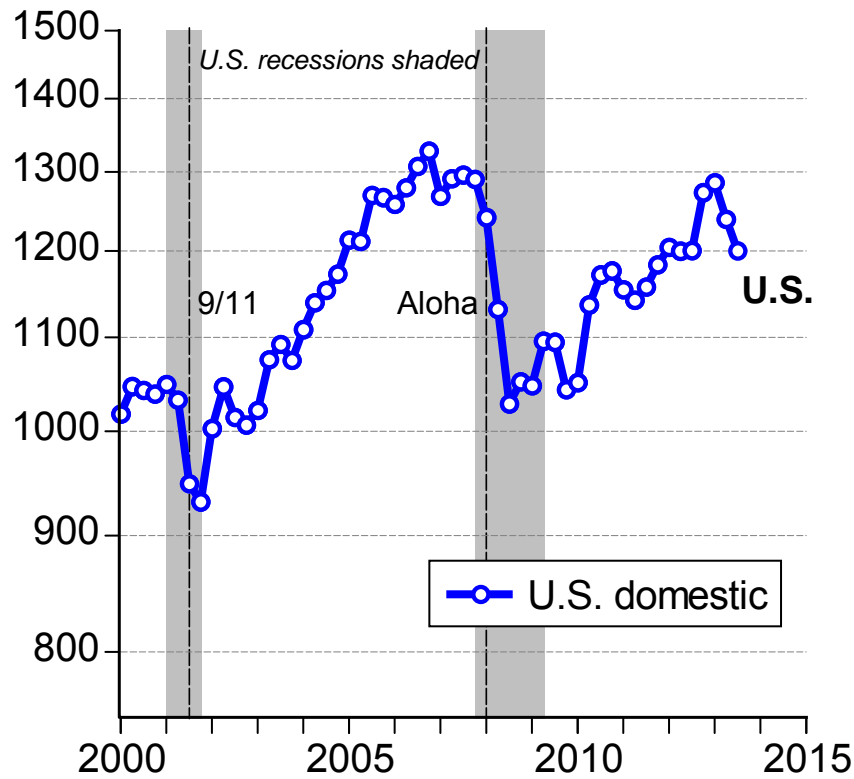
E estimated based on January-October 2013 data

Slide copyright 2013 TZ E C VO N O M I C S

Sources: Hawaii Visitors Bureau, Hawaii Tourism, Authority Hawaii DBEDT; visitors/unit is calculated by dividing total visitor days by the previous year's visitor plant inventory, and dividing the resulting ratio by 365.25 (days/year), data are annual except for 2013 estimate (10-mos. data).

Musical chairs? Recent visitor arrivals (s.a.) losing ground *except* in “other foreign” category—new Asia

Quarterly in thousands, s.a. (log scales)



Slide copyright 2013 TZ ECGVO N O M I C S

Sources: Underlying data from Hawaii Tourism Authority, Hawaii DBEDT, data seasonally-adjusted and posted by UHERO (<http://uhero.prognoz.com/TableR.aspx>).

1. Tourism

- Tourism leadership in “first half” now impaired by capacity constraint
- No more rooms \Rightarrow higher room rates at faster rates of increase
- Higher lodging expense reduces: (a) stay length; (b) non-lodging outlay/visitor; and (c) total real (inflation-adjusted) tourism export receipts
- Loss of momentum in U.S., Japan, Canada arrivals: probably not “demand”

2. Housing

3. Construction

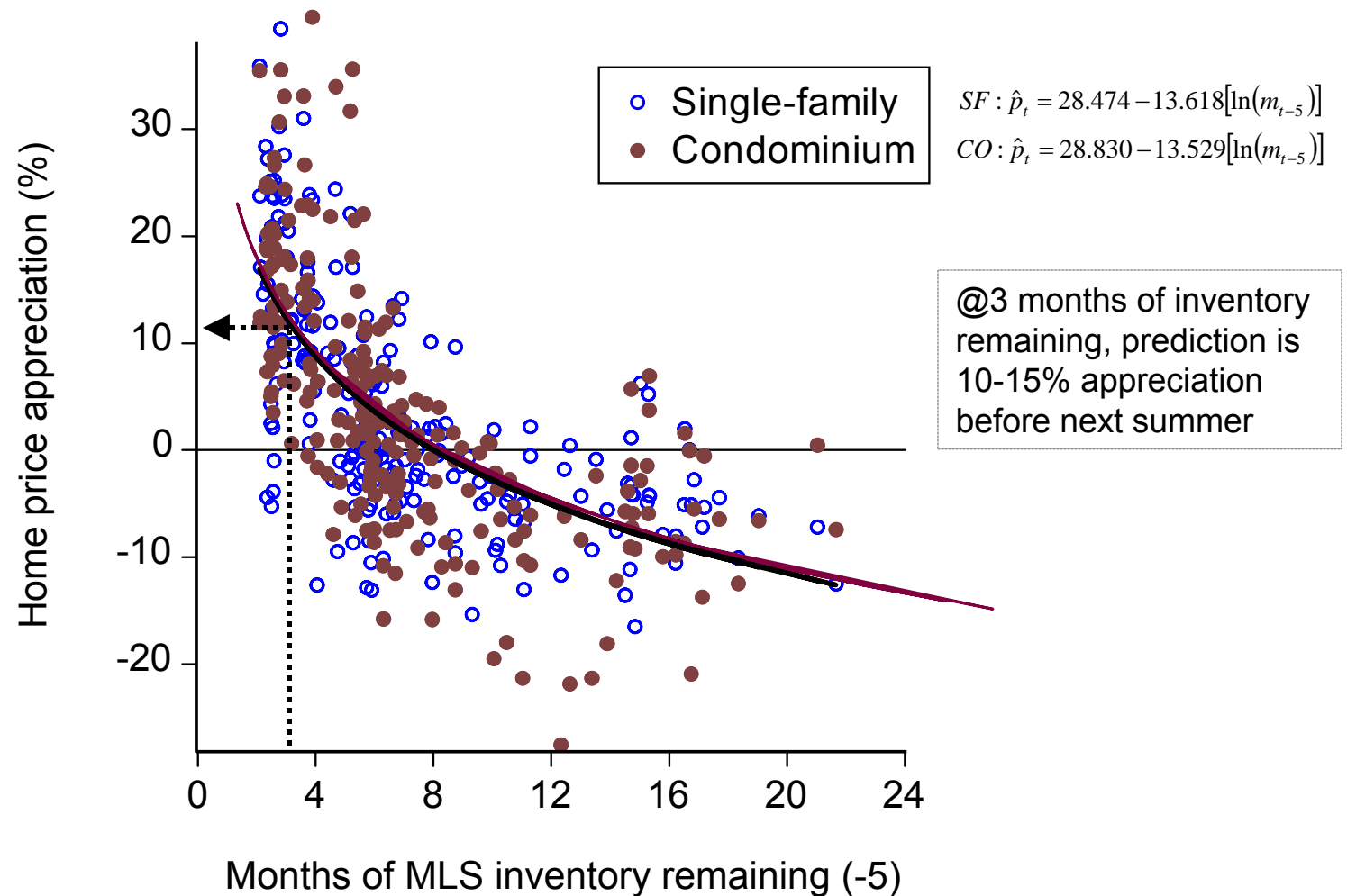
4. Macroeconomic outlook



Housing trends: cyclical recovery hindered by slow-moving regulatory process

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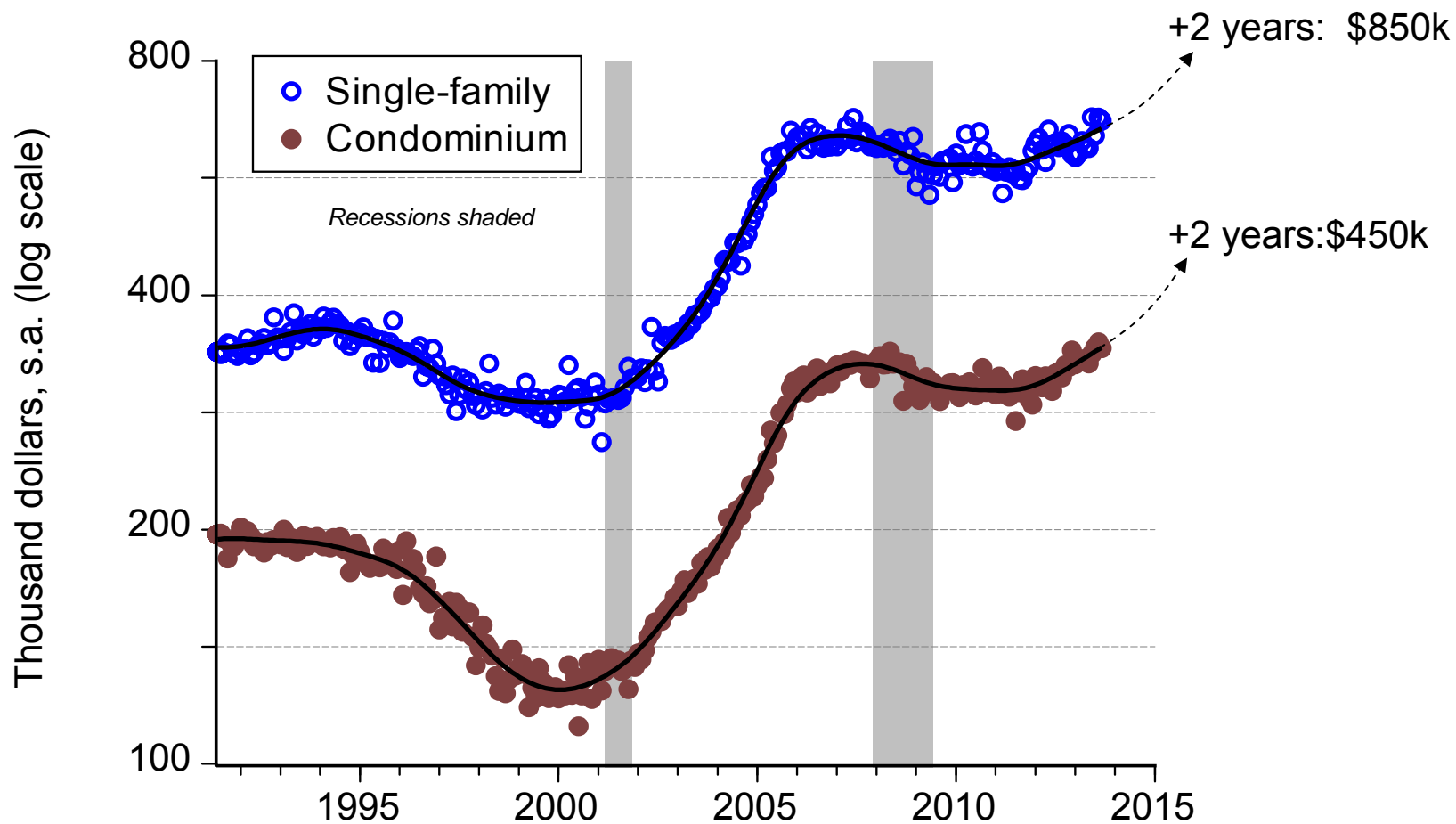
The (Mike) Sklarz Curve: Oahu home price appreciation, lagged inventory remaining 1994-2013



Slide copyright 2013 TZ E C VO N O M I C S

Source: Honolulu Board of Realtors; seasonal adjustment, regressions on logs of months of inventory remaining by TZE; see Norm Miller and Mike Sklarz, "A Note on Leading Indicators of House Price Trends," *Journal of Real Estate Research* 1:1 (Fall 1986) pp. 99-109

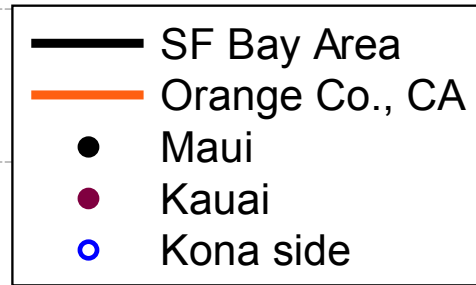
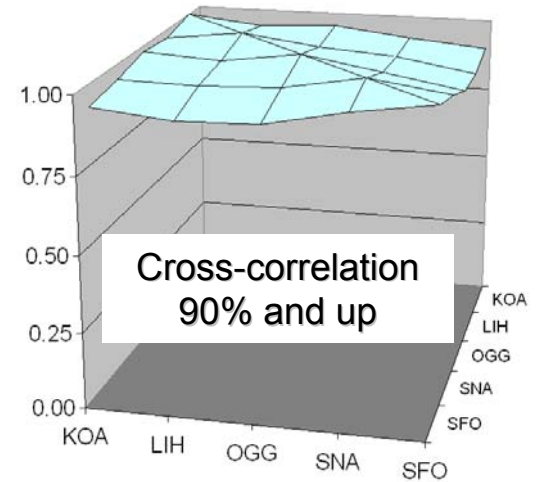
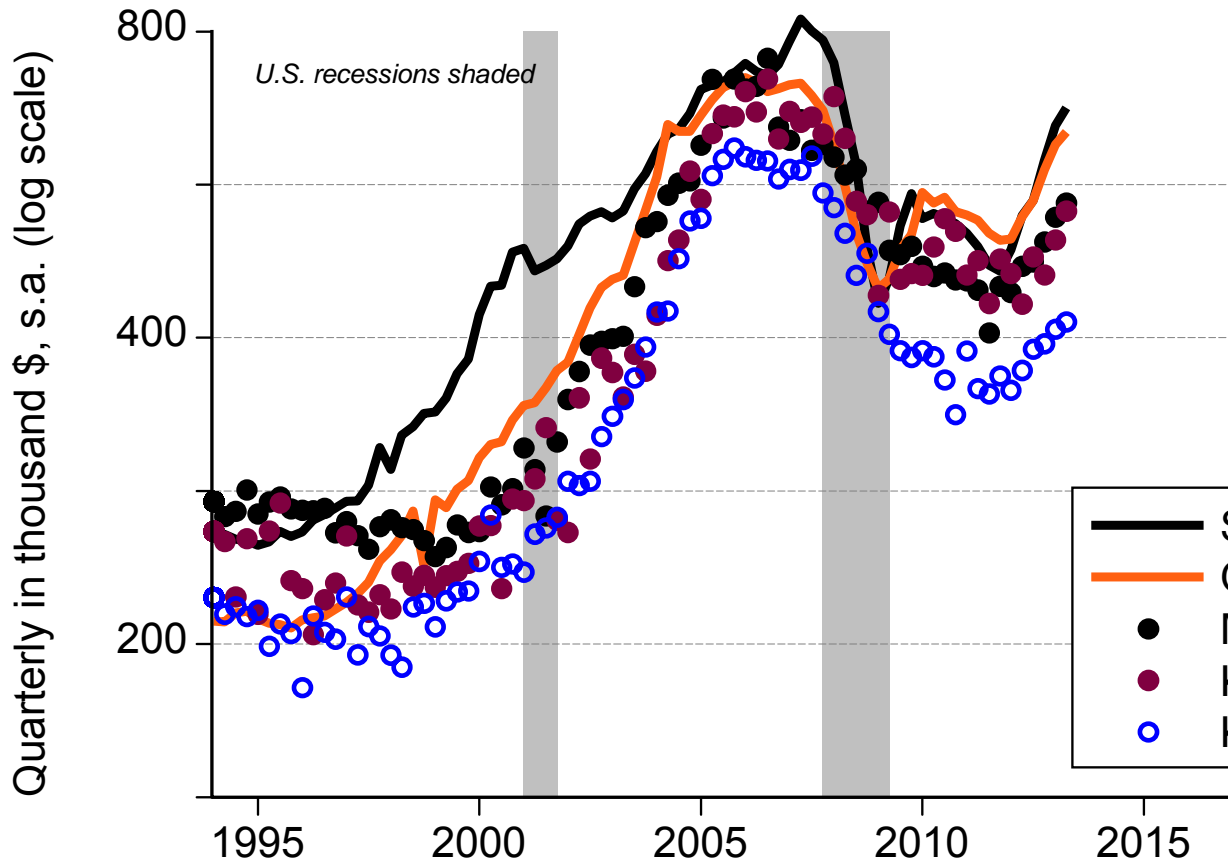
Monthly Oahu median existing home sales prices



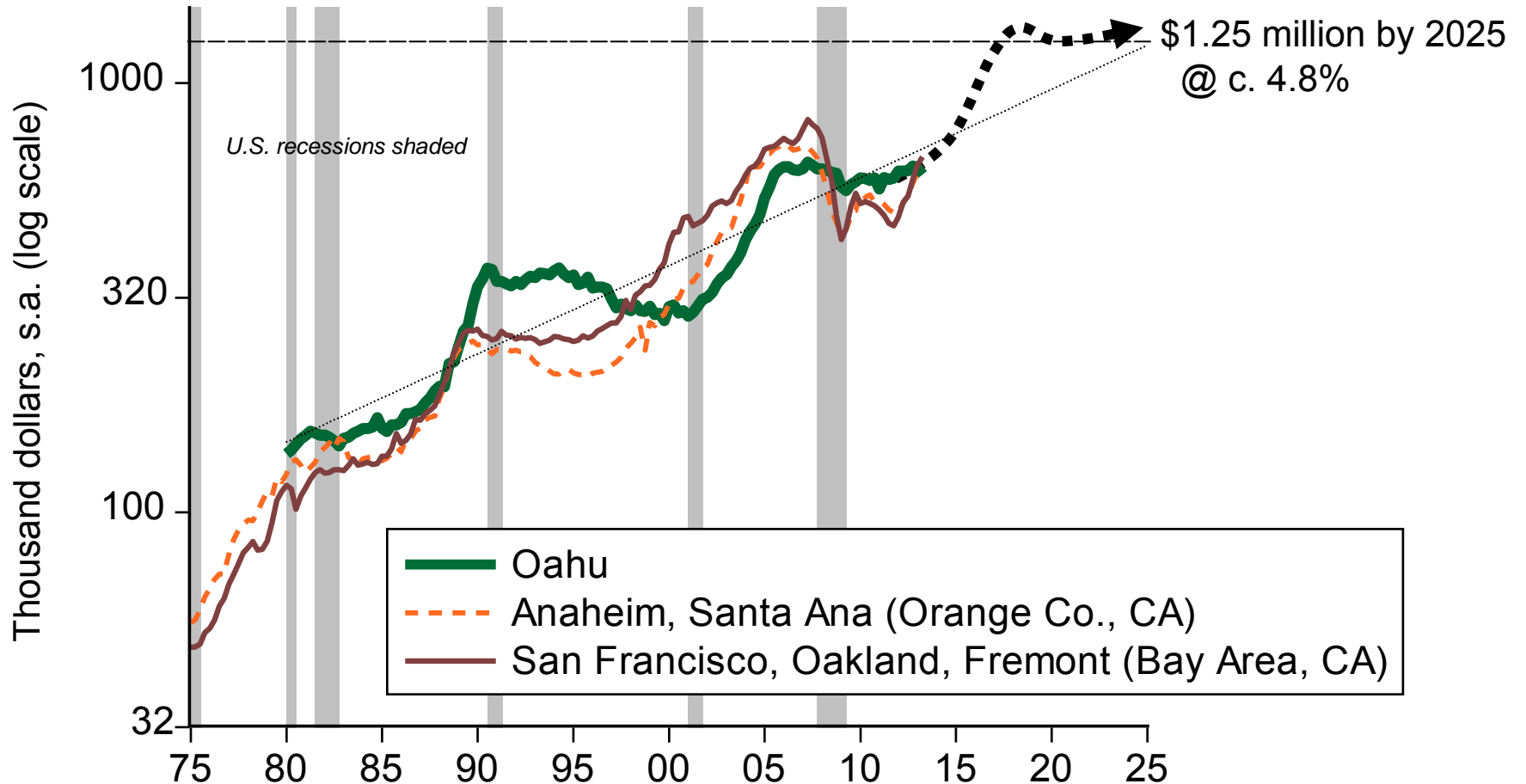
Slide copyright 2013 TZE ECONOMIC CONSULTANTS

