



# Preparing for Economic Recovery in Sonoma County

*Prepared for:*

**Annual Economic Briefing**  
**Sonoma County Economic Development Board**  
May 29, 2003

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## Preparing for Economic Recovery in Sonoma County

### Executive Summary

The U.S. economy was hit hard earlier this year by the war in Iraq, but the economy is expected to quickly stabilize in the wake of the quick victory. Confidence is improving and energy prices are falling.

The economy is poised to rebound as the principal excesses of the 1990s are worked off. The economy will receive near-term support from more federal fiscal stimulus and ample household cash flow. The economy will receive longer-term support from resilient productivity gains and a weaker dollar.

The pace of economic rebound, however, will be constrained by persistent geopolitical concerns, a weak global economy, spent-up housing and vehicle demand, highly leveraged households, and state government cutbacks.

Sonoma County's economy still suffers recession conditions. Employment has taken a turn for the worse since the beginning of this year and layoffs continue in the area's high-tech manufacturing industries. Wineries and vineyards also contribute to the weakness due to expanded global supply and downward pressure on prices. The travel and tourism industry, however, provides some stability and services such as healthcare and education continue to expand. The weak economy has caused population growth to come nearly to a halt.

Conditions are beginning to emerge for economic recovery in the county, but it will come gradually. Most importantly, productivity is beginning to rise once again after faltering in 2001. House prices appreciation continues to be positive and household balance sheets appear to be in good order as indicated by a low and stable rate of personal bankruptcy filings.

Early prospects for recovery lie in the area's hospitality industry. This is one of the few facets of personal consumption nationwide where some pent-up demand exists. With confidence rising once again, households are poised to make more extensive travel plans. The county's small but growing information technology industry will also contribute to near-term growth as demand is strong as businesses seek to gain the most from their current computer hardware. Professional services should also fare well as firms outsource work as part of cost-cutting efforts.

Sonoma's high value-added manufacturing and agriculture/food/wine industries will see more prolonged weakness in demand and pricing and will not begin to turn the corner until next year. A falling dollar will provide some support for these industries that depend upon international as well as local markets, but a weak global economy will delay the full impact of the changing terms of trade. Retailing also faces a moderate pace of growth in the near term due to pricing competition and flat consumer demand.

Employment growth will not become apparent until the end of this year, although when it does, it will quickly outpace the national average. Early growth of the rather labor intensive travel and tourism industry will contribute to this trend. Gross regional output growth will be average at best until the higher-value-added technology and winemaking industries see stronger demand in 2005.

To take advantage of improving macroeconomic conditions, nearly all local industries must focus on productivity, pricing, and innovation. Rising productivity will be necessary to compete longer term both domestically and with ever more sophisticated foreign competitors. Pricing will be a key issue as there will be little inflation to speak of and strong resistance in all markets for paying higher prices. Innovation, always a key consideration, will be particularly important as venture capital investors become more cautious and as technology markets limit capital investment to factors that will clearly lead to their own productivity gains.



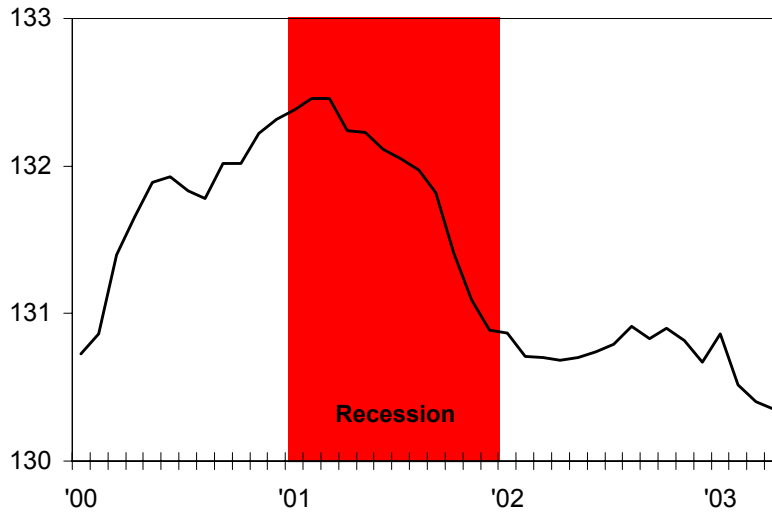
## Preparing for Economic Recovery in Sonoma County

