WESTERN ECONOMIC DEVELOPMENTS

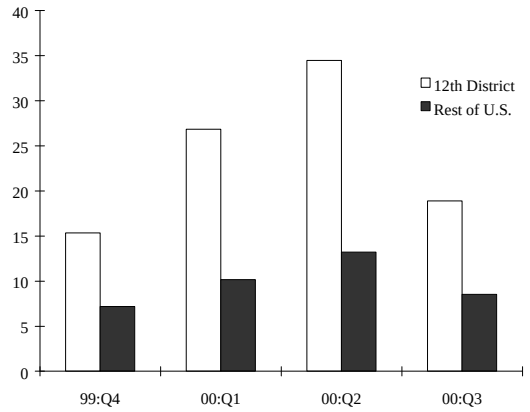
Slower growth shows through to income and spending

More moderate employment growth in the District and declines in the market value of high-tech stocks have begun to show through to personal income and spending. Data through the third quarter indicate slower growth in payroll withholding and other personal income tax and sales tax revenues in Twelfth Federal Reserve District states. Figure 1 shows the twelve month percent change in quarterly personal income tax revenues in the District, which include taxes paid on wages, salaries, and capital gains from exercised stock options. Among states with a personal income tax, tax revenues grew by 18.9 percent between the third quarter of 2000 and the same period a year earlier, down from the 34.5 percent increase in the second quarter.[1] Personal income tax revenue gains were largest in Arizona, California, and Idaho, and only Hawaii and Utah recorded revenue gains below the average for the rest of the nation.

As growth in personal incomes has slowed so has growth in consumer spending. Measured by increases in state sales tax receipts over the past twelve months, growth in consumer spending in the District slowed from nearly 12 percent in the second quarter to about 7.5 percent in the third quarter (Figure 2). The most rapid gains occurred in Arizona and California, where sales tax revenue increased by about 9½ percent in the third quarter of 2000 relative to the same period a year earlier.

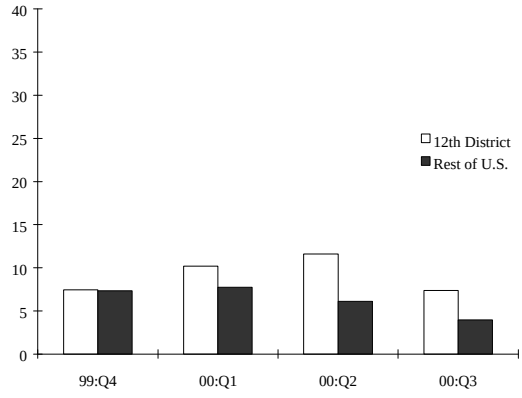
Retail sales data for the holiday shopping season point to a slower pace of consumer spending in the district. During the first 2½ weeks of the shopping season, year-over-year same store sales increased 3 percent in the West, down from a 3.8 percent pace last year.

Figure 1: **Personal income tax revenue**
(percent change over year earlier)



Source: The Nelson A. Rockefeller Institute of Government.

Figure 2: **Sales tax revenue**
(percent change over year earlier)



Source: The Nelson A. Rockefeller Institute of Government.

IN THIS ISSUE

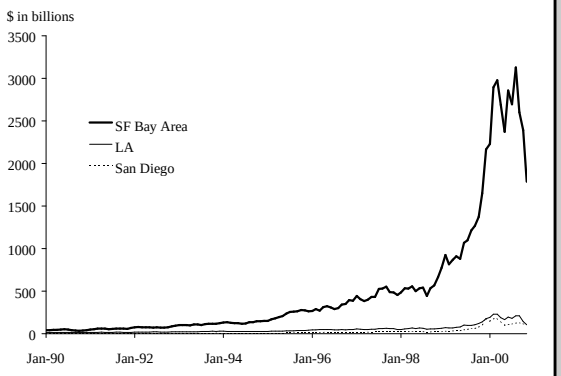
[1] Three District states—Alaska, Nevada, and Washington—do not have a personal income tax.

Market values decline for California high-tech firms

The market values of publicly traded high-tech firms in California have fallen sharply this year (Figure 3). Data through November show that, for publicly traded tech firms headquartered in the San Francisco Bay Area, market values have fallen by 40 percent since March, or by about $1.2 trillion. Southern California firms have experienced about the same percent decline in market values, although the absolute losses have been more modest—$125 billion in Los Angeles and $75 billion in San Diego.

Despite the noticeable decline since the spring of 2000, market valuations are still high relative to the mid-1990s. In the Bay Area, market capitalization has grown by 304 percent since January 1997. In Los Angeles and San Diego, the growth rates are 94 percent and 455 percent, respectively, over the same period.

Figure 3: Market values of high-tech firms headquartered in selected California metro areas



Source: Compustat.

What could slow the District expansion?

The national economic expansion has slowed in recent months. In the District, signs of moderation have been less pronounced. However, a number of factors, including more modest growth in high-tech manufacturing and rising energy costs may restrain the pace of expansion in the District in the coming year.

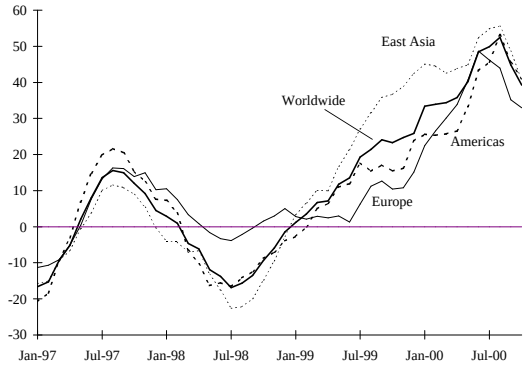
Slower growth in high-tech manufacturing

High-tech manufacturing employment in the District has increased rapidly in 2000, particularly among makers of electronic goods including semiconductors and communications devices.[2] However, recent revisions in earnings forecasts among major semiconductor makers, as well as slower sales of semiconductors and a sharp drop in the growth of new orders for electronic and other electrical goods suggest that some slowing in employment growth could occur in 2001.