Source: Honolulu Board of Realtors (raw data through September 2013); seasonal adjustment using Census X-12 ARIMA filter by TZE

California, Neighbor Island existing single-family home median sales prices: strong co-movement



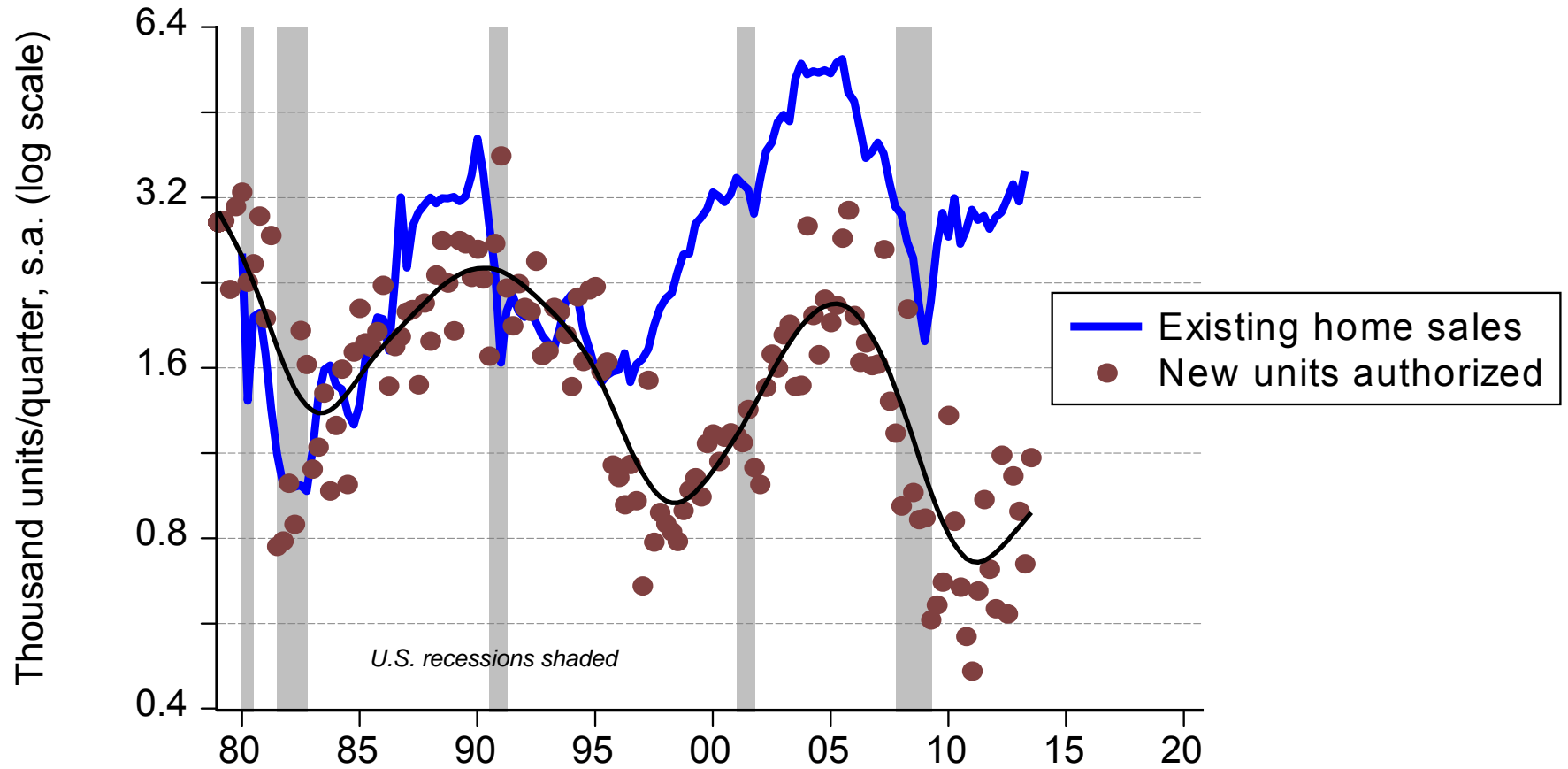
Median single-family existing home sales prices: replicating the *last* (early-2000s) price acceleration



Slide copyright 2013 TZ ECGVO N O M I C S

Sources: Honolulu Board of Realtors, National Association of Realtors. Prudential Locations, UHERO; seasonal adjustment by TZE; regression estimate of the natural logarithm of Oahu median home prices on a constant and time trend, 1980Q1-2013Q2

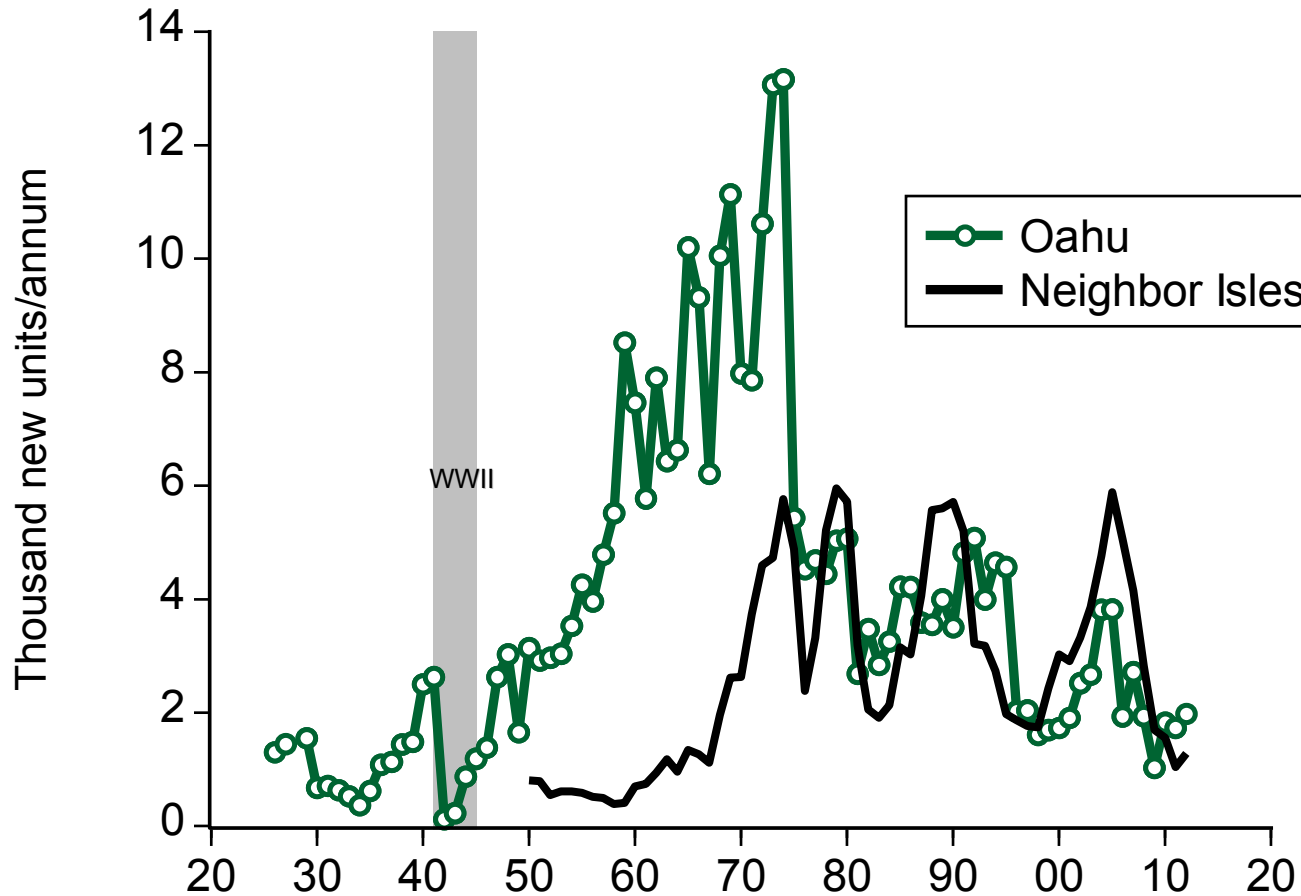
Hawaii existing home sales outpace new residential units permitted (especially slow Neighbor Isle recovery)



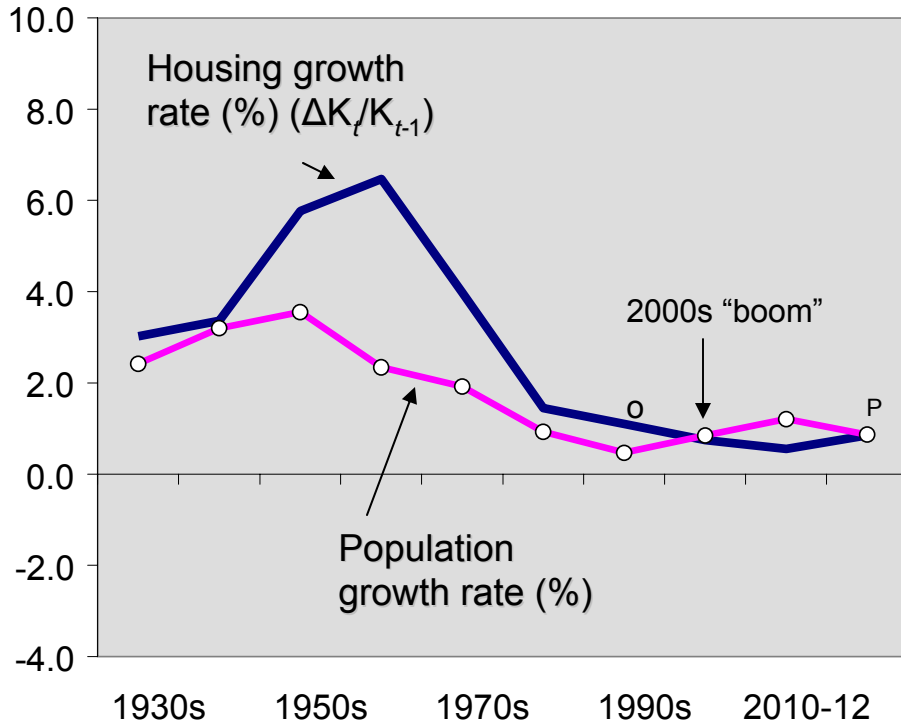
Slide copyright 2013 TZ Economics

Source: Prudential Locations, UHERO, County Building Departments, Hawaii DBEDT and TZ Economics; seasonal adjustment, trend extraction by TZE, housing unit authorization data through third quarter 2013, existing home sales through second quarter 2013

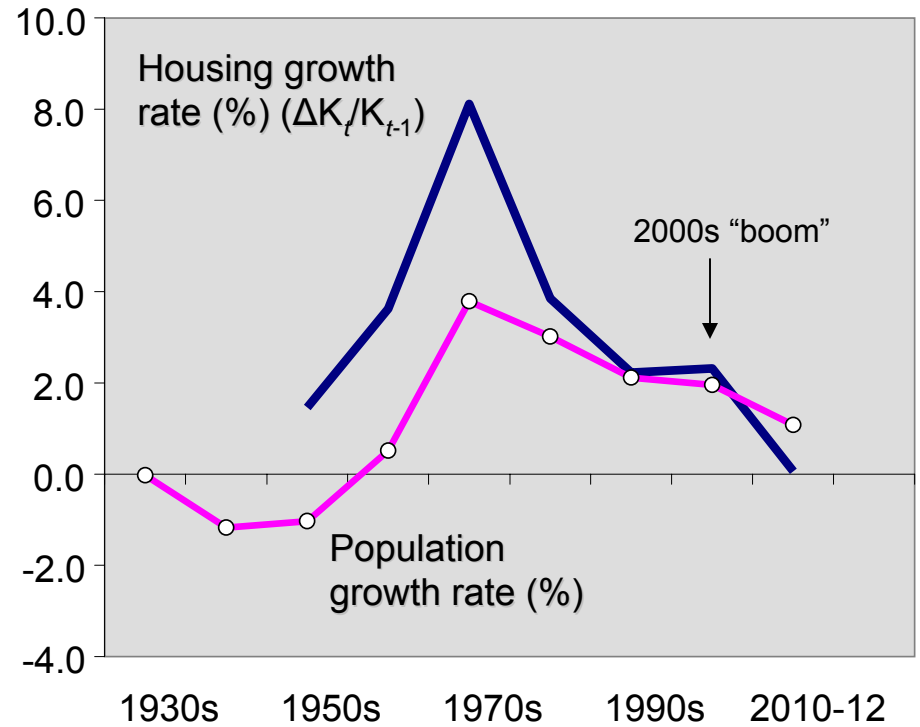
Annual new housing units authorized by building permit



Hawaii now: population growth > housing formation



Oahu



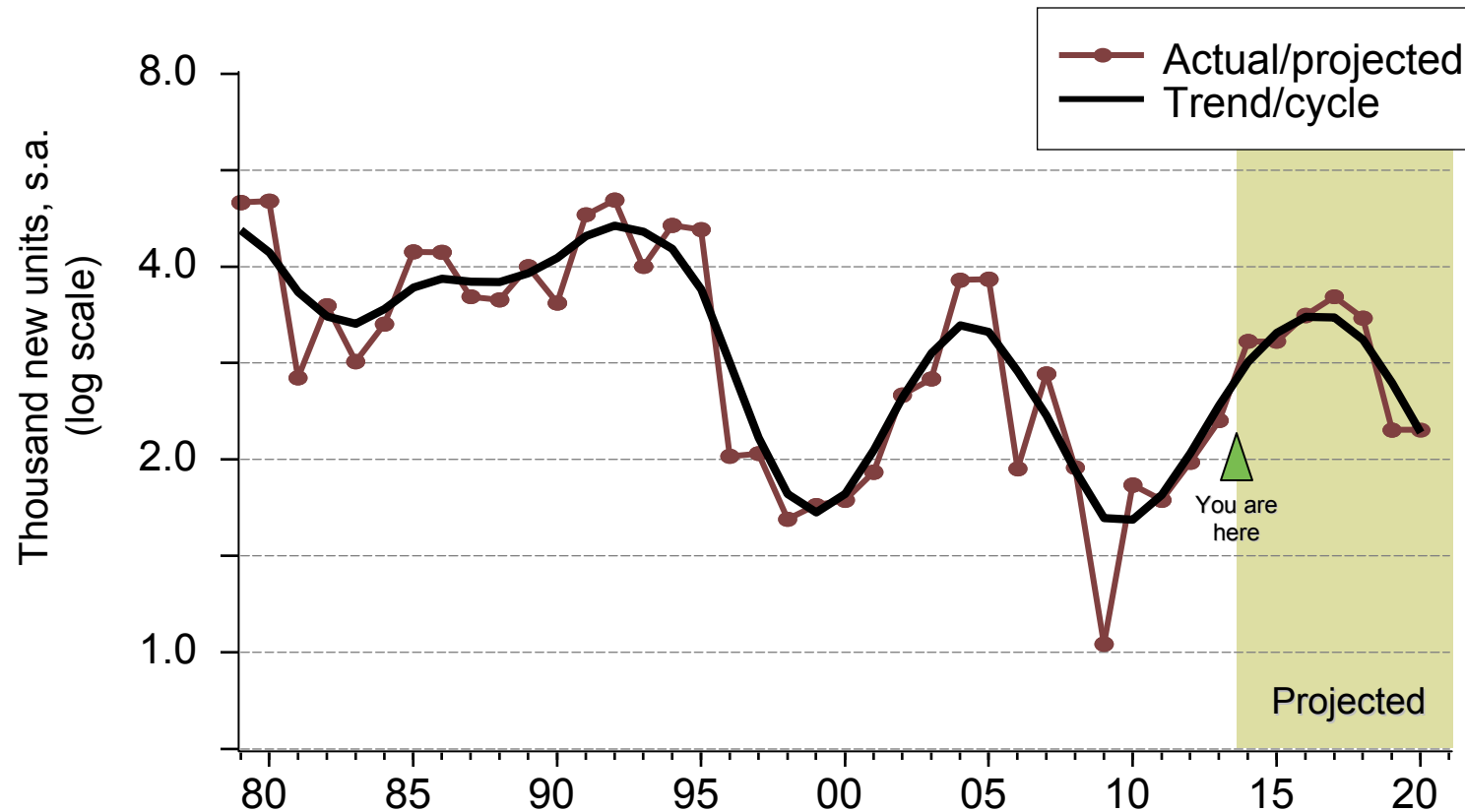
Neighbor Islands

^oMilitary downsizing (BRAC) ^PProjection to 2020 with Koa Ridge, Ho'opili, Kakaako; assumes housing cycle tapers after 2017 (next slide)

Slide copyright 2013 TZ E C VO N O M I C S

Sources: Robert C. Schmitt *Historical Statistics of Hawaii*, Hawaii DBEDT (http://dbedt.hawaii.gov/economic/county_report/), Bank of Hawaii *Annual Economic Report* (various), annual TZE data through 2012

Oahu annual new housing units authorized by building permit actual and projected for 20-teens



Projection assumes that existing home sales prices rise 15% annually 2014-2017 to approximately \$1 million (SF), \$530k (condo), long-term Treasury bond yields rise to 4% by 2015, production of 5,500 high-rise condominium units in Kakaako is completed but absorption reduces notional annual production amounts at Koa Ridge (300 units) and Ho'opili (500 units) by one-third in 2017 and two-thirds in 2018 at the end of a U.S. economic expansion of average duration for the post-1970s era (eight years)



Outline

1. Tourism

2. Housing

- Tight inventory: model predicts 10-15 percent appreciation in 2014
- Housing market fundamentals improving, demand outstripping supply
- Upswing will face headwinds: eroding affordability, rising interest rates
- Production constraints limit homebuilding to *less than* population growth
- (Regulatory, geographic constraints *amplify* valuation cycle in housing)