### The Macroeconomic Environment

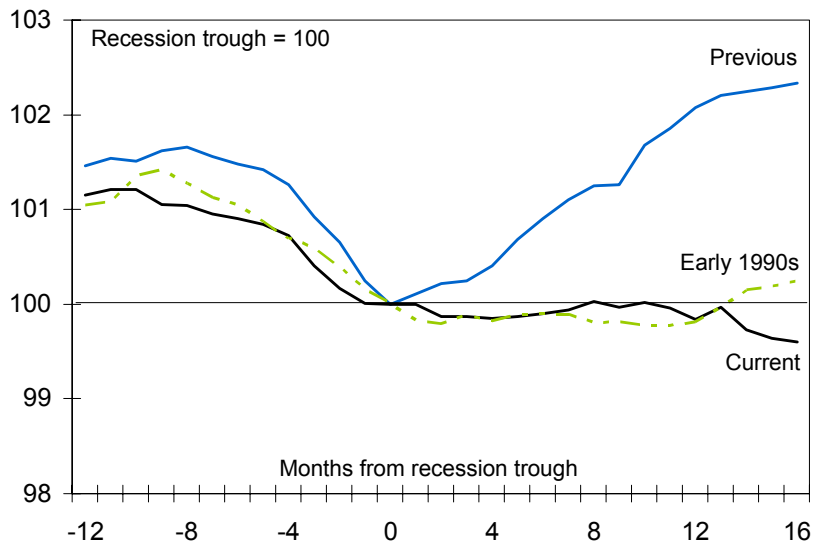
**Recent performance.** The economy continues to struggle. During the past half year, real GDP growth has advanced at an annualized rate of only 1.5%, less than half the economy's growth potential.

The job market remains under substantial pressure, with payrolls down by well over two million jobs since peaking two years ago. The severity of the job losses is now on par with that experienced during the early 1990s' recession (see Chart 1).

**Chart 1: Struggling Economy, U.S. employment, mil.**



**Chart 2: Worse Than The Jobless Recovery, U.S. employment**



The job market's current difficulties are at least as broad based as those of a decade ago. Employment is still falling across a wide range of industries, from apparel manufacturing to state government, and across many regions, from Boston to the Bay Area of California.

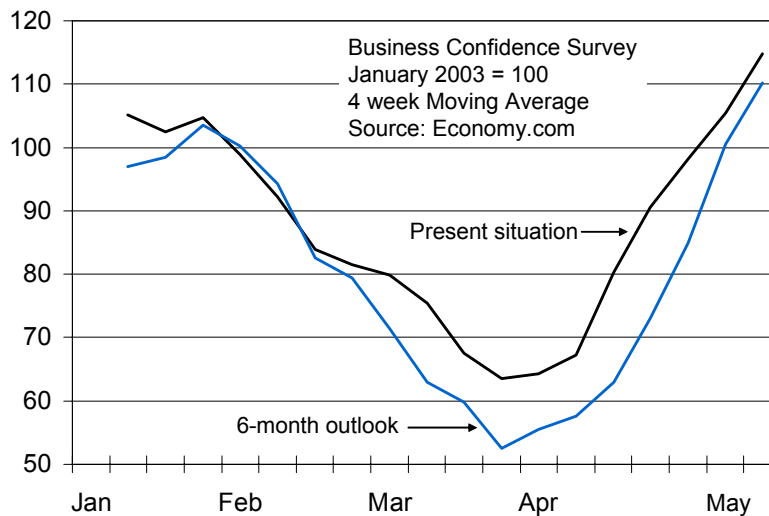
The slump in the job market is now particularly prolonged. Employment was already rising measurably at this point in the early 1990s' business cycle (see Chart 2). Moreover, there is no indication that the current job losses will soon abate. Leading indicators of full-time hiring, including initial claims for unemployment insurance, help-wanted advertising, hours worked, and temp hiring, all remain weak.