Growth in monthly worldwide semiconductor sales has slowed in recent months (Figure 4). Year-over-year sales growth peaked in July—at 53 percent—and has fallen steadily since then. In October, year-over-year sales growth was 39 percent. The slowing in semiconductor sales growth has occurred across all regions.

National data on new orders and shipments of electronics and other electrical equipment including semiconductors also point to slower growth (Figure 5). Growth in the value of new orders slowed substantially in recent months. Relative to year-earlier values, new orders were up by just 8 percent in October 2000, well below the June peak of about 27 percent.[3] Moreover, since August, growth in the value of shipments has outpaced growth in the

Figure 4: Monthly semiconductor sales
(percent change over year earlier)

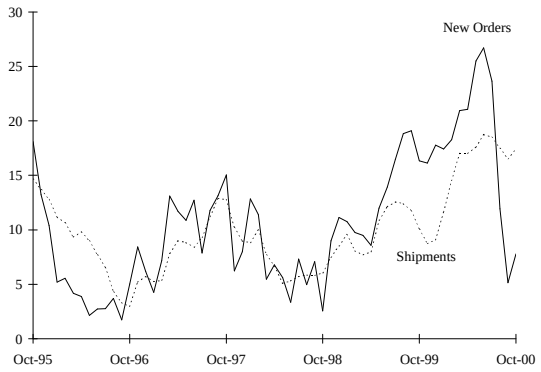


Underlying data are three-month moving averages
Source: Semiconductor Industry Association.

[2] Annualized employment growth during the first ten months of 2000 in electronics and other electrical equipment was 6.9% in Arizona, 3.4% in California, 10.3% in Oregon, and 5.9% in Washington. In contrast, employment among makers of computers and office equipment has declined this year.

[3] Although some of the slowing in the growth of the value of new orders may be due to price declines, the magnitude of the slowing suggests that falling prices are not the sole explanation.

Figure 5: **Electronic and other electrical goods**
(percent change over year earlier)



Underlying data are three-month moving averages.
Source: Bureau of the Census.

value of new orders, suggesting that shipment growth may slow in the near term. Finally, information from earnings announcements indicate a pickup in order cancellations for high-tech goods.

Energy costs increase

Rapidly rising energy costs have become a major concern in many Twelfth District states. Although energy prices have increased nationally, prices for natural gas and electricity have risen faster in District states than in the rest of the U.S. Ongoing demand and supply imbalances and associated price surges in energy markets could damp economic expansion in the District in the coming year.

Higher costs have begun to affect both producers and consumers. On the producer side, record-setting prices for natural gas and electricity have pushed a number of agricultural producers beyond profitability and induced some manufacturers to shut down. For manufacturers with forward contracts for energy, it is increasingly more profitable to resell this energy than to produce their products. On the consumer side, increases in natural gas prices have prompted major utilities in the District to warn customers that natural gas bills could increase 50 percent or more relative to last year. In California and the Pacific Northwest, a shortage of electricity during periods of peak demand has initiated public appeals for electricity conservation.

Rising prices for natural gas. In recent months prices for natural gas have risen steadily and are currently well above historical levels. While analysts predicted an increase in the price of natural gas during the peak-demand winter months, recent spikes have surpassed almost all forecasts. The recent surge in prices is the result of strong demand growth combined with limited increases in supply.

Robust demand for natural gas this winter owes to a number of short- and long-term factors including colder-than-normal temperatures in many areas, increased use of natural gas to fuel electricity generators, and ongoing economic expansion. Temperatures in the East, Midwest, and Pacific Northwest have been well below normal levels for November. At the same time, electricity deregulation and the general move toward cleaner burning fuels have resulted in considerable growth in natural gas fired electricity generation plants. Finally, rapid and continuous economic expansion has boosted demand for natural gas among both businesses and consumers.

While demand has been increasing, supplies of natural gas have remained relatively stable. Low prices for natural gas in 1998 and 1999 made operation of some existing well-heads unprofitable and discouraged exploration and new drilling. Prices currently are sufficient to attract new investment and production, but there is a considerable lag between licensing a site and bringing it online. As a result, natural gas supplies are not expected to be in balance with demand until sometime in 2002.

Higher natural gas prices in California. California has experienced some of the largest price increases in recent months. On average, the spot price for natural gas coming into California has been twice the price of gas at the Henry Hub, the benchmark natural gas trading center in the U.S. A number of factors have contributed to the relatively large increases in natural gas prices in California compared to other regions in the U.S. California imports about 85 percent of all the natural gas it consumes and competes with a number of areas which also have experienced rapidly growing demand for natural gas including Arizona, Nevada, Oregon, Idaho, Washington, and Mexico. California's use of natural gas for electricity generation has surpassed expectations and sent many generators to the spot market, driving up prices. Finally, part of the current supply and demand imbalance in natural gas markets in California owes to past and ongoing distributional problems related

to the El Paso Pipeline explosion. The main channel in that network was slow to come back online and, during the worst part of the crisis, California drew down reserve supplies from underground storage to allow neighboring states to gain supplies from the remaining pipelines. As a result, natural gas stocks in the state are below year-earlier and five-year average levels. In combination, these factors have pushed natural gas prices in California higher than prices in other regions of the U.S.