3. Construction

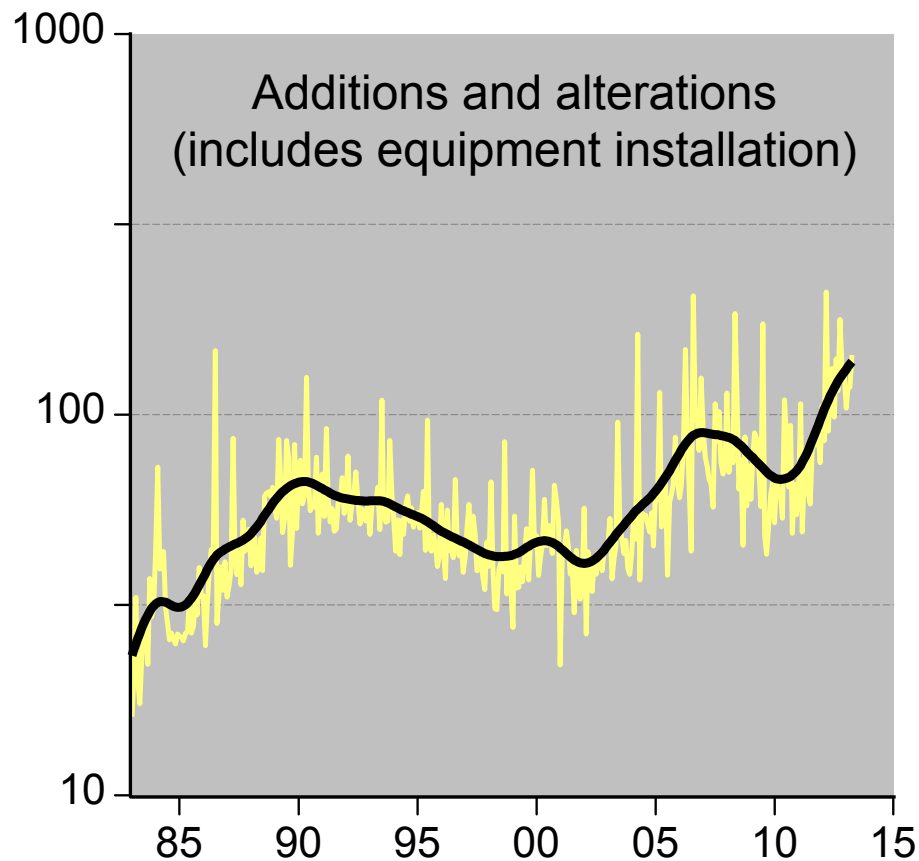
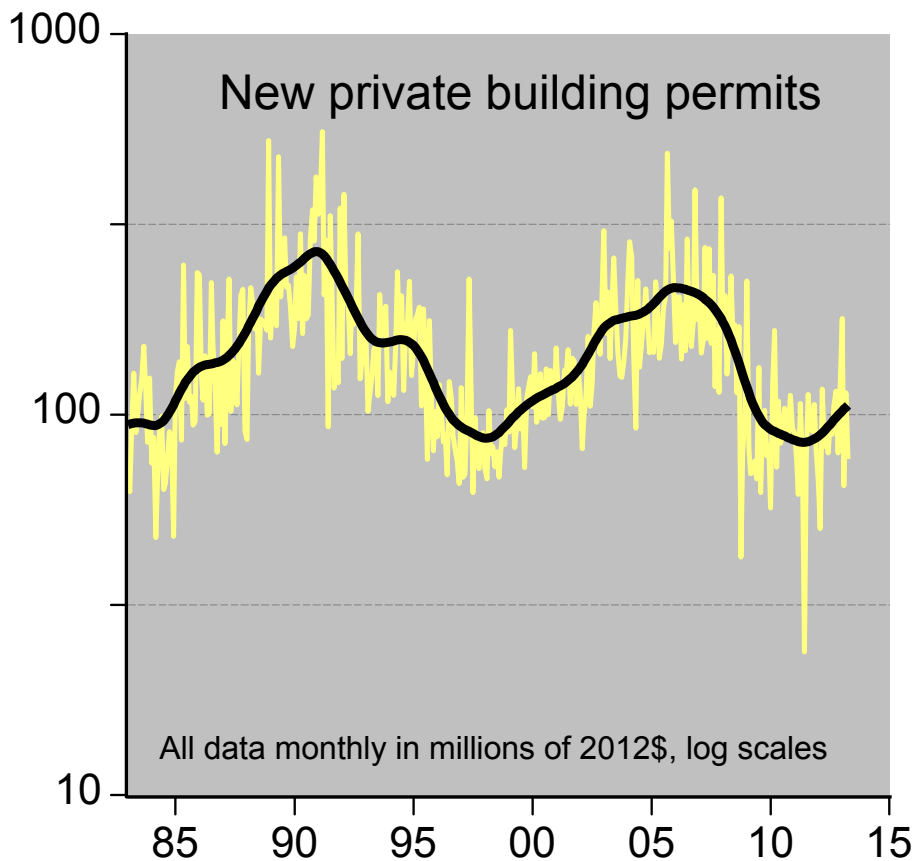
4. Macroeconomic outlook



Construction: head fake—PV panels are not buildings

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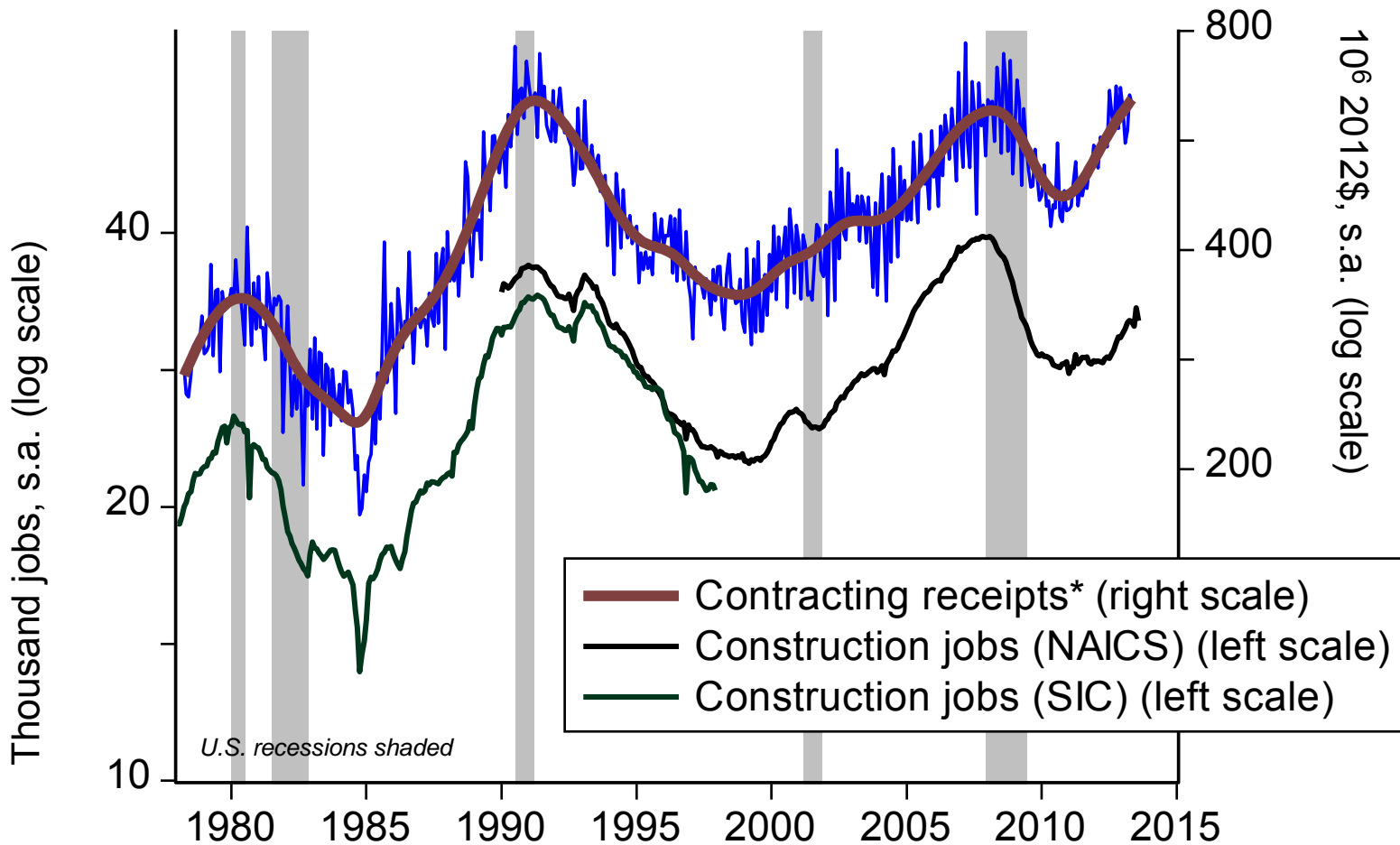
Recent growth of Hawaii real private building permits dominated by *equipment** (PV), not new structures



*Building permits are required for installation of photovoltaic equipment, but investment (gross capital formation) customarily distinguishes structures from equipment and software—buying a diesel generator for hurricane preparedness may be a good idea but it's not building (the verb) a building (the noun), nor is the installation of rooftop photovoltaic panels

Slide copyright 2013 TZ Economics

Construction receipts and jobs correlate, but buying PV or a diesel generator is *equipment* investment

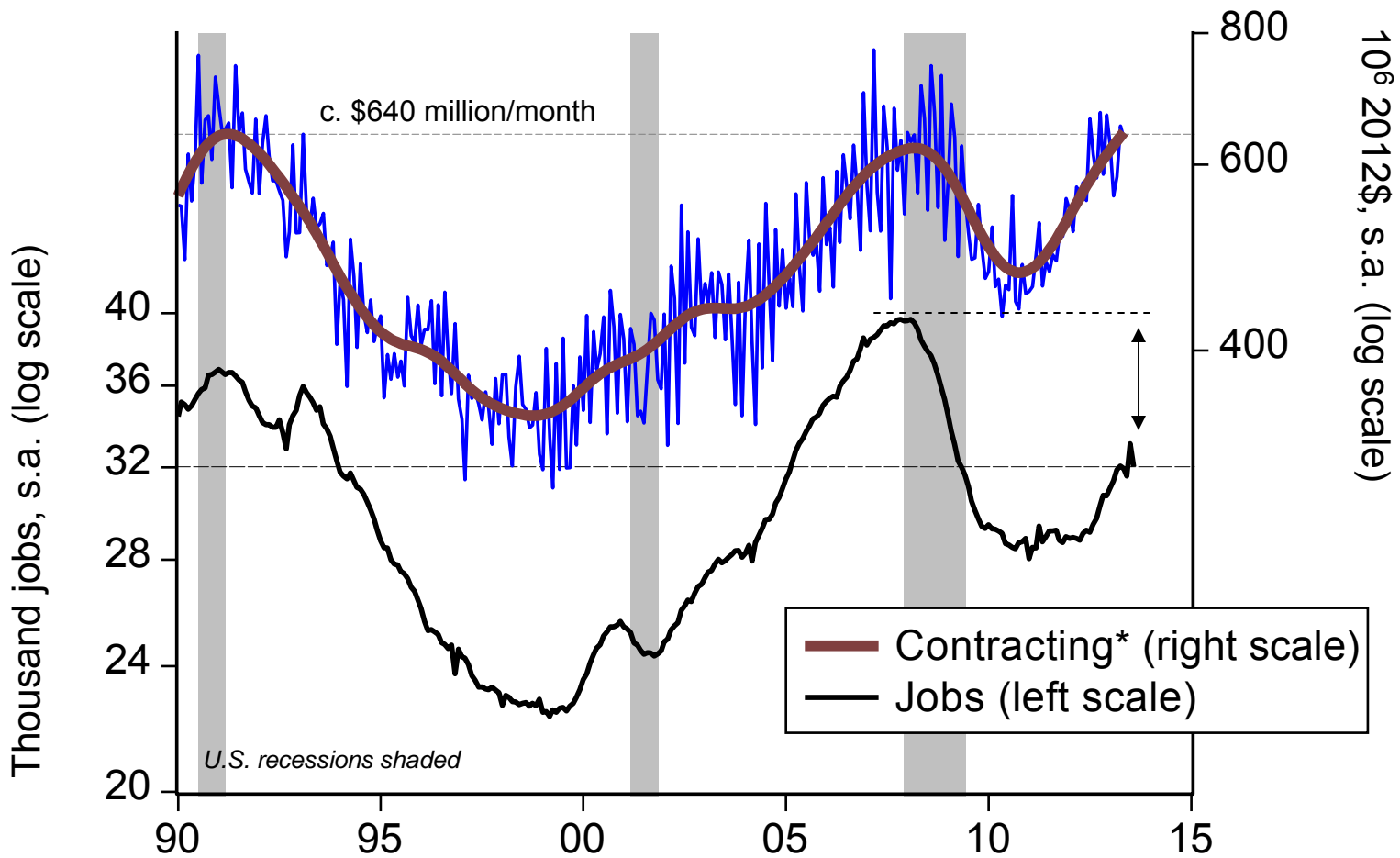


*Excludes military housing privatization which was tax-exempt

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Sources: Hawaii Department of Taxation, Hawaii DLIR and DBEDT, U.S. Bureau of the Census; seasonal adjustment, deflation and trend extraction by TZE, tax base data through May 2013, payroll employment data through August 2013

Construction jobs not keeping up with spending

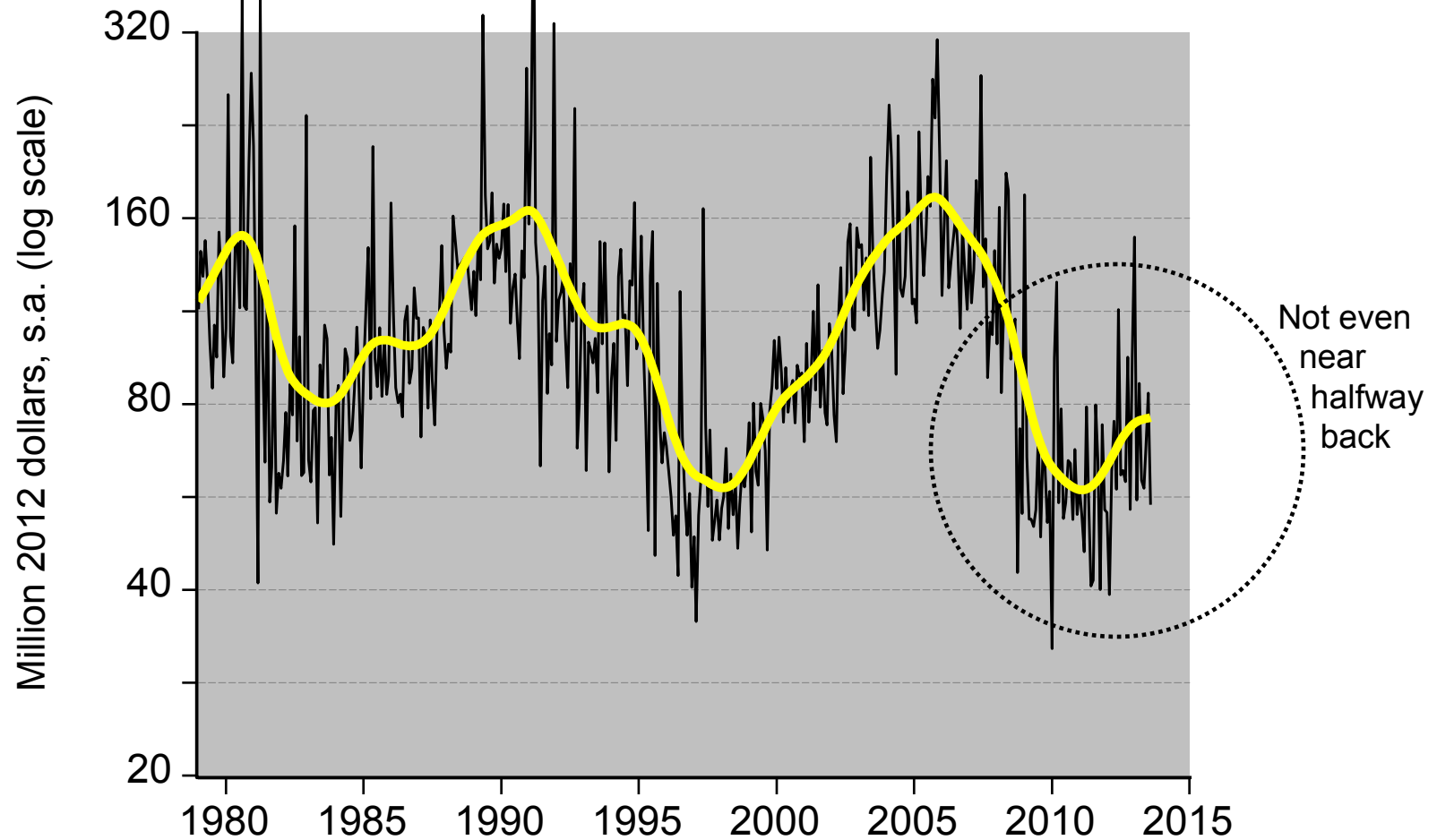


*Excludes military housing privatization which was tax-free

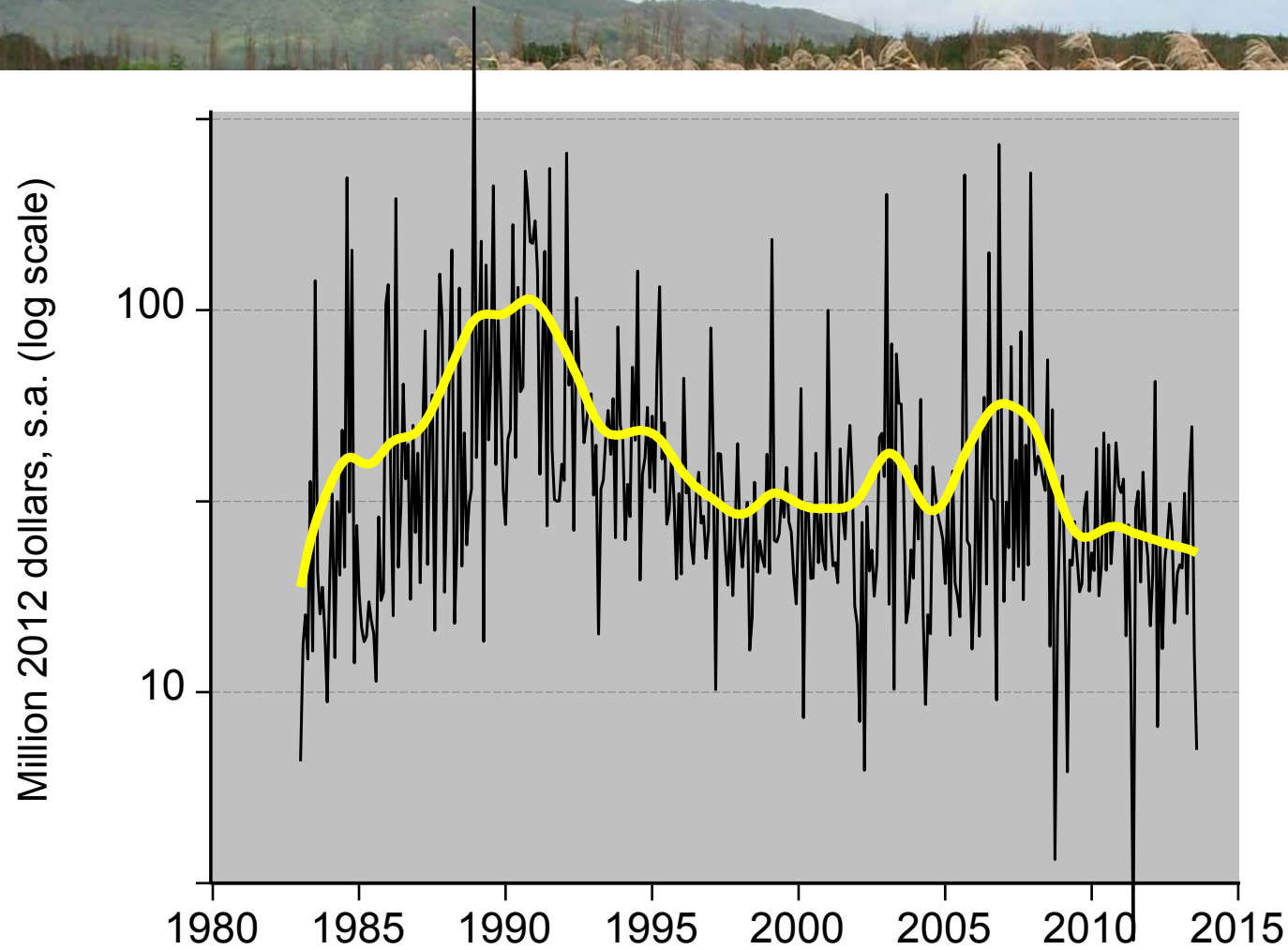
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Sources: Hawaii Department of Taxation, Hawaii DLIR and DBEDT, U.S. Bureau of the Census; seasonal adjustment, deflation and trend extraction by TZE, tax base data through May 2013, payroll employment data through August 2013