**Post-war revival.** While the current statistics are undeniably poor, there are reasons to be optimistic that conditions will quickly improve. Investor, business and consumer confidence has rallied in the wake of the Iraq war. While gauges of confidence provide little insight into actual investment and spending decisions in more normal times, they are particularly useful guides at economic turning points.

Stock prices are up some 15% from their mid-March nadir, with the largest price gains occurring in stocks of technology and cyclically sensitive companies. Corporate bond yields have also narrowed considerably relative to Treasury yields, as investors have grown less concerned over corporate credit risk. The junk bond market has experienced an especially strong rally in recent weeks.

Business confidence is also rebounding. According to Economy.com's business confidence index, sentiment has more than doubled since its low point in mid-March, and it is now above where it was at the start of the year (see Chart 3). Respondents across all industries are more upbeat both regarding current economic conditions and the economy's prospects six months hence.

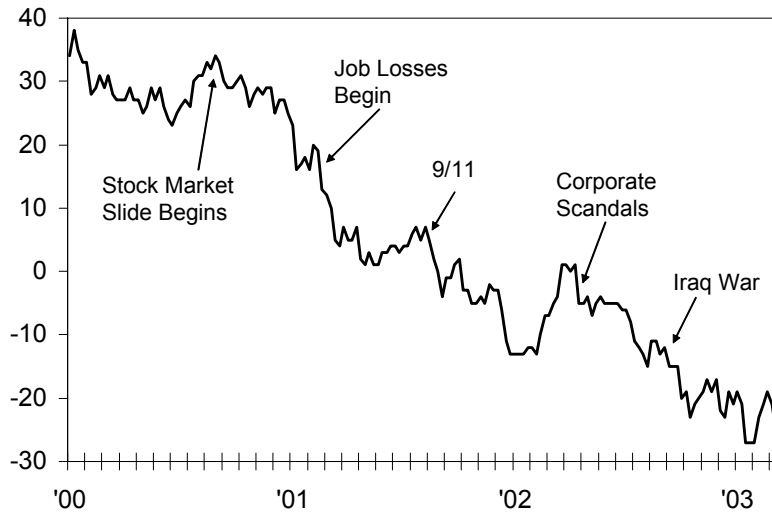
**Chart 3: Business Confidence Rebounds**



Consumers are also feeling better. The ABC/Money Magazine, Conference Board, and University of Michigan surveys all indicate that consumer attitudes have revived since the end of the war. While confidence remains fragile, it is decidedly better than it was just one month ago (see Chart 4).

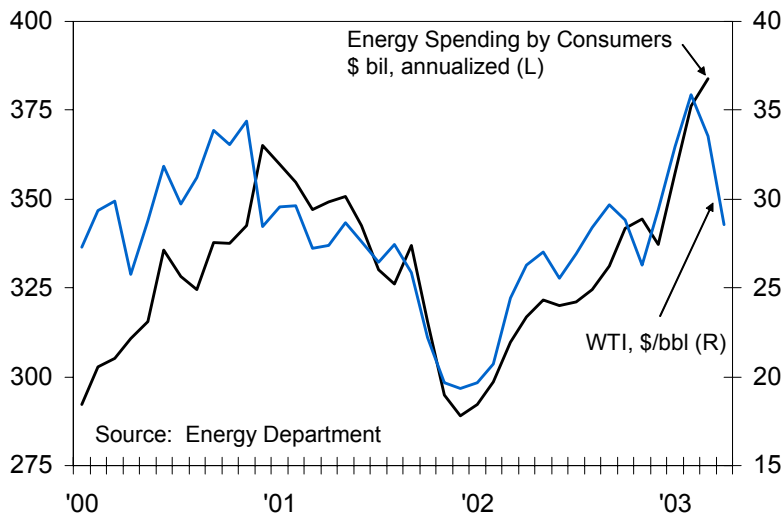
The economy is also receiving a quick lift from the slide in energy prices. The price of a barrel of West Texas Intermediate oil has fallen to near \$25, compared to a pre-war peak of almost \$40 per barrel. Natural gas prices have also receded from a high of over \$10 per million BTU to \$5 currently.