Western electricity markets. Turmoil in the electricity markets in the West has intensified. Pressures on wholesale prices for electricity in the West that mounted during the hot summer months were expected to ease with the coming of autumn. To the contrary, day-ahead wholesale electricity prices in November consistently were hitting the $250 per MWh cap. In addition, a series of electricity emergencies were called for California. On December 7, the California Independent System Operator (ISO) declared its first stage three alert as system reserves fell below 1.5 percent of the level required to maintain system reliability. Although rolling blackouts were avoided, under a stage three alert the ISO is authorized to curtail electricity to businesses and residents.

To attract additional electricity to California, the ISO "softened" the price cap in its real-time electricity market.[4] Immediately after the ISO began accepting bids in excess of the previous "hard cap" of $250 per MWh, additional generation became available to the ISO; electricity supplies increased by as much as 6,990 MW. The soft cap also had other effects. One was reduced forward trading in the California Power Exchange markets. The other was a jump in the average price in the day-ahead market for electricity.

In recent months, the supply of electricity generated in California has decreased. Both scheduled and forced capacity outages have increased significantly. For example, in October and November more than six times the amount of generation capacity was offline compared to the same period in 1999. Recent increases in the capacity that is offline are due, in part, to aging generation resources; more than 60 percent of capacity in the West is over 30 years old. Other factors have been limits on production as generators have hit pollution limits and the fact that some inefficient systems are uneconomical to operate at current levels of fuel costs.[5]

Net imports of electricity have declined in recent months, due both to decreasing imports and increasing exports. Below average hydro conditions have reduced the supply of electricity in the Pacific Northwest, while cold weather has boosted Washington and Oregon's electricity demand. In the first half of November, California's electricity imports declined by 15 percent—for electricity generated in California, exports have nearly doubled.

The gaping divide between wholesale and retail electricity prices has had an indirect effect on supply. Pacific Gas and Electric and Southern California Edison, in particular, have accumulated billions of dollars of so-called undercharges. Uncertainty over when and *how* the gap will be narrowed has led to some concern about the utilities' financial positions. As a result, several electricity generators in the Northwest tried to demand cash payments from the California ISO, which in effect buys electricity in the spot market on behalf of the utilities. This threat to the availability of electricity to California was temporarily avoided when the U.S. Energy Secretary used his emergency powers to force producers to sell to the California ISO.

[4] Currently, the ISO operates an Imbalance Energy Market. The purpose of this real-time market is to insure that adequate generation is online to meet load demand and provide grid reliability and security. While the California Power Exchange operates day-ahead, hour-ahead, and block-forward markets, the ISO real time markets must balance "underscheduled" generation and load that has not been sold/bought in the Power Exchange markets. Until December 8, the ISO had a $250 MWh price cap. However, the price cap was not binding when the ISO had to procure energy out-of-market, generally at higher costs, due to extensive underscheduling. On December 8, the ISO instituted a "soft" price cap, which would allow the ISO to accept real time bids above $250 per MWh from suppliers with verifiable costs exceeding $250 per MWh. Further, real-time costs will be allocated to discourage underscheduled loads.

[5] In Southern California, NOx pollution credits prices have increased. However, in response to California's emergency conditions, the South Coast Air Quality Management District permitted some generation to resume despite a lack of NOx credits.

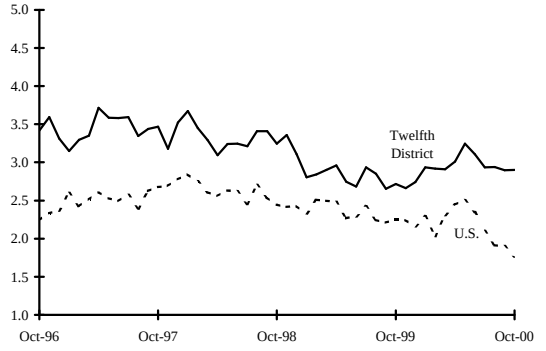
TWELFTH DISTRICT

Economic update

The pace of economic expansion in the Twelfth District continued to moderate in recent months, despite a pickup in growth in some states. Total nonagricultural employment increased 2.2 percent at an annual rate during the three months ending in October, down from the 2.5 percent pace of the third quarter and well off the 3 percent pace of the first half of the year. Employment growth in several states—notably Arizona, Hawaii, Idaho, and Oregon—slowed significantly in recent months. In contrast, employment growth in California and Utah accelerated, rising above already rapid trends. Overall, District employment growth remained sufficiently rapid to keep labor markets tight; the unemployment rate was 4.6 percent in October, the same rate recorded in September.

Despite slower employment growth in recent months, the gap between job growth in the District and the rest of the U.S. continues to grow. Over the past twelve months, the District economy has added jobs at a 2.9 percent pace, well above the 1.6 percent pace of the rest of the U.S. As of October, the District contained five of the ten fastest growing states in the nation—Nevada, Arizona, California, Idaho, and Utah. Moreover, over the past year, only one state—Oregon—expanded less quickly than the rest of the nation.

Nonagricultural payroll employment
(percent change over year earlier)



Merchandise exports by origin of movement

	Sep-00	Aug-00	Sep-99	% Change From Previous Month	% Change From Previous Year
District	121.1	106.9	109.3	13.3	10.8
Alaska	1.9	1.7	1.9	11.8	0.6
Arizona	9.8	8.7	8.1	12.1	20.4
California	73.0	64.0	61.3	14.0	19.0
Hawaii	0.2	0.2	0.2	15.4	43.6
Idaho	2.2	1.9	1.5	16.6	49.9
Nevada	0.7	0.6	0.6	18.2	15.8
Oregon	7.8	7.0	7.0	11.7	12.1
Utah	2.4	2.1	2.2	9.9	5.4
Washington	23.1	20.6	26.5	12.0	-12.9

Source: Bureau of the Census, FT900 Supplement.