Real new residential building permits: lagging



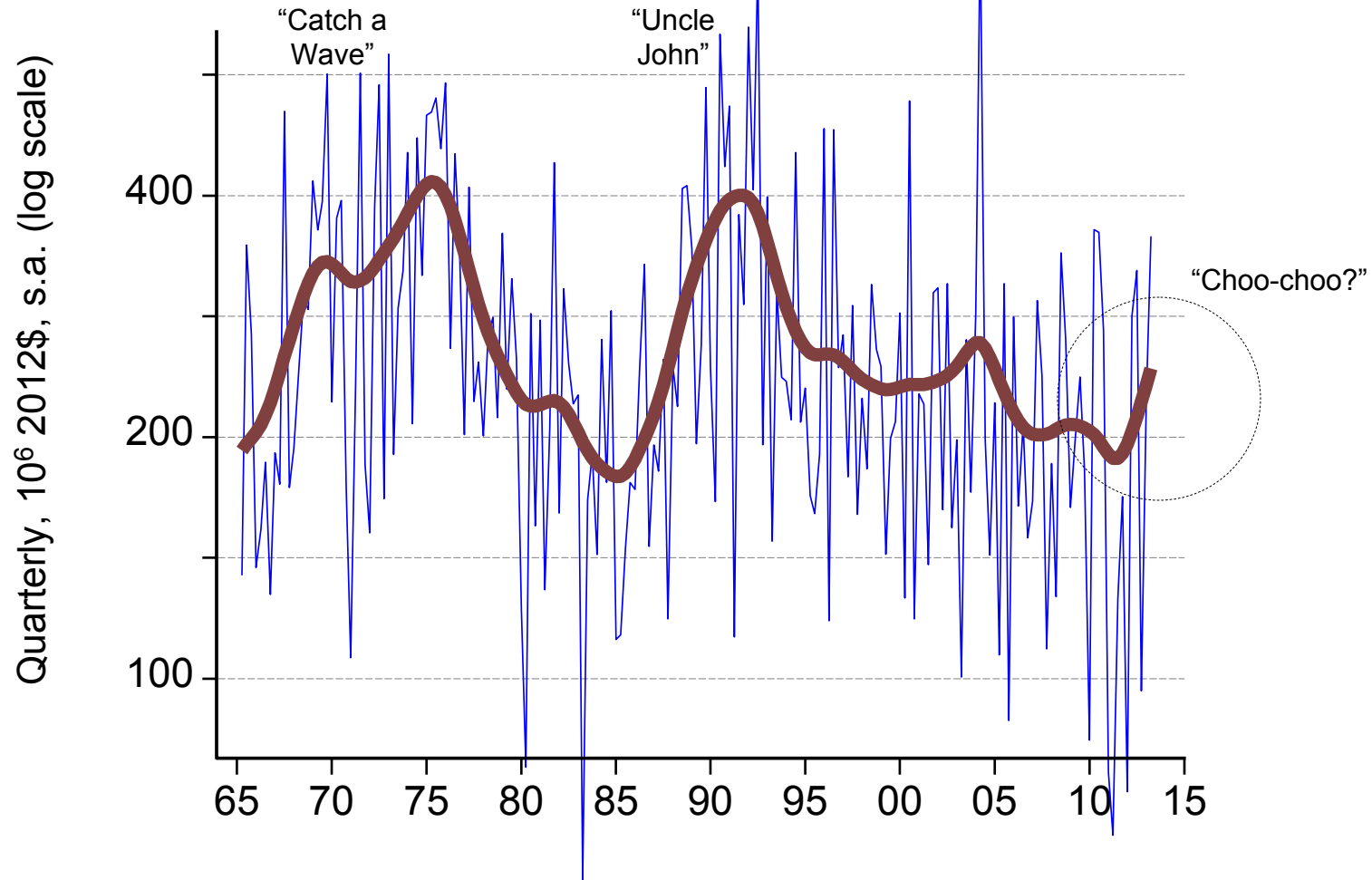
Real new commercial building permits: lagging worse



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Sources: County building departments, Hawaii DBEDT, U.S. Bureau of the Census; seasonal adjustment, deflation and trend extraction by TZE monthly data through August 2013

Quarterly real government construction contracts to mid-2013: signs of life or deferred maintenance?

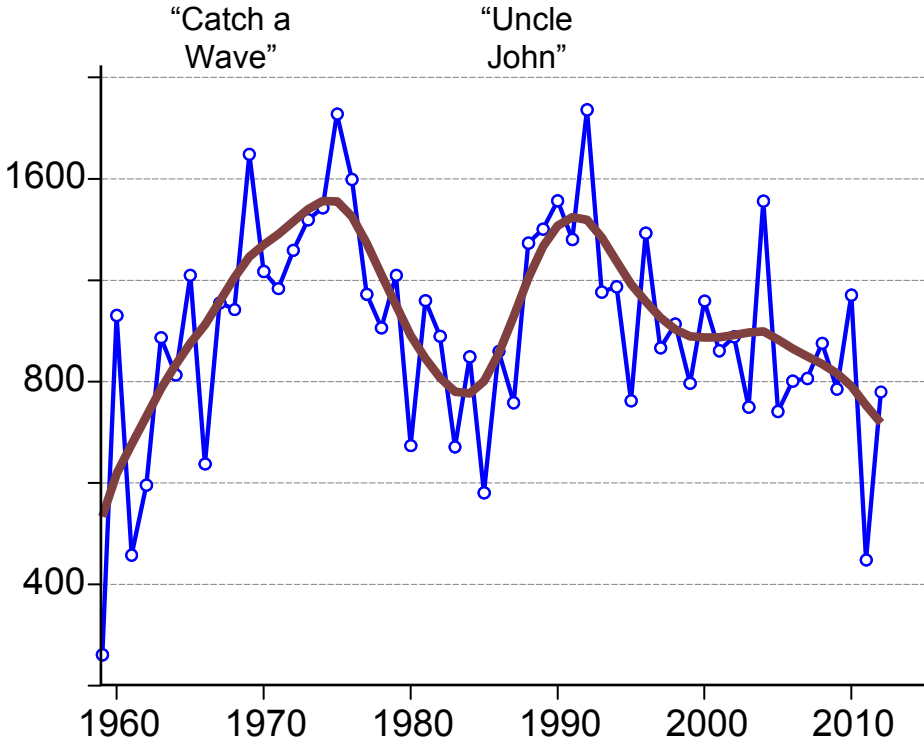


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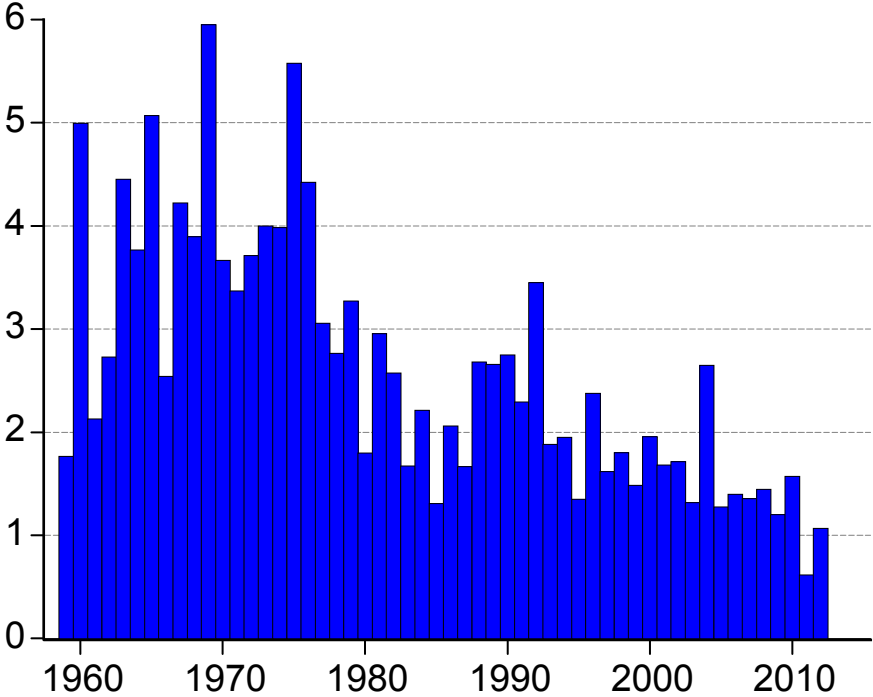
Sources: Bank of Hawaii (discontinued), Hawaii DBEDT, U.S. Bureau of the Census; seasonal adjustment, deflation and trend extraction by TZE quarterly data through second quarter 2013, combined federal, state and county government construction commitments



Annual real government construction in Hawaii, through 2012



Federal, state, county contracts*
(Million 2012 dollars)



Totals relative to Hawaii output
(percent of GDP)

*Excludes military housing privatization which is not public, duh



Outline

1. Halfway into the current economic expansion

2. Housing

3. Construction

- Recovery is partly a head fake: PV panels are *equipment*, not buildings*
- Construction of new *buildings* recovering less quickly; commercial not at all
- Homebuilding mired in acronymphobia (LUC, DPP, HCDA, HHFDC, DHHL...)
- *After* rising, public construction as % of GDP still *less than* fifty years ago

4. Macroeconomic outlook

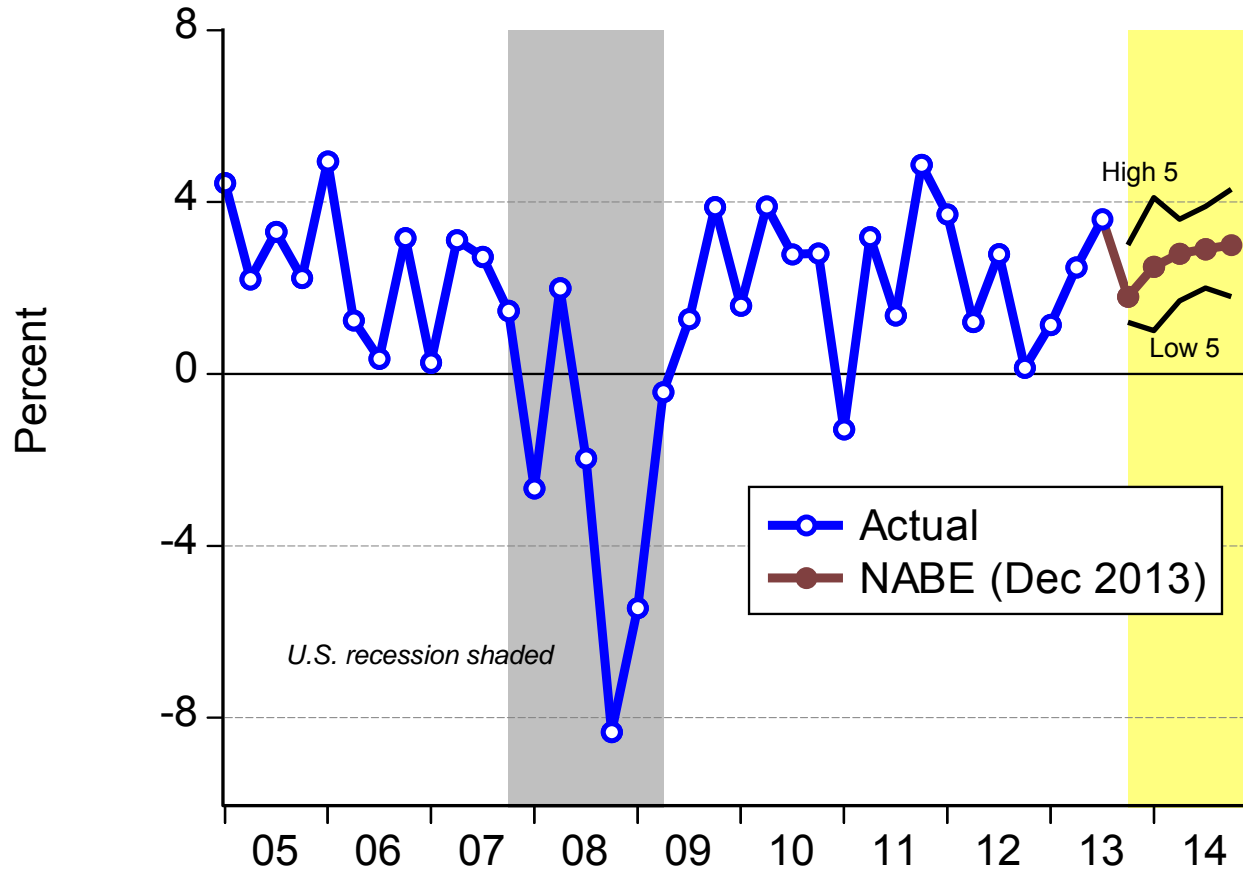
*As in “building permit,” the noun, not the verb



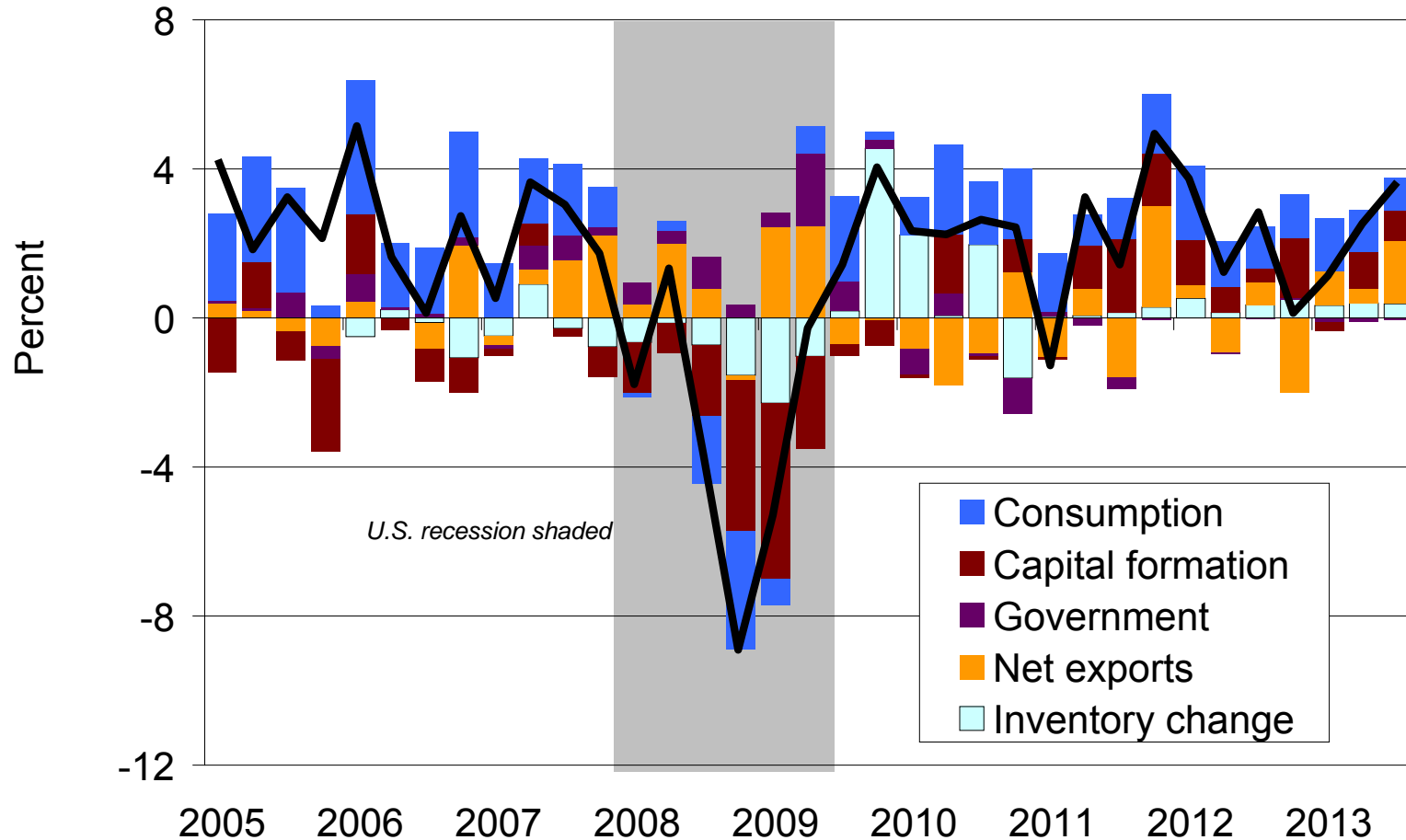
Macroeconomic outlook: growth with challenges

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U.S. real GDP growth forecasts (December 2013): October federal shutdown masked strong third quarter



Composition of U.S. real GDP since 2010: consumption-, investment-, and export-led growth