**Chart 4: Less Anxious Consumers,  
ABC/Money Magazine Consumer Comfort Index**



Consumers spent a record \$384 billion (annualized) on all energy goods and services in March, up nearly \$100 billion in just one year (see Chart 5). With consumers spending more to fill their gasoline tanks and to heat their homes, they have had less to spend on everything else. Energy bills are now falling quickly, however, with the cost of a gallon of regular unleaded down more than ten cents nationwide in just the past month. Energy-intensive manufacturers and transportation companies that were choking on higher energy costs are also quickly benefiting.

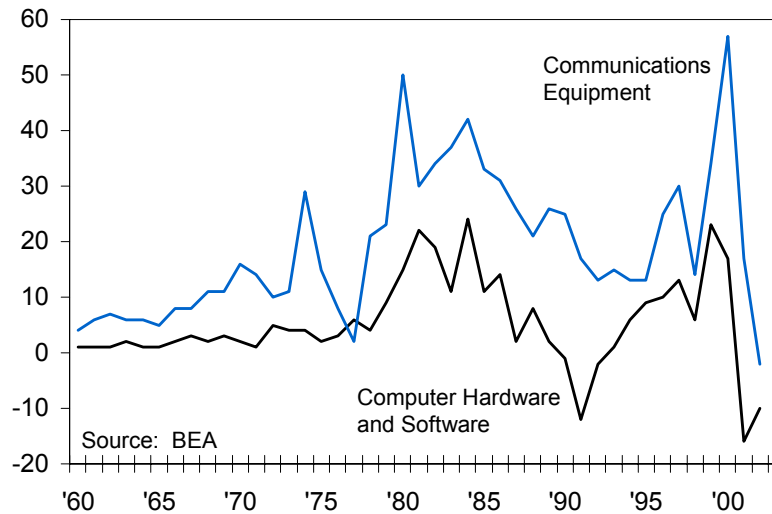
**Chart 5: Energy Bills Have Peaked**



**Good fundamentals.** Whether the post-war bounce in confidence and decline in energy prices is enough to soon ignite growth closer to the economy's potential depends on whether the economy is still struggling with more fundamental problems. The most pressing weight on the economy has arguably been substantial overcapacity in information technology. Business IT investment, which broadly includes spending on computer hardware, software, and telecommunications equipment, more than doubled

between the mid-1990s and its peak soon after Y2K (see Chart 6). At its peak, IT investment accounted for nearly 5% of GDP and an astounding 20% of the economy's growth.

**Chart 6: Change in Net Capital Stock as Share of GDP**



Much of this new IT investment quickly went fallow, however, when the stock market bubble began to deflate and many previously high-flying, voracious IT purchasing dot com companies failed. Even large, well-established tech companies that had aggressively expanded their IT spending in the boom times were seemingly blind-sided when demand for their goods and services failed to increase as anticipated. Telecommunication companies, for example, were able to find only a few users for their new vast fiber optic capacity as broadband adoption lagged.

Under the weight of so much excess capacity, IT spending plunged. Investment fell by one-sixth during the 2001 recession year, and spending on telecom equipment, the hardest hit part of IT, was cut by one-third. Severely chastened creditors unwilling to extend more investment capital exacerbated the downturn. Businesses raised \$275 billion of capital from stock and corporate bond investors and bank lenders to fund their investments at the height of the boom in 2000. They were able to raise only \$75 billion last year.

While the duration and extent of the recent investment slump has been modest in comparison to the duration and extent of the previous investment boom, the overcapacity in IT has seemingly been all but worked off. IT technologies continue to advance rapidly, leading to short economic lives and rapid depreciation rates for IT capital. Computer hardware and software depreciate particularly quickly, with an estimated economic life of less than two years. With weak investment and heightened depreciation, the stock of capital posted its largest decline on record in 2001. Telecom equipment has a longer life of closer to six years, but the collapse in such investment has been so substantial, the stock of such capital is also now falling.

**Technology.** Business spending on shorter-lived computer hardware and software has indeed already seemingly hit bottom. Both nominal and real dollar spending on such items has been enjoying modest increases since this time last year.