Employment by state and by industry

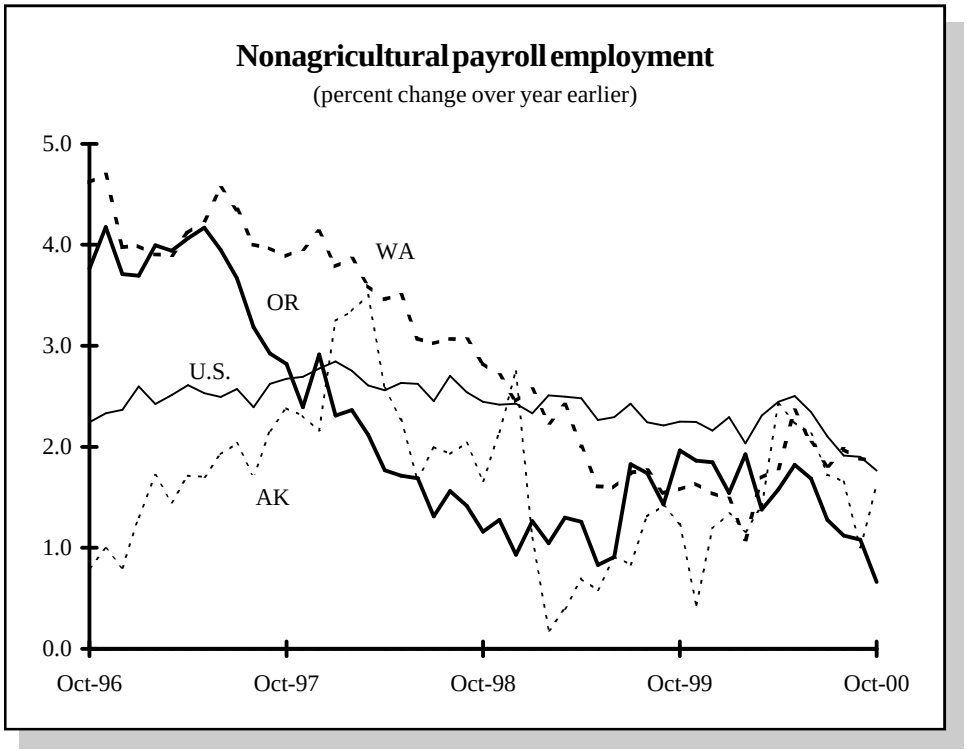
	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
By State					
District	24,624.1	24,573.7	23,933.1	2.5	2.9
Alaska	283.2	281.7	278.7	6.6	1.6
Arizona	2279.3	2274.3	2188.0	2.7	4.2
California	14529.5	14490.0	14083.9	3.3	3.2
Hawaii	546.3	550.5	537.1	-8.8	1.7
Idaho	561.9	564.0	547.9	-4.4	2.6
Nevada	1043.9	1040.9	1001.4	3.5	4.2
Oregon	1593.5	1593.0	1583.0	0.4	0.7
Utah	1083.6	1082.3	1059.4	1.5	2.3
Washington	2702.9	2697.0	2653.7	2.7	1.9
U.S.	131,800.0	131,723.0	129,523.0	0.7	1.8

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
By Industry					
Total	24624.1	24573.7	23933.1	2.5	2.9
Mining	68.6	69.3	69.5	-11.5	-1.3
Construction	1411.3	1405.1	1329.1	5.4	6.2
Manufacturing	3011.1	3010.9	3016.6	0.1	-0.2
T.C.P.U.	1301.1	1294.6	1257.8	6.2	3.4
Trade	5680.9	5670.1	5543.9	2.3	2.5
F.I.R.E.	1394.7	1390.7	1374.5	3.5	1.5
Services	7718.1	7693.0	7414.3	4.0	4.1
Government	4038.3	4040.0	3927.4	-0.5	2.8

Seasonally adjusted payroll unemployment data

ALASKA, OREGON, AND WASHINGTON

EMPLOYMENT



Employment by industry and unemployment rates

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Alaska					
Total	283.2	281.7	278.7	6.6	1.6
Mining	9.7	9.7	9.0	0.0	7.8
Construction	14.0	13.9	13.7	9.0	2.2
Manufacturing	14.1	13.4	14.6	84.2	-3.4
T.C.P.U.	27.0	26.7	26.5	14.3	1.9
Trade	57.8	57.9	57.3	-2.1	0.9
F.I.R.E.	12.7	12.6	12.8	10.0	-0.8
Services	73.4	73.1	71.0	5.0	3.4
Government	74.5	74.4	73.8	1.6	0.9
Oregon					
Total	1593.5	1593.0	1583.0	0.4	0.7
Mining	1.7	1.8	1.8	-49.6	-5.6
Construction	88.7	87.4	83.5	19.4	6.2
Manufacturing	241.1	241.8	240.2	-3.4	0.4
T.C.P.U.	80.3	80.0	78.7	4.6	2.0
Trade	389.4	390.5	390.3	-3.3	-0.2
F.I.R.E.	95.3	95.4	95.5	-1.3	-0.2
Services	437.5	435.8	432.0	4.8	1.3
Government	259.5	260.3	261.0	-3.6	-0.6