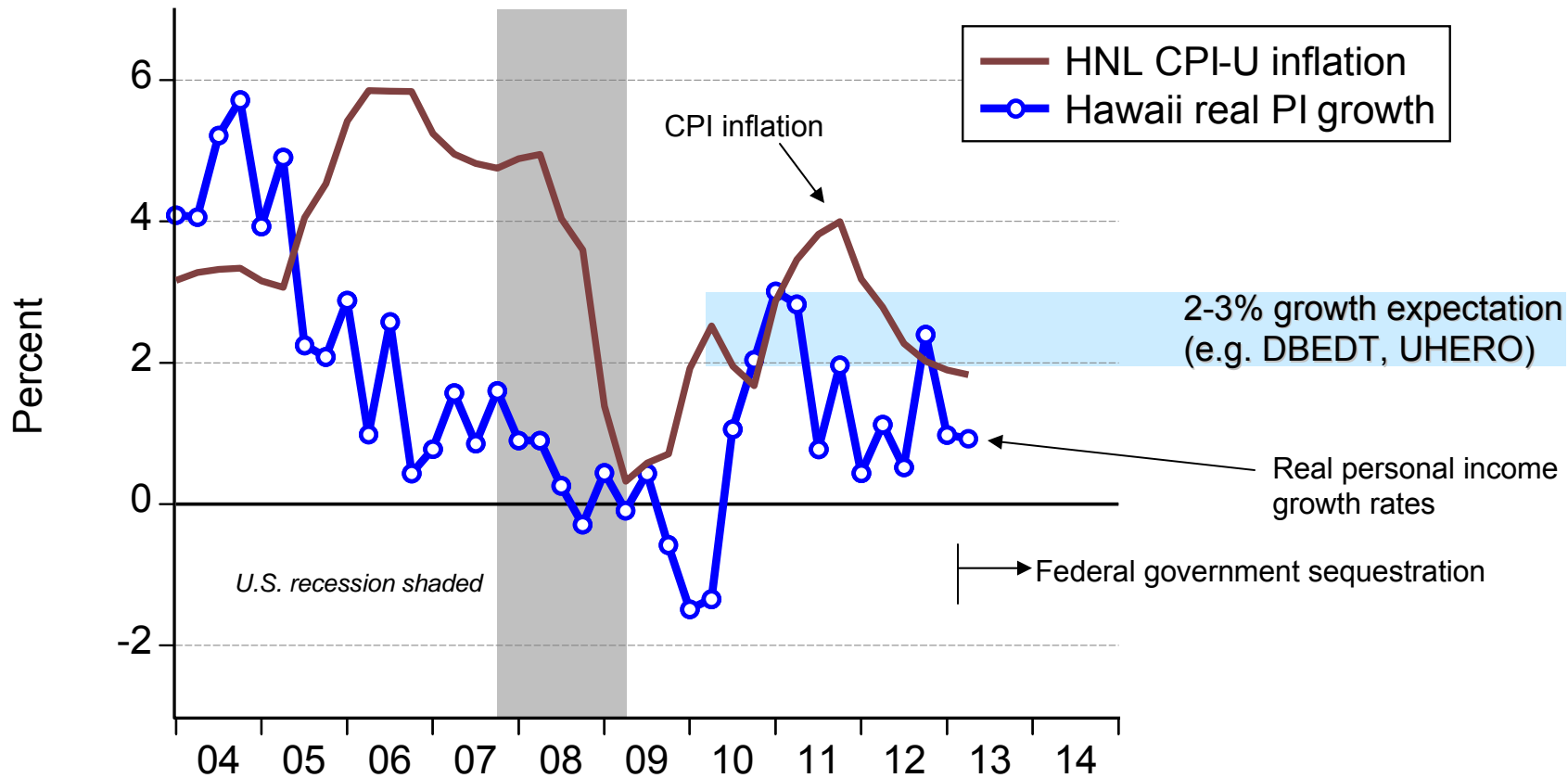
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Compound annual growth of real U.S. GDP government components highlight shifting sources of fiscal drag

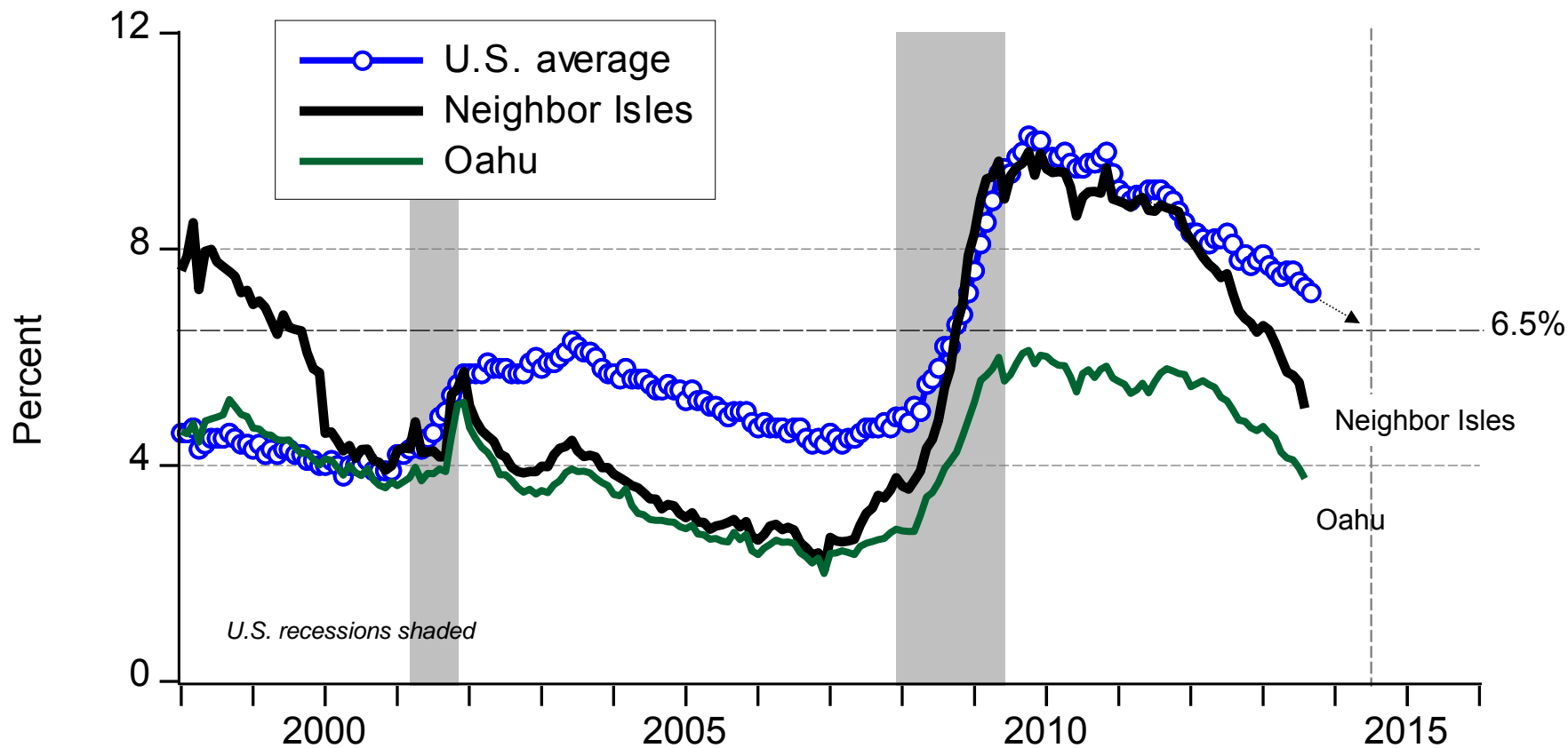
	Expansion to-date	First 2 years 09Q2-11Q2	Second 2 years 11Q2-13Q3
GDP	2.3	2.25	2.36
Government	-1.5	-1.5	-1.4
Federal	-1.1	1.1	-3.0
National defense	-2.1	0.8	-4.5
Nondefense	0.7	1.8	-0.3
State and local	-1.7	-3.3	-0.3

Hawaii math: 0.25 of economy (public sector) is growing -1.5% per annum
0.75 of economy (private sector) is growing $+3.5\%$
Overall economy grows 2.25%

Hawaii quarterly real personal income growth (puka) and contemporaneous Honolulu inflation rates (line)



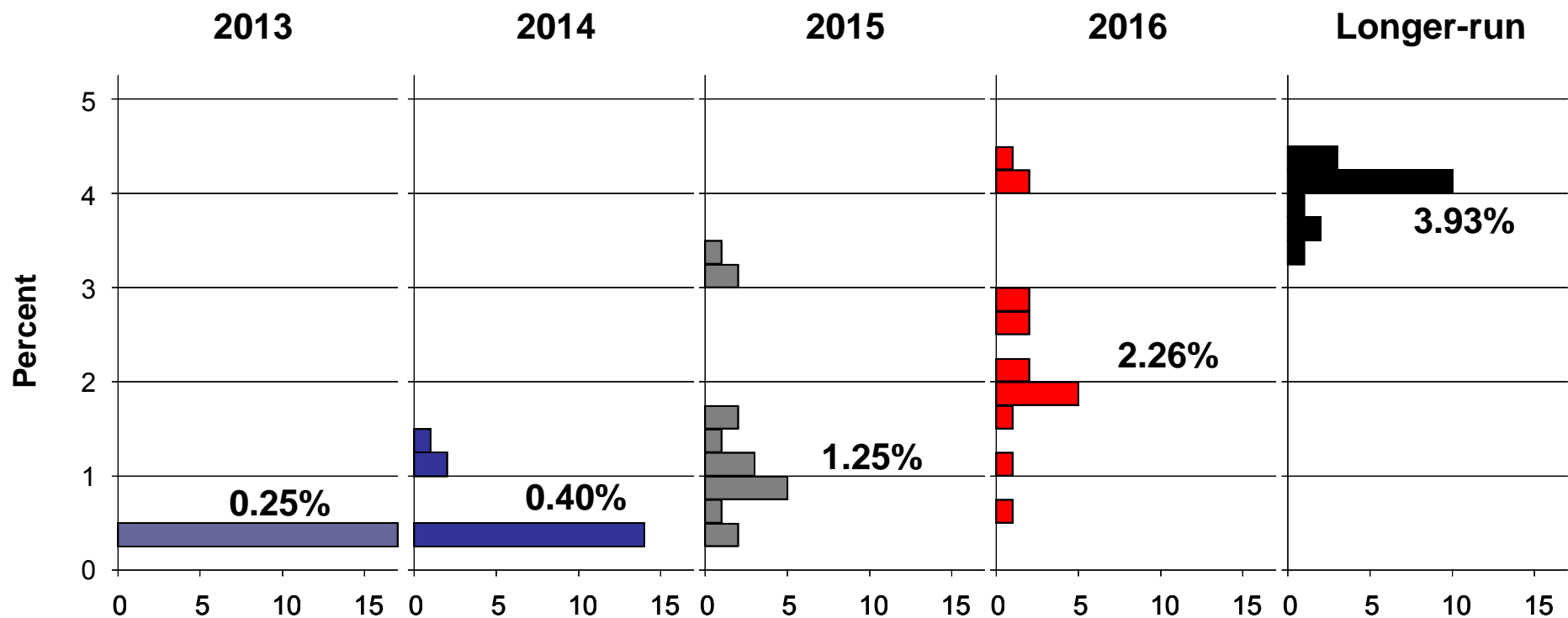
Hawaii and U.S. unemployment rates(s.a.): Fed threshold, 6.5%, before short-term rates rise



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Source: Bureau of Labor Statistics, U.S. Department of Labor, Hawaii DLIR and DBEDT; seasonal adjustment of Hawaii data by TZE; Hawaii data through August 2013, U.S. data include September 2013 (delayed) estimate.

Distributions of FOMC participant's forecasts for the fed funds target rate and weighted averages

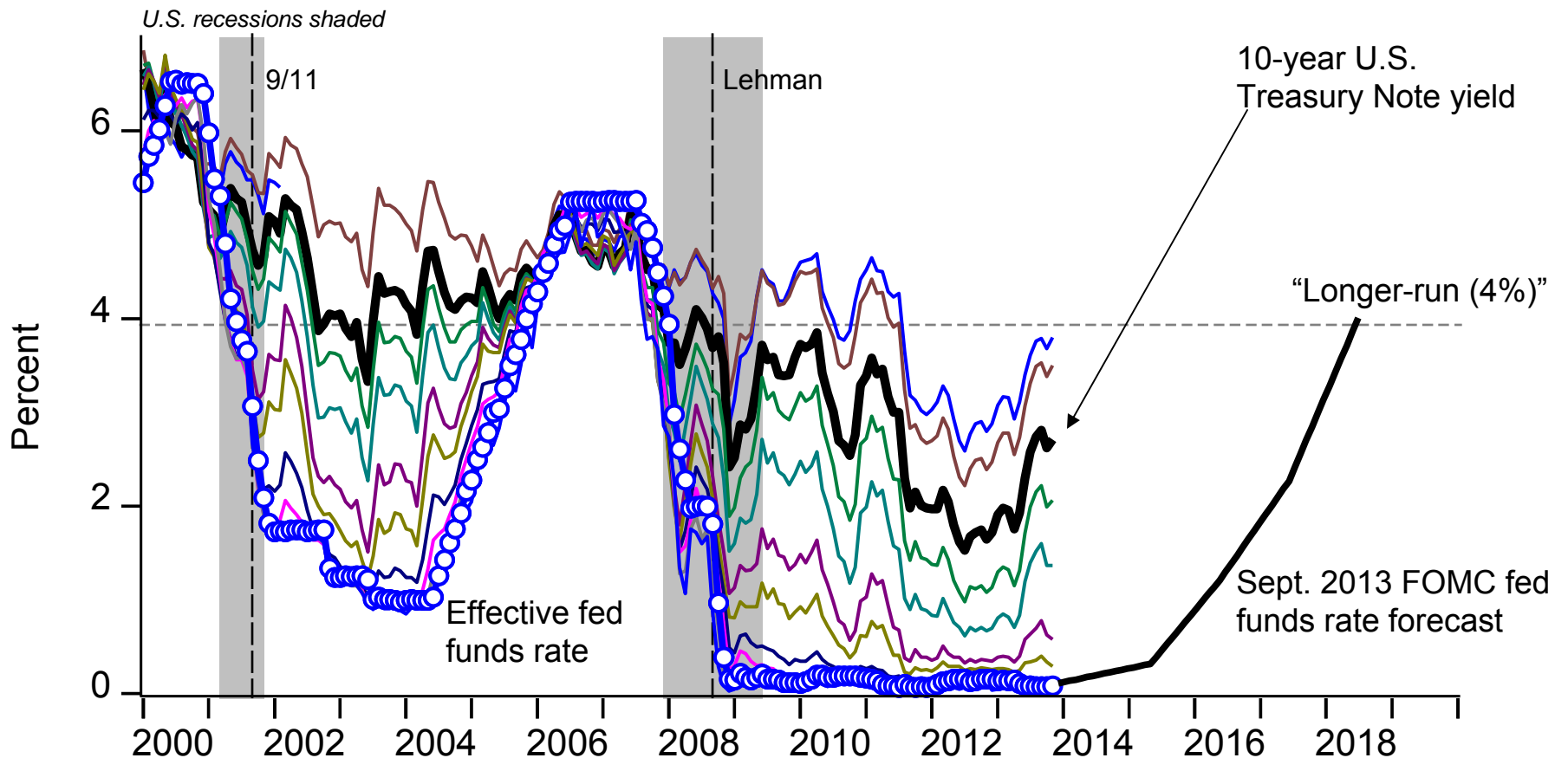


Number of observations (FOMC participants, total = 17)

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Source: Advance release of Figure 2 Overview of FOMC participants' assessments of appropriate monetary policy to be released with September 17-18, 2013 FOMC minutes (released September 18, 2013) (<http://www.federalreserve.gov/monetarypolicy/fomcproptabl20130918.htm>)

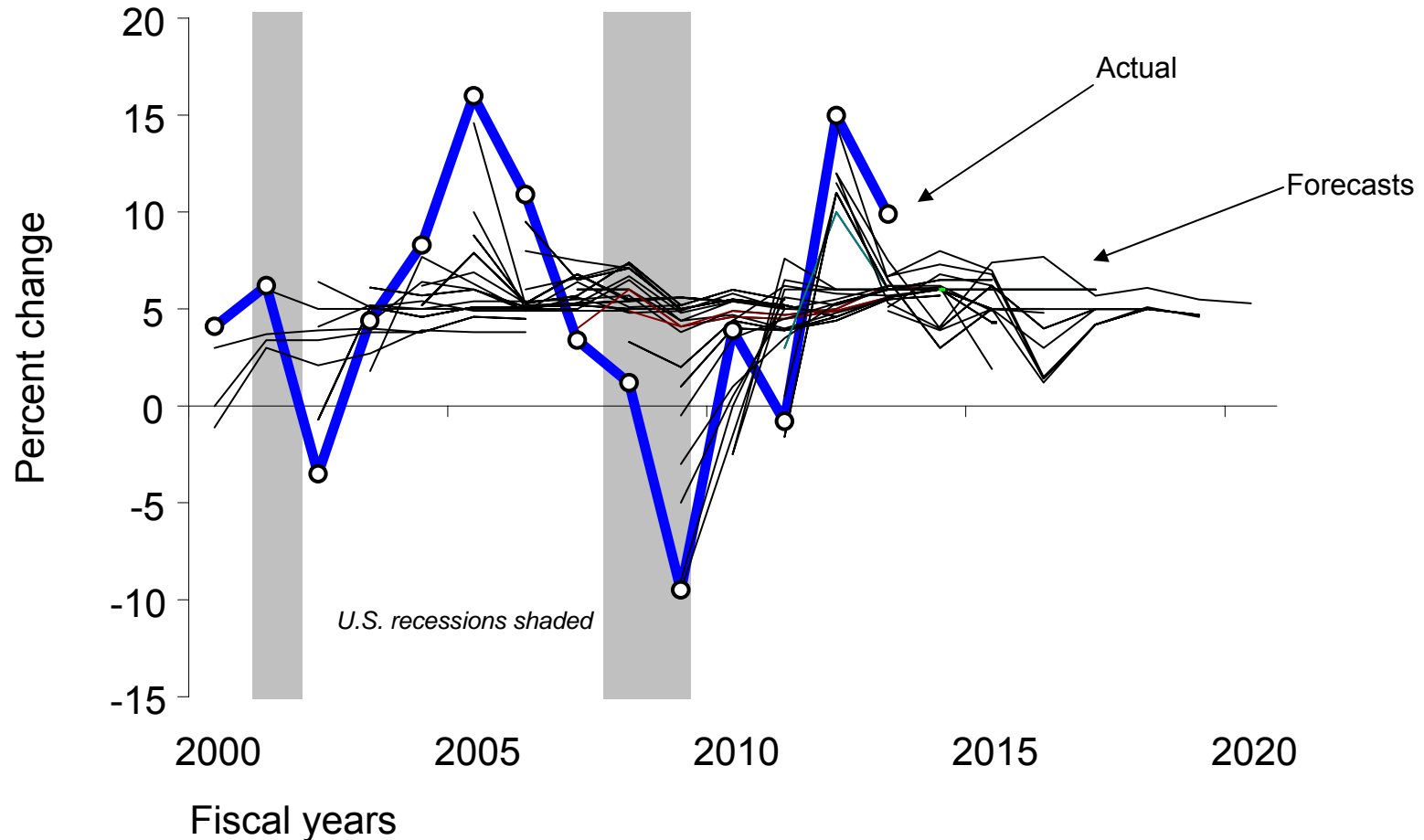
Treasury constant-maturity yields (term structure) and fed funds rate trajectory implied by the FOMC