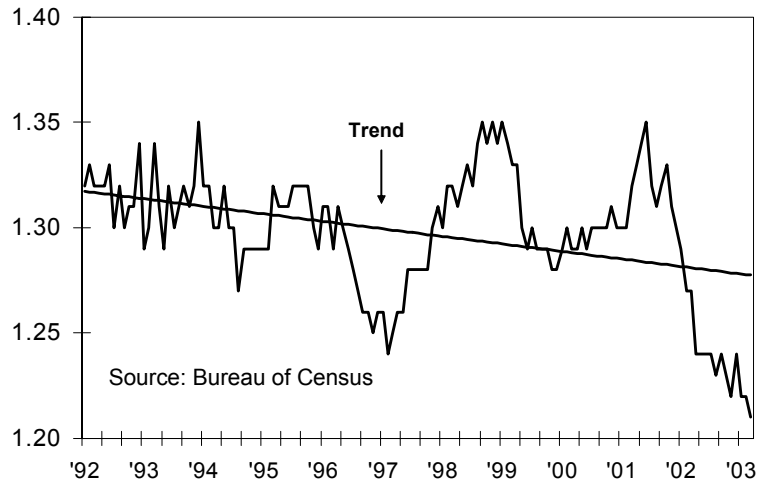
Not all investment spending will rebound quickly. Substantial excess capacity exists for commercial aircraft and structures, including office, industrial and hotel space. These assets have economic lives lasting for decades, and demand for air travel and commercial space remains moribund. Investment in these assets has already plunged, however, suggesting any future declines will be limited. The real value of new commercial construction put-in-place, for example, has fallen by nearly as much over the past two years as it did during the severe construction cycle of the early 1990s.

Moreover, other types of investment are set to rebound strongly. Steadily rising demand, lean inventories, and persistently high prices seem ready to ignite much stronger exploration and development of

the nation's natural gas resources. Inventory rebuilding more broadly, save for in the vehicle industry, is also set to accelerate, as cautious businesses have pushed inventories to record low levels relative to sales (see Chart 7). A growing number of businesses are giving up sales for lack of adequate inventory.

With IT spending poised to rebound and other investment expected to hold its own, business investment in toto is set to soon go from being a substantial weight on the economy to a source of growth.

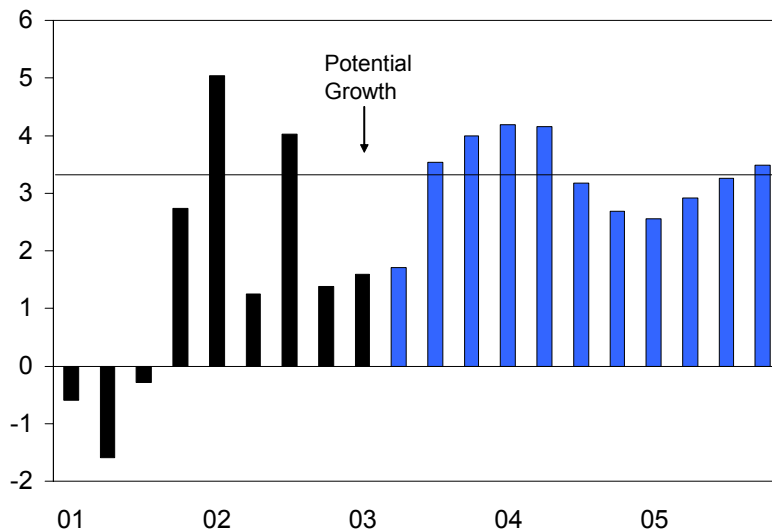
**Chart 7: Inventory Building Will Resume, Wholesale inventory-to-sales ratio**



**Outlook.** It has been a difficult few years for the U.S. economy. It has had to overcome a string of arguably unprecedented events, including the unraveling of the stock market bubble, a brutal terrorist attack, wars in Afghanistan and Iraq, a string of corporate scandals and, now, a mysterious new global virus.

Despite all of this, there are reasons to be optimistic that the economy is poised for stronger growth. With a bit of good luck (avoidance of further terrorism and adverse geopolitical events) and some deft policymaking (more federal tax cuts are soon forthcoming), the economy should soon find its footing.