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Washington					
Total	2702.9	2697.0	2653.7	2.7	1.9
Mining	3.2	3.2	3.3	0.0	-3.0
Construction	166.0	164.9	155.9	8.3	6.5
Manufacturing	348.3	349.9	357.2	-5.4	-2.5
T.C.P.U.	143.6	142.0	140.5	14.4	2.2
Trade	649.9	649.3	640.1	1.1	1.5
F.I.R.E.	140.4	139.8	138.5	5.3	1.4
Services	769.5	767.4	743.7	3.3	3.5
Government	482.0	480.5	474.5	3.8	1.6

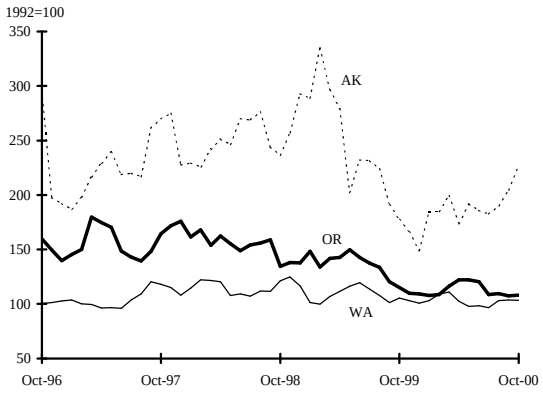
Unemployment Rates (%)

	Oct-00	Sep-00	Aug-00	Oct-99	Sep-99
Alaska	6.0	6.3	5.8	6.0	6.2
Oregon	5.4	5.1	5.3	5.4	5.7
Washington	4.7	4.7	5.1	4.5	4.6
U.S.	3.9	3.9	4.1	4.1	4.2

Unemployment rates are from the household employment survey; all other data are for nonagricultural payroll employment.
All data are seasonally adjusted.

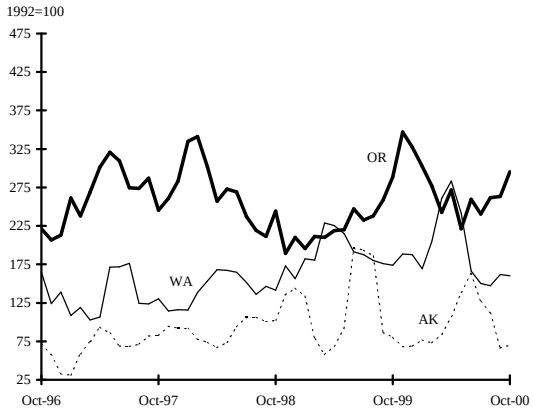
CONSTRUCTION AND REAL ESTATE

Residential construction permits



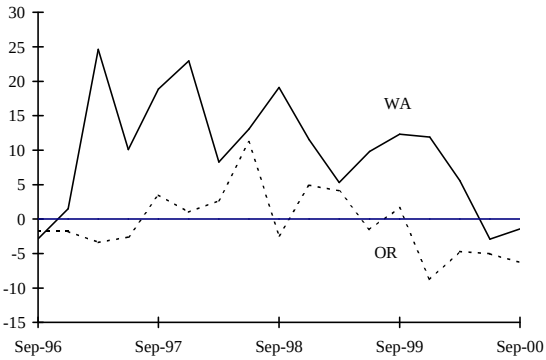
Data are seasonally adjusted three-month moving averages

Non-residential construction awards



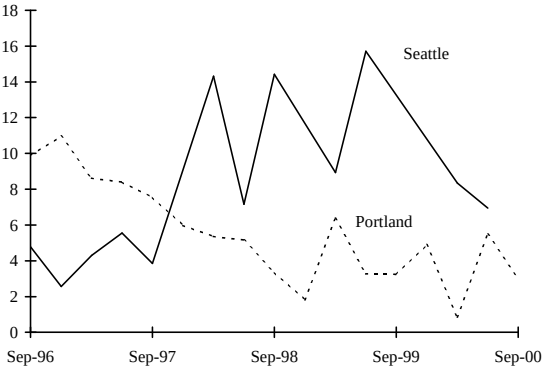
Data are seasonally adjusted three-month moving averages

Sales of existing homes
(percent change over year earlier)



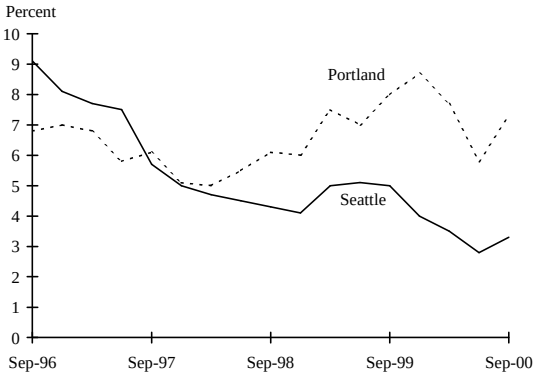
Source: National Association of Realtors.

Median home price appreciation
(percent change over year earlier)



Source: National Association of Realtors.