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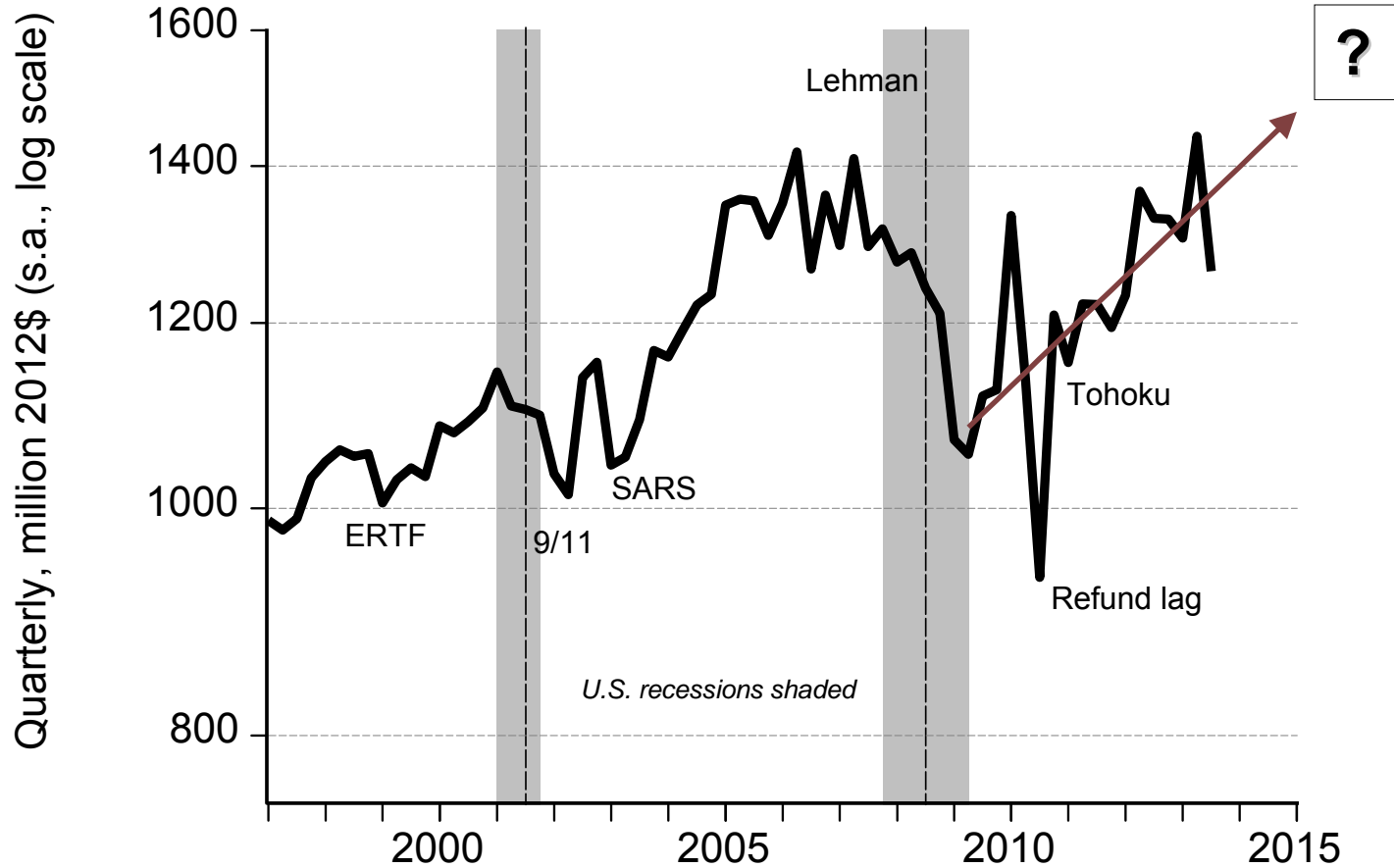
Source: H.15 and advance release of Figure 2 Overview of FOMC participants' assessments of appropriate monetary policy to be released with Sept. 17-18, 2013 FOMC minutes (released September 18, 2013) (<http://www.federalreserve.gov/monetarypolicy/fomcprojt20130918.htm>)

Hawaii Council on Revenues multi-year forecasts for nominal General Fund revenue growth since FY1999



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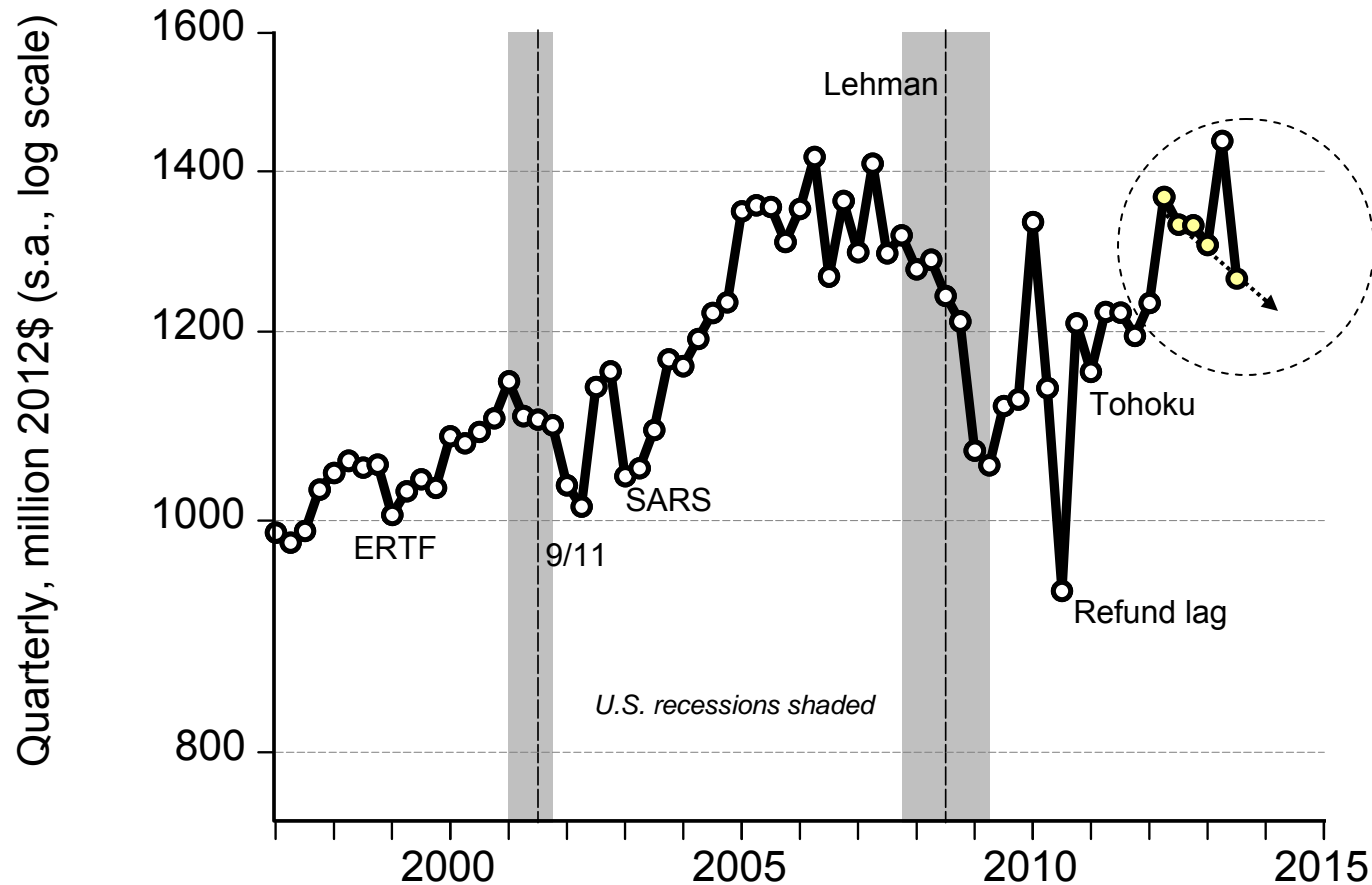
The \$6.4 billion dollar question: will real General Fund revenue exceed \$5.4 billion (12 mos. to 9/13)?



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Sources: Hawaii Department of Taxation, Hawaii Department of Business, Economic Development and Tourism, Bureau of Labor Statistics; seasonal adjustment and deflation by TZ Economics

Constant-dollar Hawaii general fund revenues actually have declined for 5 quarters recently (1 outlier)



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Sources: Hawaii Department of Taxation, Hawaii Department of Business, Economic Development and Tourism, Bureau of Labor Statistics; seasonal adjustment and deflation by TZ Economics



Outline

1. Halfway into the current economic expansion

2. Housing

3. Construction

4. Macroeconomic outlook

- U.S. real GDP growth forecast: 2% going to 3% (Hawaii too)
- Private sector growth despite fiscal drag, now from federal government
- Oil-driven inflation shocks were temporary; tighter labor markets coming
- Normalization of monetary policy will raise interest rates—more drag
- General fund revenues exceed forecast, boom *and* bust; position for latter



Mahalo!

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Kailua, Hawaii 96734-4430
paulbrewbaker@tzeconomics.com

Appendix: Phillips Curves, etc.



Mahalo!

Slides available from:

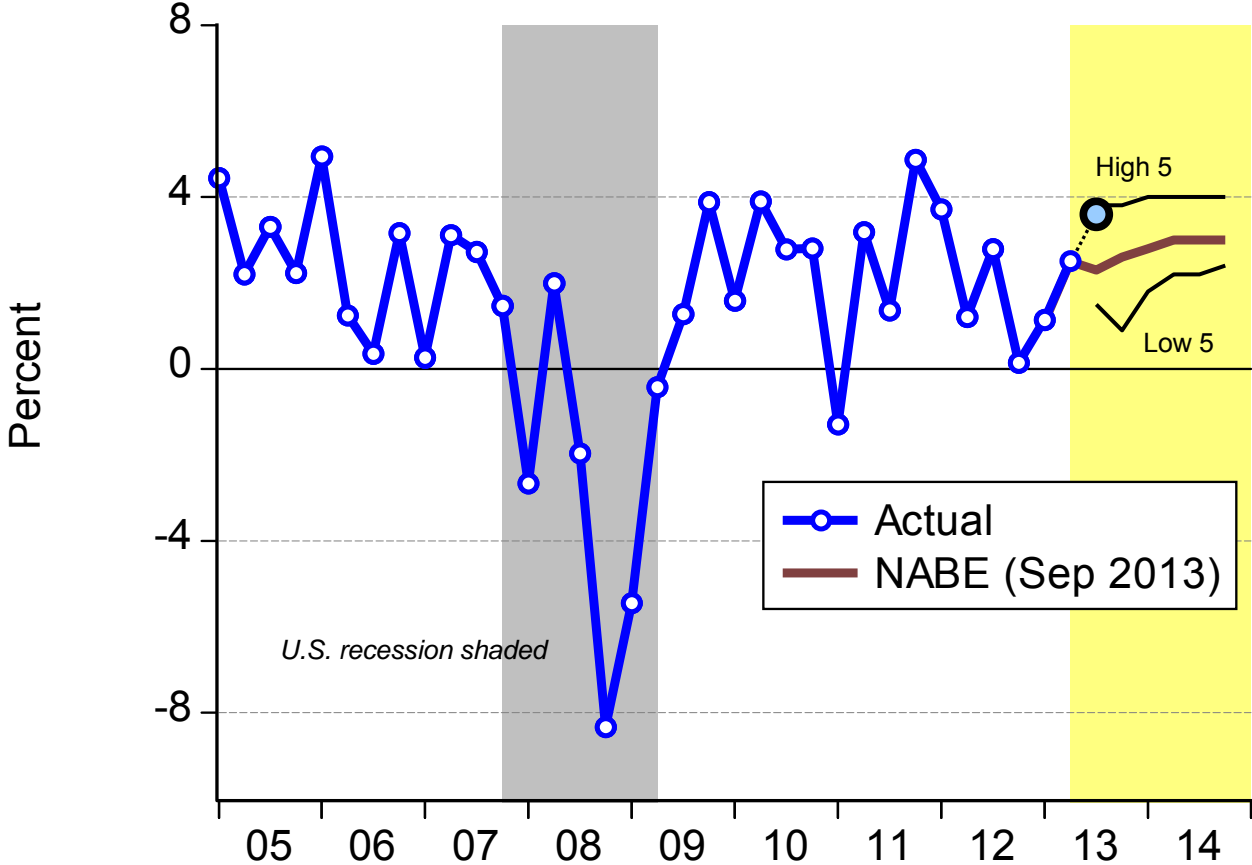
Paul H. Brewbaker, Ph.D.
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Kailua, Hawaii 96734-4430
paulbrewbaker@tzeconomics.com



Appendix 1: NABE September 2013 forecast

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U.S. real GDP growth forecasts (September 2013): actual third quarter growth closer to high end

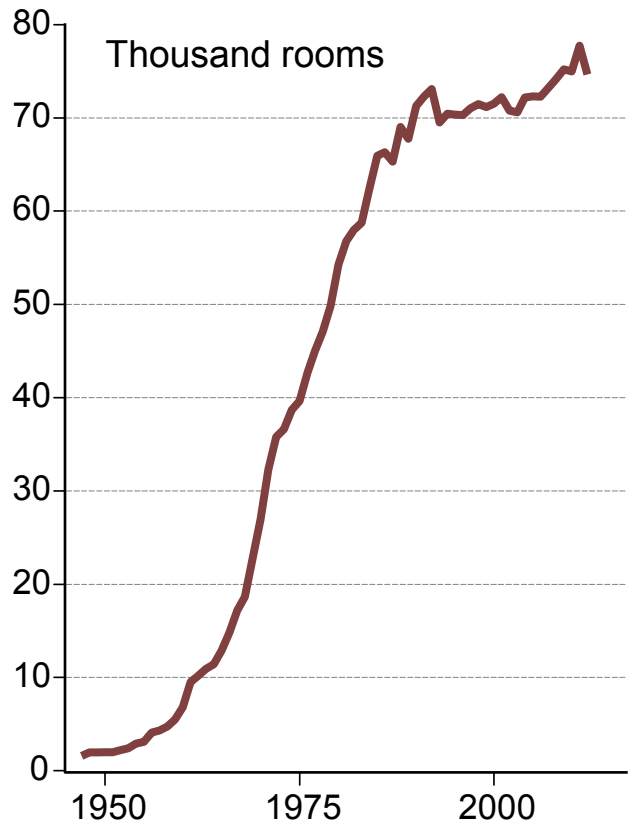


A wide landscape photograph showing a range of mountains under a cloudy sky. In the foreground, there is a field of tall, dry grasses. The text is overlaid on the upper portion of the image.

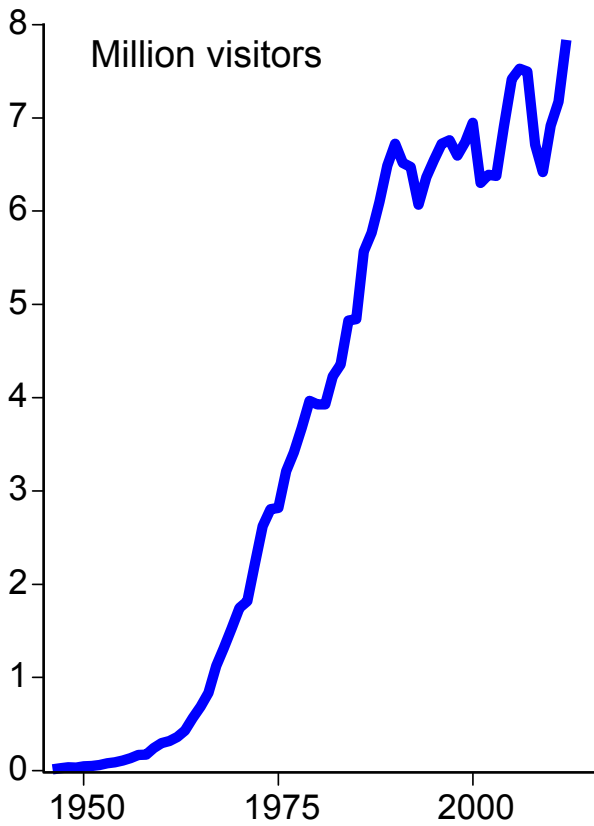
Appendix 2: Tourism has *not* grown since 1990

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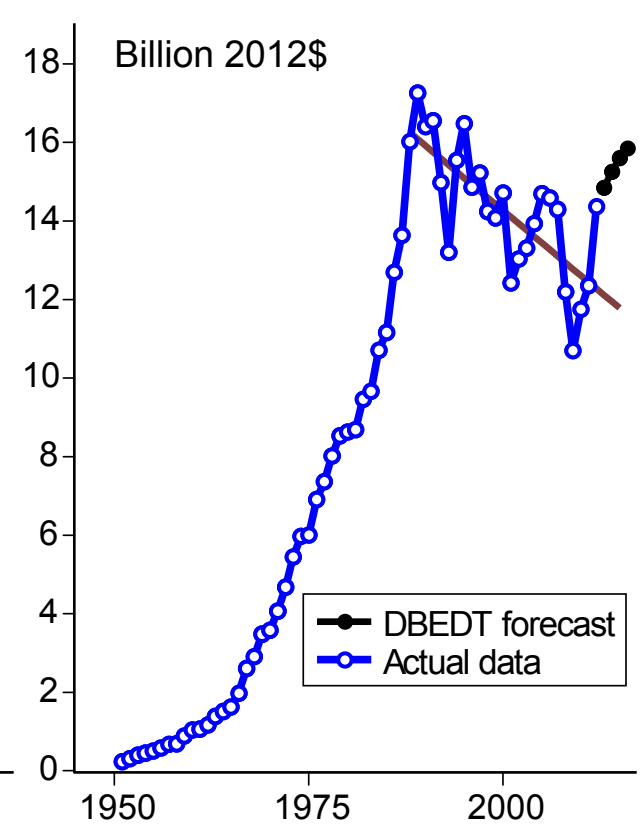
Tourism dilemma—higher volumes, *lower* receipts; binding constraint: 75k rooms (2012) vs. 73k (1992)



Tourist accommodations

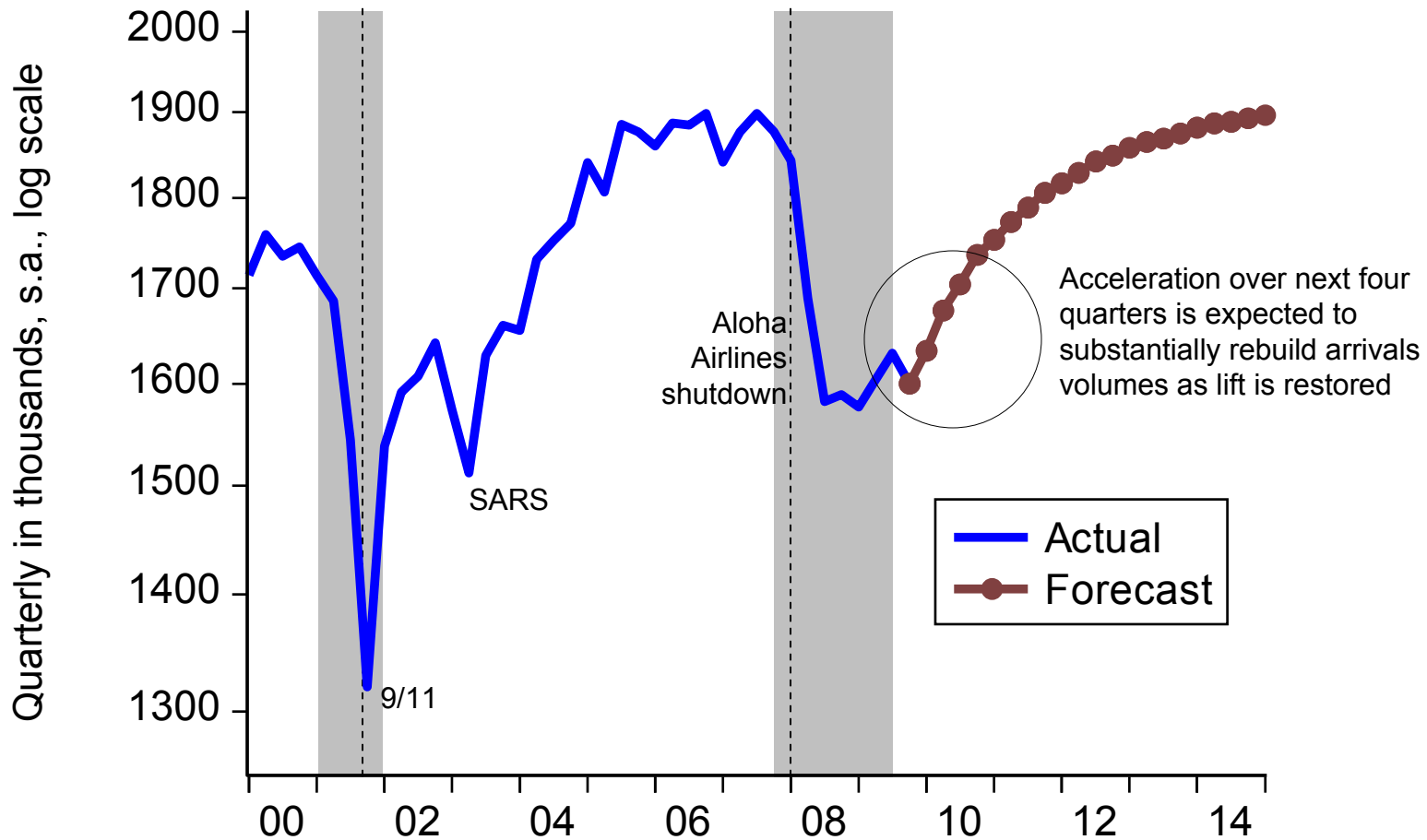


Tourist arrivals



Real tourism receipts

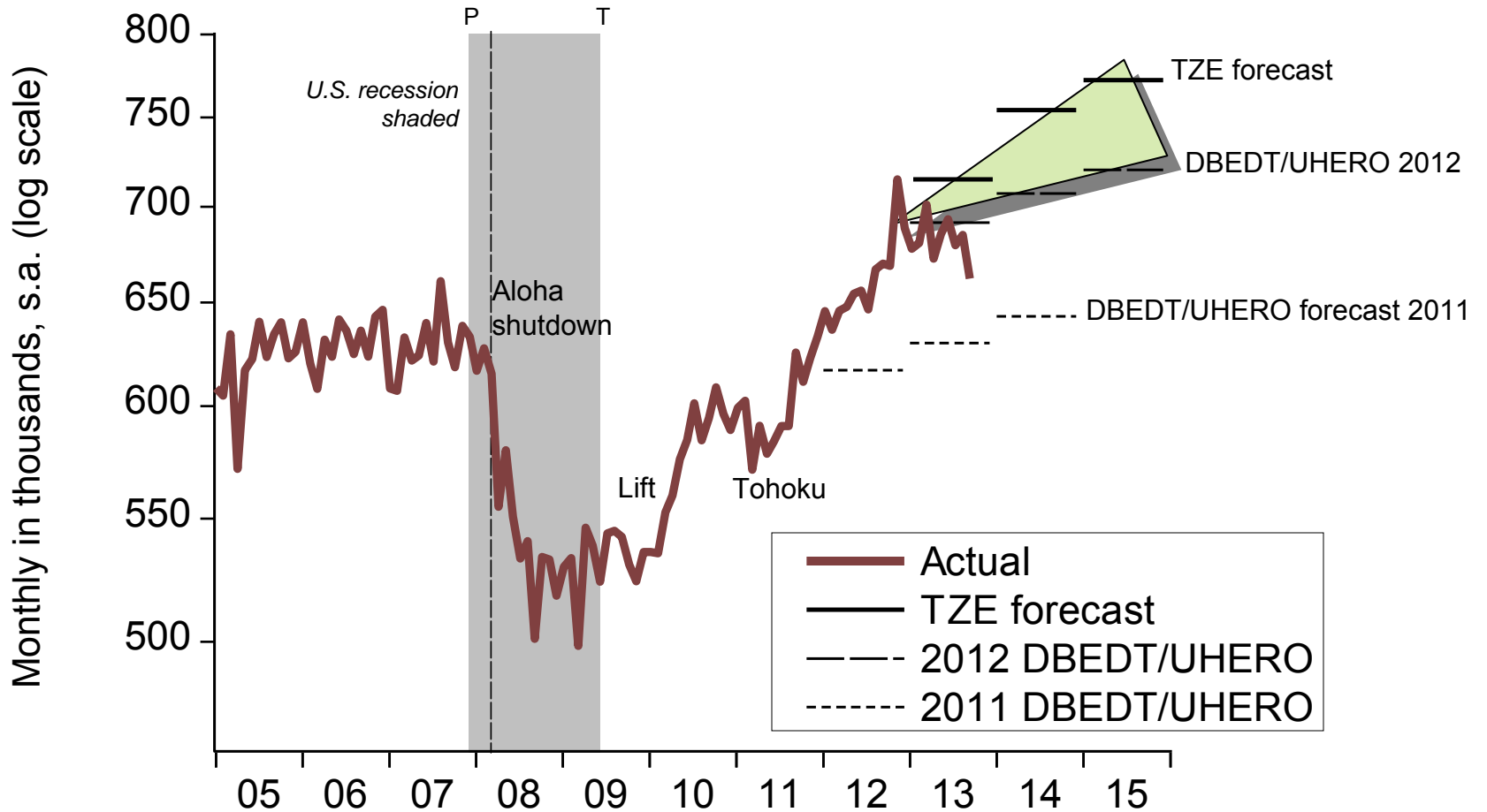
Older Hawaii tourism forecast (fall 2009): nobody believed it possible but visitor arrivals grew



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Source: Hawaii Tourism Authority, Hawaii DBEDT; seasonal adjustment and fall 2009 forecast by TZE (image modified slightly in 2013 to highlight Aloha Airlines shutdown instead of collapse of Lehman Brothers six months later)

2011 forecasts too low, 2012 too high (especially mine): failing to identify lodging capacity constraint



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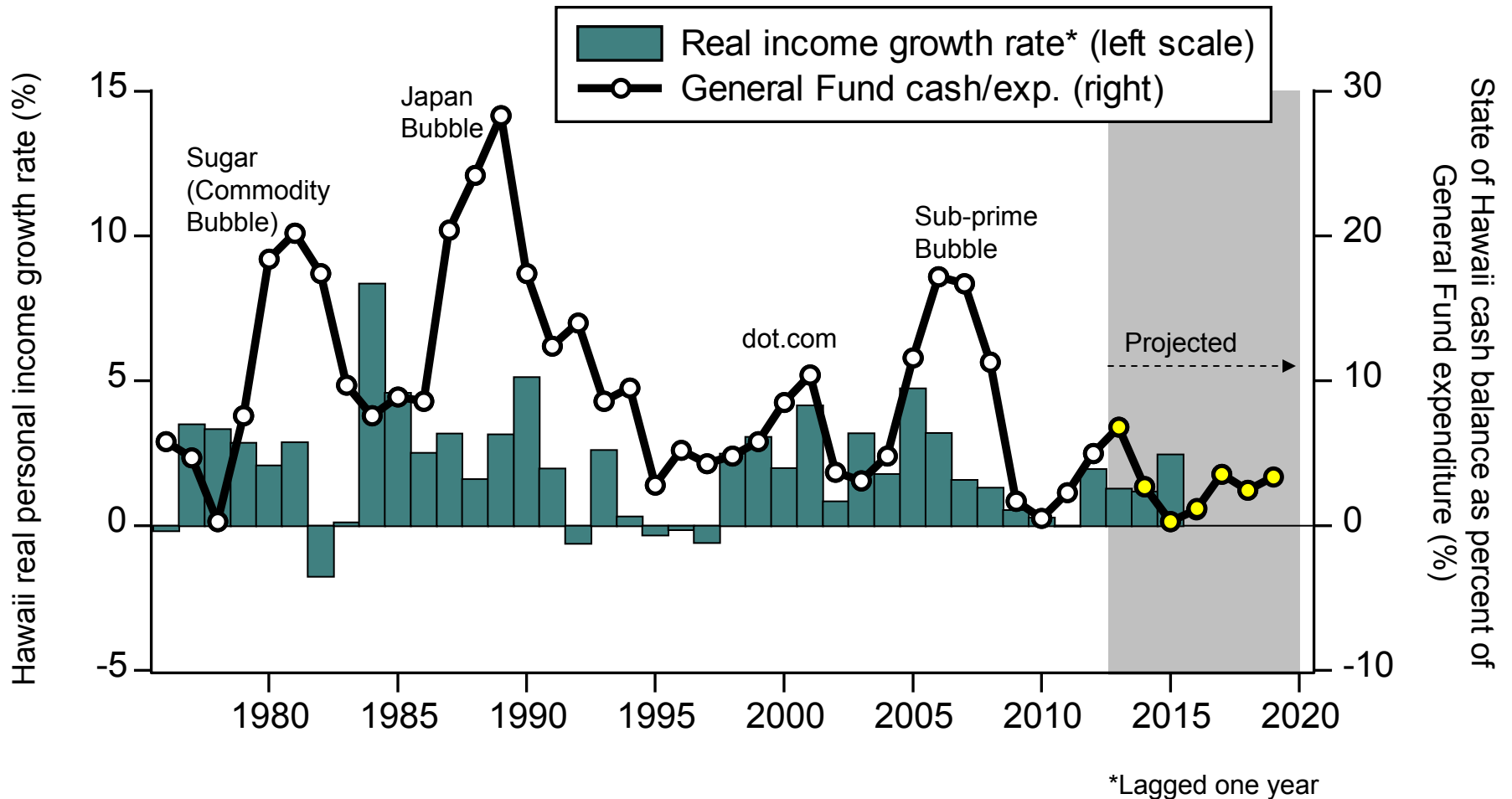
Source: Data through September 2013 from HTA, Hawaii DBEDT; forecasts from DBEDT and UHERO); seasonal adjustment (Census X-12 ARIMA filter) and forecast from trend components of tax revenue model for January 2013 HIPA conference by TZE



Appendix 3. State of Hawaii is *not* saving enough

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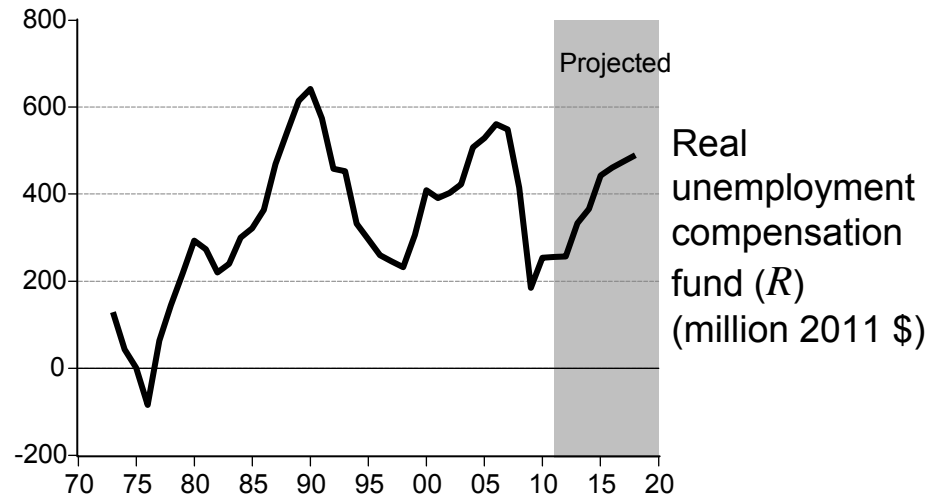
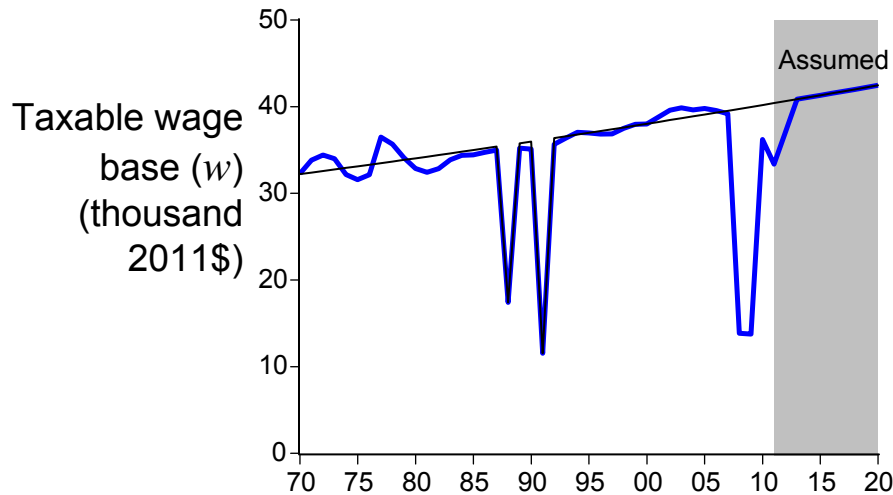
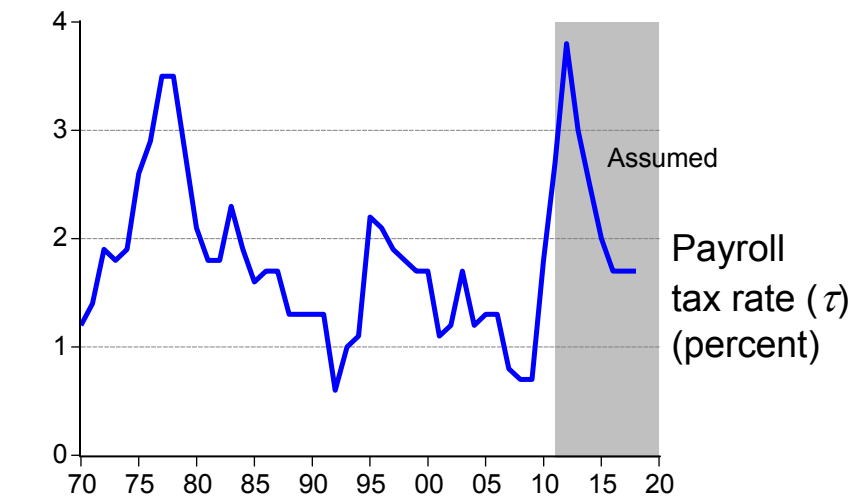
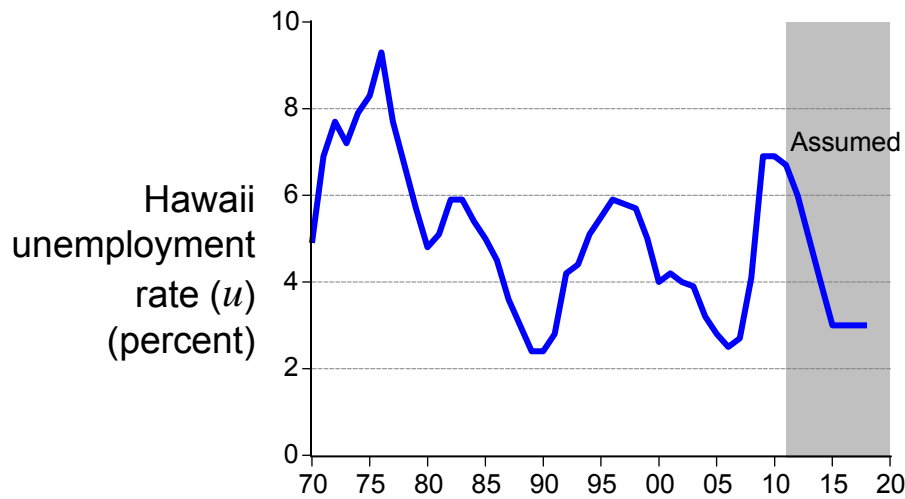
State cash balances historically provided deeper “insurance” coverage than during the last cycle



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Sources: BEA, BLS, Hawaii Tax Review Commission, Hawaii Dept. of B&F (December 17, 2012) (<http://budget.hawaii.gov/wp-content/uploads/2012/12/05.-State-Receipt-and-Revenue-Plans-FB13-15-PFP.pdf>), Hawaii DoTAX (http://www.state.hi.us/tax/cor/2013tpi10-31_with1104_Rpt2Gov.pdf)

Another fund: unemployment rate falls to 3%, wage base, tax rate revert to “normal”—adequate funding?