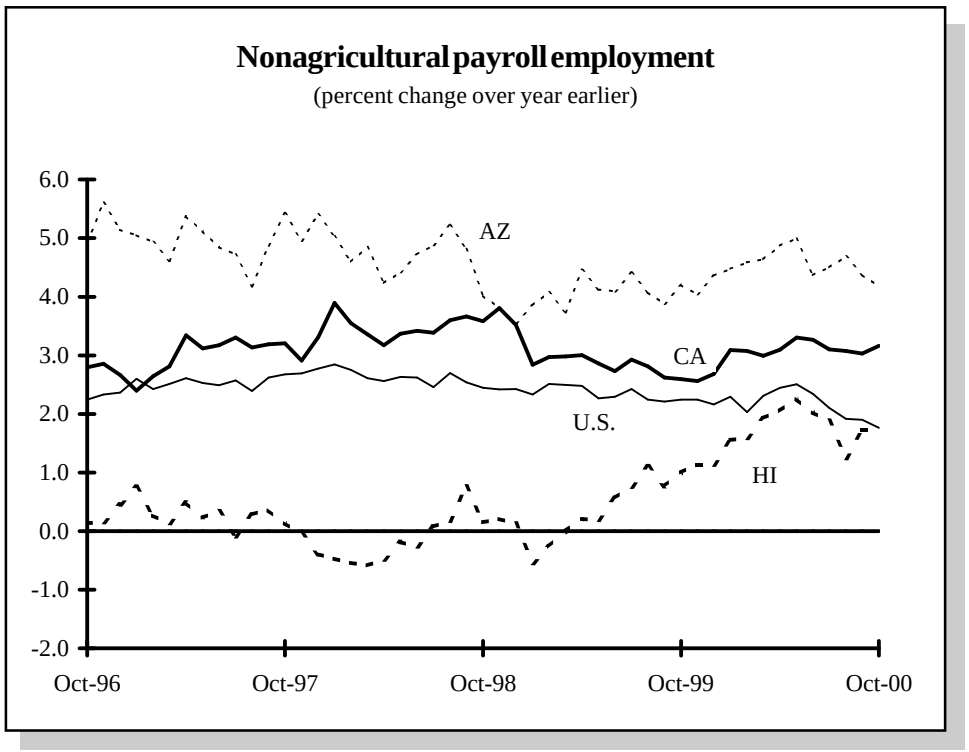
Metro area office vacancy rates



Source: CB Richard Ellis.

ARIZONA, CALIFORNIA, AND HAWAII

EMPLOYMENT



Employment by industry and unemployment rates

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Arizona					
Total	2279.3	2274.3	2188.0	2.7	4.2
Mining	10.0	10.2	10.1	-21.2	-1.0
Construction	162.2	160.3	157.5	15.2	3.0
Manufacturing	216.5	216.5	212.1	0.0	2.1
T.C.P.U.	110.7	109.8	105.6	10.3	4.8
Trade	534.0	534.3	517.7	-0.7	3.1
F.I.R.E.	148.2	146.9	142.1	11.2	4.3
Services	731.1	730.4	692.0	1.2	5.7
Government	366.6	365.9	350.9	2.3	4.5
California					
Total	14529.5	14490.0	14083.9	3.3	3.2
Mining	22.8	23.1	23.4	-14.5	-2.6
Construction	751.4	749.1	695.4	3.7	8.1
Manufacturing	1922.1	1920.0	1923.7	1.3	-0.1
T.C.P.U.	753.2	750.2	725.6	4.9	3.8
Trade	3298.7	3290.6	3210.5	3.0	2.7
F.I.R.E.	837.7	836.2	825.4	2.2	1.5
Services	4619.7	4599.3	4432.0	5.5	4.2
Government	2323.9	2321.5	2247.9	1.2	3.4

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Hawaii					
Total	546.3	550.5	537.1	-8.8	1.7
Mining	.	.	.	.	.
Construction	23.5	23.5	21.5	0.0	9.3
Manufacturing	16.8	16.8	16.6	0.0	1.2
T.C.P.U.	41.6	41.8	41.2	-5.6	1.0
Trade	135.4	134.8	133.6	5.5	1.3
F.I.R.E.	34.4	34.3	34.9	3.6	-1.4
Services	179.3	179.8	175.2	-3.3	2.3
Government	115.3	119.5	114.1	-34.9	1.1

Unemployment Rates (%)

	Oct-00	Sep-00	Aug-00	Oct-99	Sep-99
Arizona	3.7	3.5	3.9	4.3	4.3
Hawaii	3.9	4.4	4.3	5.3	5.3
California	4.7	4.8	5.1	5.0	5.0
U.S.	3.9	3.9	4.1	4.1	4.2

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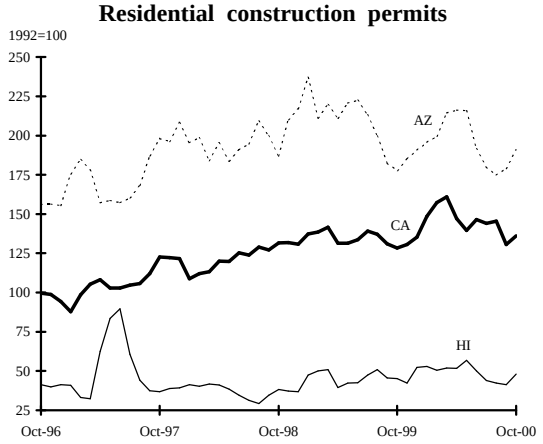
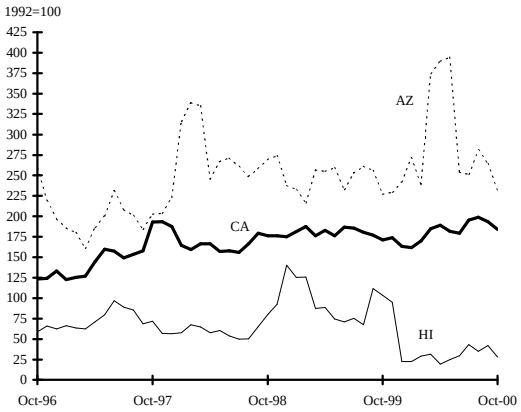
CONSTRUCTION AND REAL ESTATE

Residential construction permits



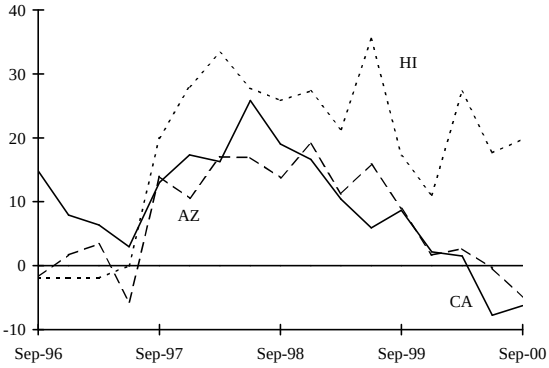
Data are seasonally adjusted three-month moving averages

Non-residential construction awards



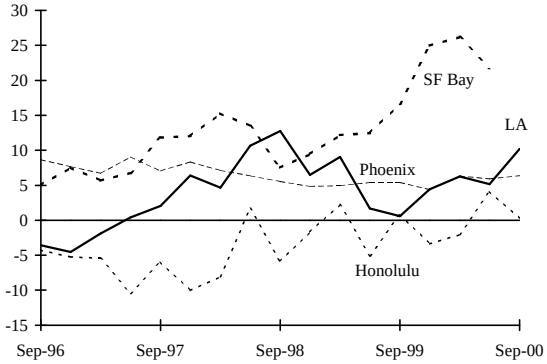
Data are seasonally adjusted three-month moving averages

Sales of existing homes
(percent change over year earlier)



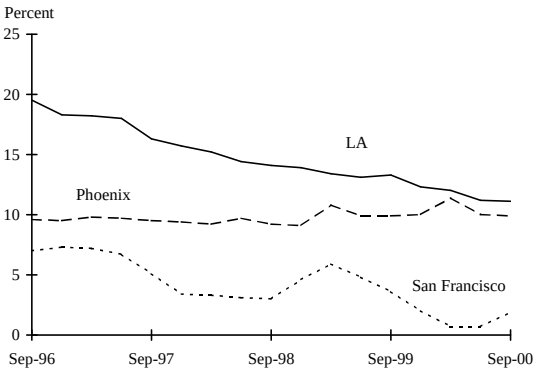
Source: National Association of Realtors.

Median home price appreciation
(percent change over year earlier)



Source: National Association of Realtors.

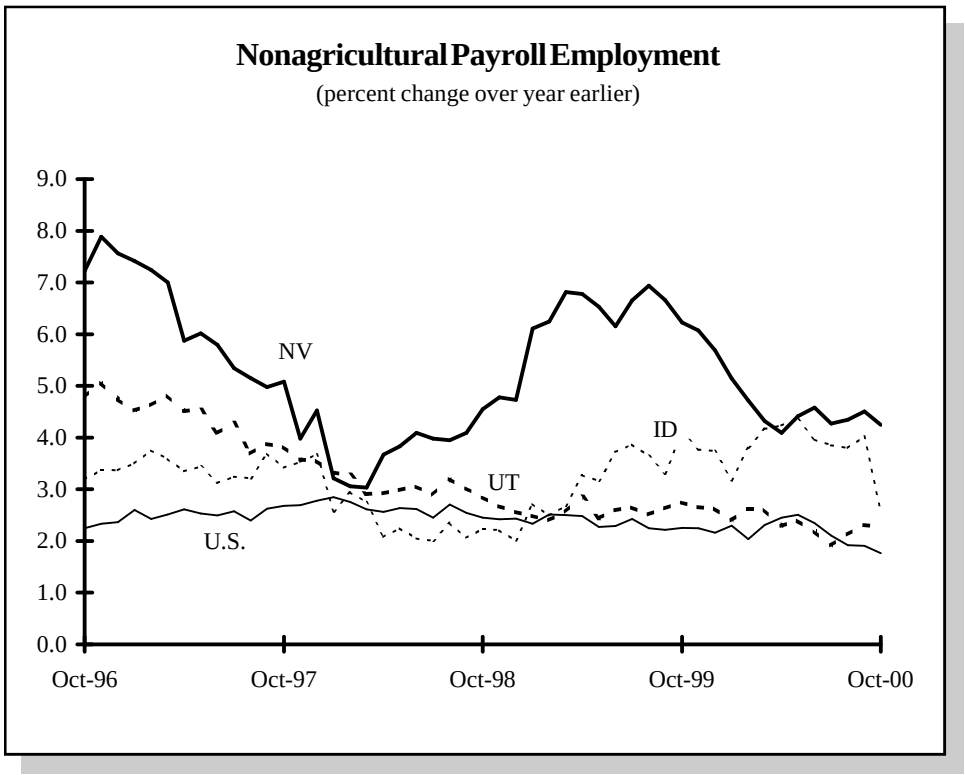
Metro area office vacancy rates



Source: CB Richard Ellis.