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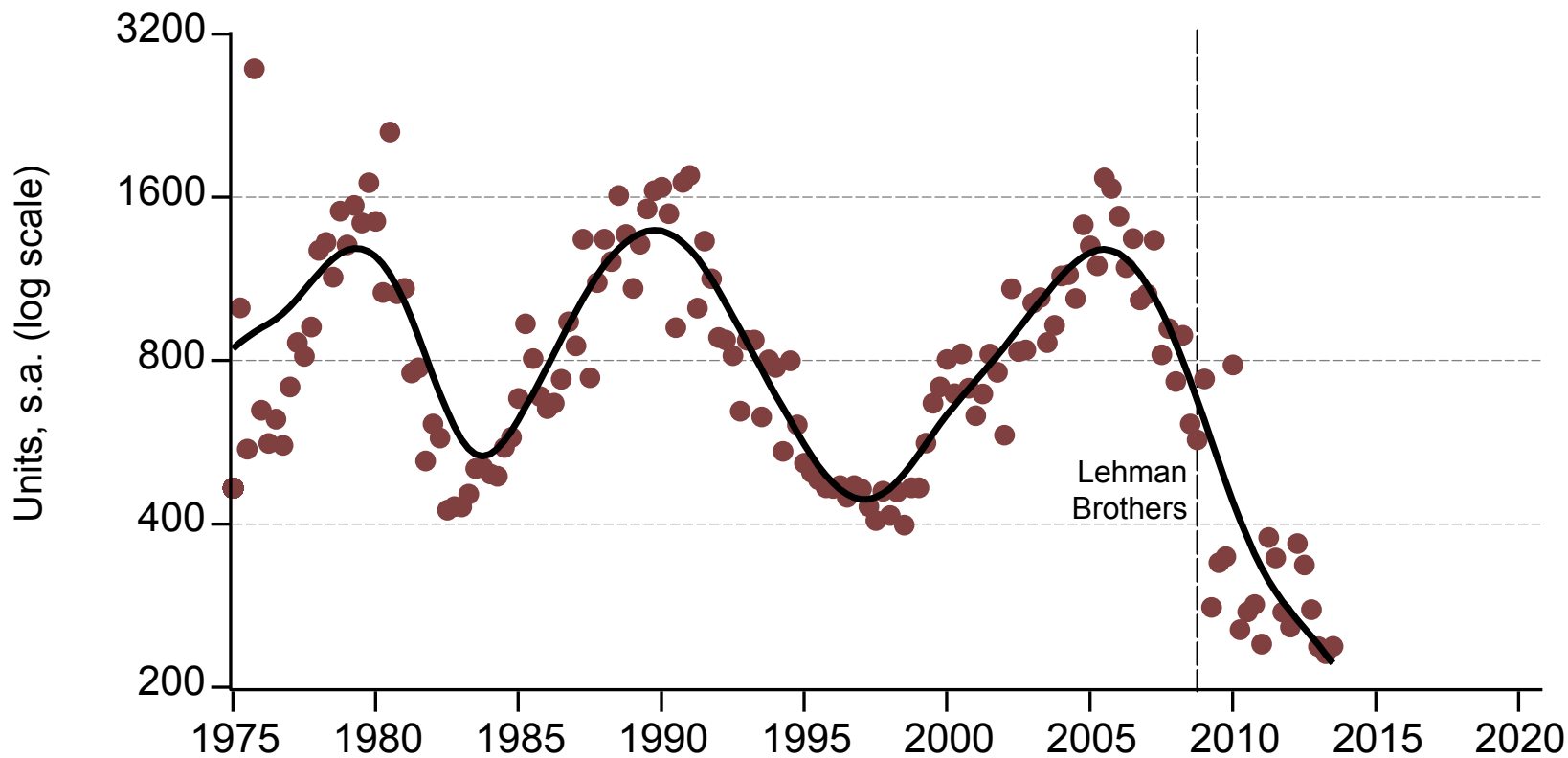
Source: Hawaii DLIR (special correspondence and <http://hawaii.gov/labor/reports/annual/2011-4/program/UTF%20FY2011.pdf>); deflation by TZE using Honolulu CPI-U; even aggressive restoration of funding parameters and a good economy may not rebuild the fund fast enough



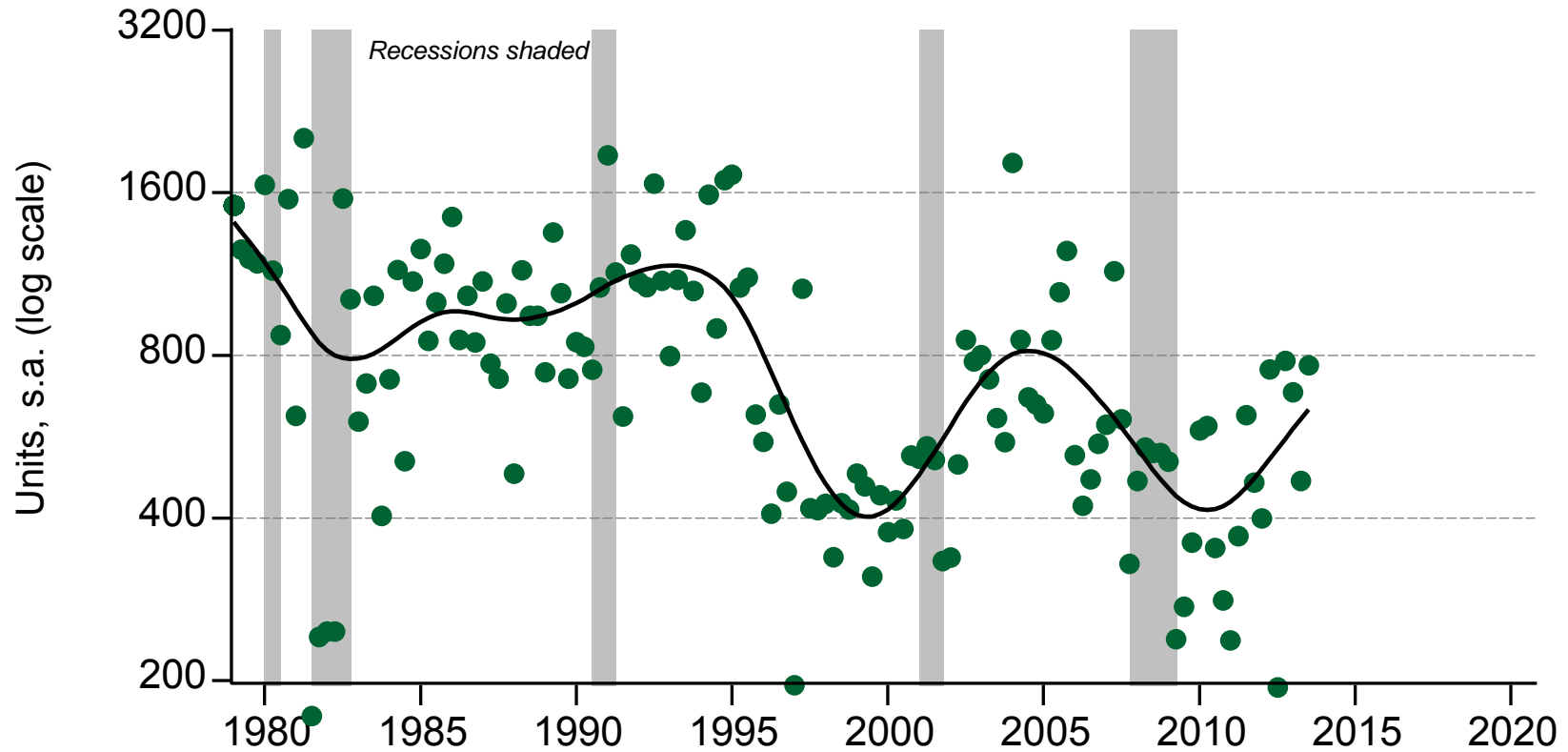
Appendix 4. Homebuilding really is *that* low

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Neighbor Island quarterly new housing units authorized by building permit: nothing but upside



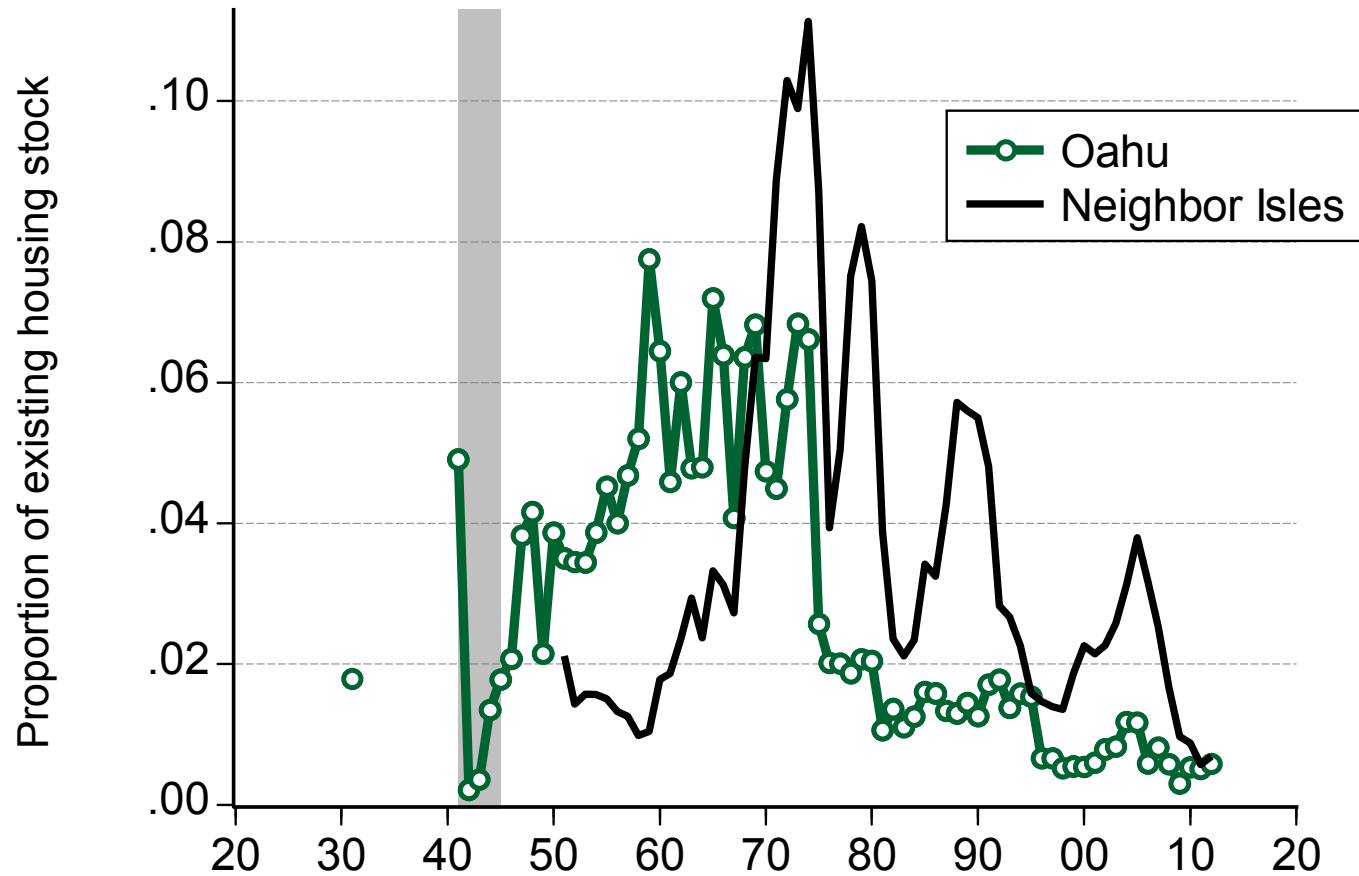
Oahu quarterly new housing units authorized by building permit: growth but fast enough?



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Sources: Honolulu City & County Department of Planning and Permitting, Hawaii DBEDT, quarterly TZE data through third quarter 2013; seasonal adjustment and trend extraction by TZE

New housing units as % of housing stock(-1)



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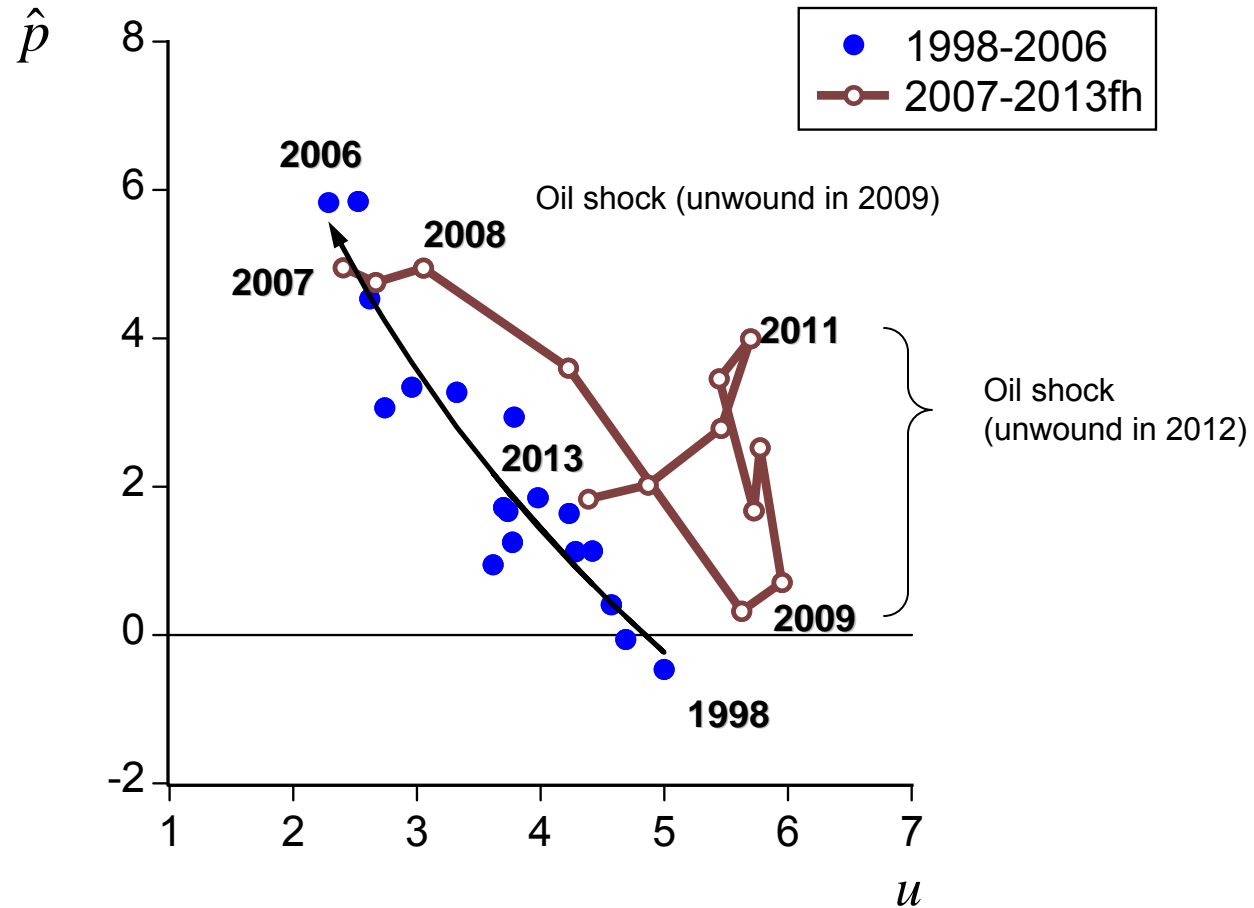
Sources: Robert C. Schmitt *Historical Statistics of Hawaii*, Hawaii DBEDT (http://dbedt.hawaii.gov/economic/county_report/), Bank of Hawaii *Annual Economic Report* (various); annual TZE data through 2012



Appendix 5: Honolulu Phillips Curves

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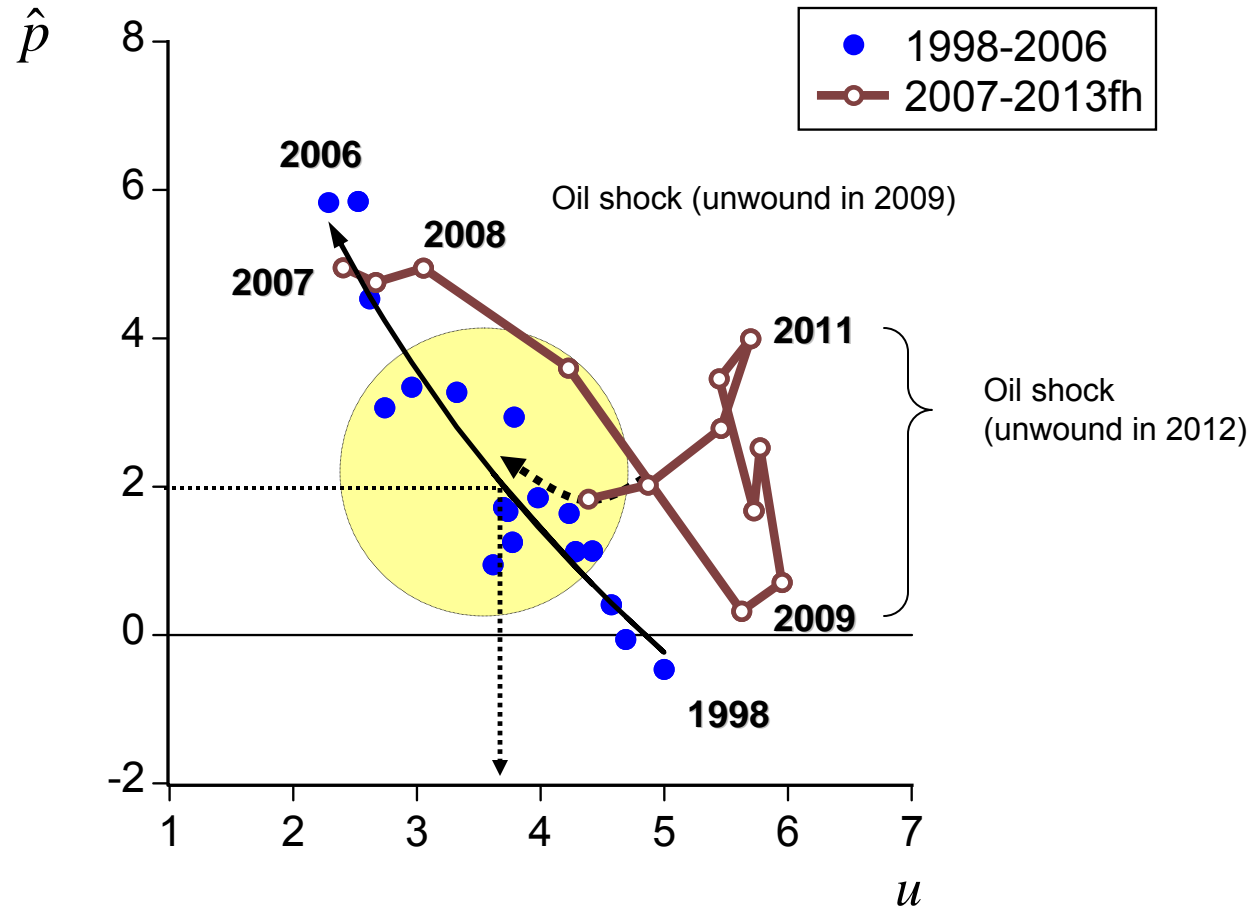
Honolulu inflation and unemployment since 2007: oil shocks (2008, 2010-11); into “The Zone” 2013



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Source: Bureau of Labor Statistics, U.S. Department of Labor, Hawaii DBEDT and DLIR; data through second half 2012, all calculations by TZE

Fed inflation goal (2%) defines LR equilibrium; Oahu housing cycle exerts “clockwise” tendency



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Source: Bureau of Labor Statistics, U.S. Department of Labor, Hawaii DBEDT and DLIR; data through second half 2012, all calculations by TZE