IDAHO, NEVADA, AND UTAH

EMPLOYMENT



Employment by industry and unemployment rates

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Idaho					
Total	561.9	564.0	547.9	-4.4	2.6
Mining	2.5	2.5	2.6	0.0	-3.8
Construction	38.8	39.1	36.7	-8.8	5.7
Manufacturing	74.8	75.3	76.9	-7.7	-2.7
T.C.P.U.	27.7	27.8	27.1	-4.2	2.2
Trade	142.5	141.8	137.8	6.1	3.4
F.I.R.E.	23.6	23.5	23.6	5.2	0.0
Services	142.9	144.6	135.8	-13.2	5.2
Government	109.1	109.4	107.4	-3.2	1.6
Nevada					
Total	1043.9	1040.9	1001.4	3.5	4.2
Mining	11.0	11.1	11.5	-10.3	-4.3
Construction	92.3	92.1	90.5	2.6	2.0
Manufacturing	44.4	44.2	42.5	5.6	4.5
T.C.P.U.	55.8	55.2	52.3	13.9	6.7
Trade	218.4	216.7	206.2	9.8	5.9
F.I.R.E.	45.3	45.0	44.4	8.3	2.0
Services	453.9	454.7	435.2	-2.1	4.3
Government	122.8	121.9	118.8	9.2	3.4

	Number Employed (thousands)			Annualized % Change From Previous Month	% Change From Previous Year
	Oct-00	Sep-00	Oct-99		
Utah					
Total	1083.6	1082.3	1059.4	1.5	2.3
Mining	7.7	7.7	7.8	0.0	-1.3
Construction	74.4	74.8	74.4	-6.2	0.0
Manufacturing	133.0	133.0	132.8	0.0	0.2
T.C.P.U.	61.2	61.1	60.3	2.0	1.5
Trade	254.8	254.2	250.4	2.9	1.8
F.I.R.E.	57.1	57.0	57.3	2.1	-0.3
Services	310.8	307.9	297.4	11.9	4.5
Government	184.6	186.6	179.0	-12.1	3.1

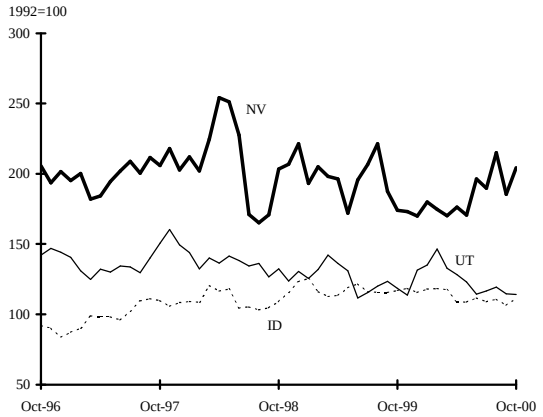
Unemployment Rates (%)

	Oct-00	Sep-00	Aug-00	Oct-99	Sep-99
Idaho	4.7	4.6	4.5	4.8	5.0
Nevada	4.2	4.0	3.8	4.5	4.6
Utah	3.1	3.0	3.1	3.3	3.5
U.S.	3.9	3.9	4.1	4.1	4.2

Unemployment rates are from the household employment survey; all other data are for nonagricultural payroll employment.
All data are seasonally adjusted.

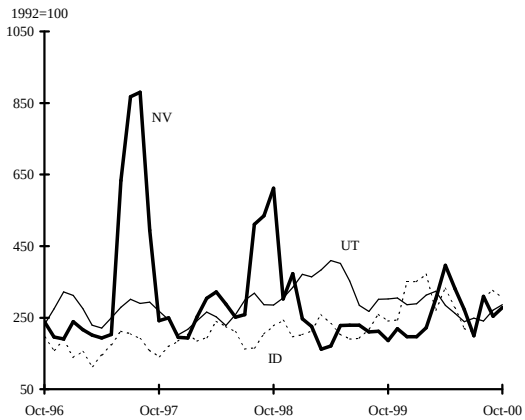
CONSTRUCTION AND REAL ESTATE

Residential construction permits



Data are seasonally adjusted three-month moving averages

Non-residential construction awards



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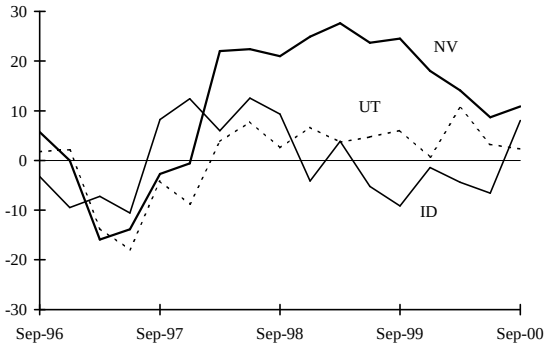
Sales of existing homes
(percent change over year earlier)



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Median home price appreciation
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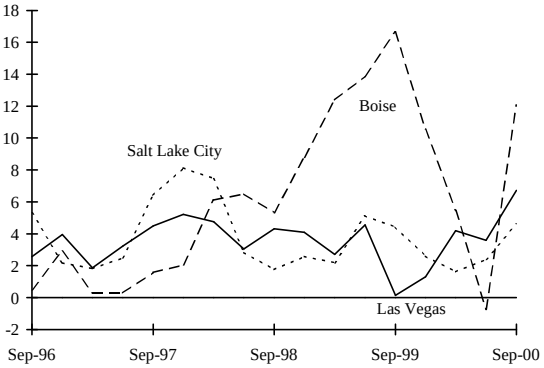

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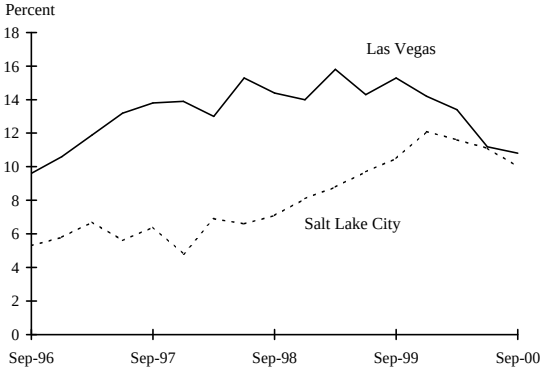
Metro area office vacancy rates



Source: CB Richard Ellis.

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