**Chart 8: Economy Will Find Its Footing, Real GDP, annualized % change**



The collective psyche remains fragile, but it will mend, ensuring that while the ensuing recovery may at times prove disappointing, it appears set to finally take place in earnest during the year ahead (see Chart 8).

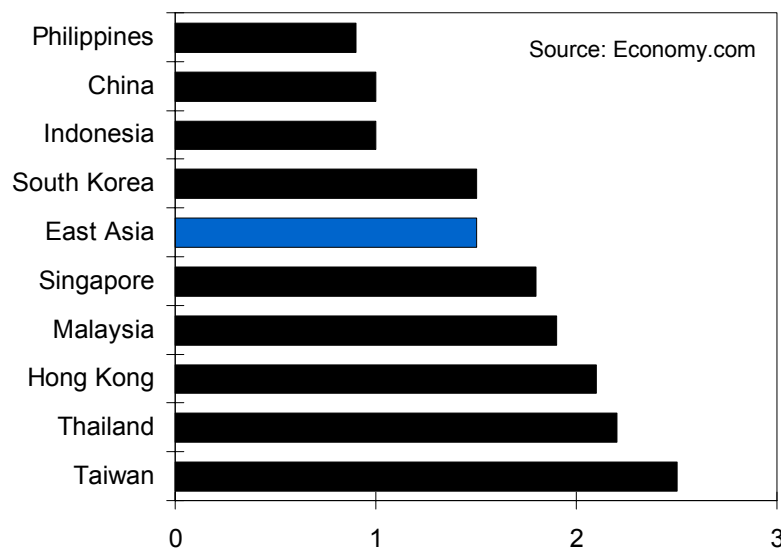
**Consumers.** The pace of economic rebound, however, will be moderate, with GDP growth expected to exceed its long-run potential rate of growth for only the coming four quarters, and then only by a small margin. The primary factor limiting the pace of growth is the lack of any pent-up demand for consumer goods. Low interest rates, an ability to tap burgeoning home equity, and sustained aggregate income growth over the past year have allowed consumer spending to continue to rise through the 2001 recession and the subsequent months. Thus, consumer spending will contribute little to the pace of growth during the coming period of economic recovery.

**Global economy.** Other factors also will weigh on the near-term outlook. The economy's performance will be impaired by a moribund global economy. The nation's net export position has rapidly eroded, going from a deficit of under \$400 billion in 2000 to more than \$500 billion currently, slicing one-half percentage point from per annum real GDP growth over the period. This weakening in the trade balance has been largely due to falling U.S. exports.

The Japanese decade-long economic miasma is now legendary and shows few signs of abating. That nation's banking system continues to choke on bad debt, curtailing credit to all borrowers bad and good. The euro zone economy is also struggling, as the large German economy has been slow to allow its labor and capital markets to restructure and reform. The impending expansion of the EU to include a lengthy list of Eastern European economies is also resulting in adjustment pains. Latin America's largest economies have only recently come to terms with the near implosion last year. Political leadership in Argentina and Brazil is changing, but the legal and institutional reforms that must be adopted for these economies to return to sustained growth will be difficult.

Adding to the global economy's woes is the proliferation of SARS throughout the previously faster-growing Asia Pacific region. The Chinese economy—heretofore the only large global economy experiencing measurable growth—is particularly vulnerable as the contagion continues to rage out of control. Even if the disease is soon reined in, growth this year will be at least one percentage point lower than it would have been otherwise (see Chart 9). If the contagion continues on into the summer, then the nation's longer-term economic health could be threatened as previously booming foreign investment wanes. The risk that SARS would spread more widely outside of China also will rise.

**Chart 9: SARS Is a Growing Economic Weight,  
Reduction in 2003 real GDP growth rate**



Also dimming prospects for a quick global economic rebound is the lack of any obvious global policy response to the current problems. Onerous fiscal budget deficits and debt loads are widespread and effectively neuter the use of fiscal stimulus, while already very low interest rates make the efficacy of further monetary stimulus questionable.

While the U.S. economy cannot look to the global economy as an impetus for growth, the global economy is not expected to remain a millstone on the U.S. economy for much longer. This is due to the building economic benefits of the year-long decline in the U.S. dollar. Since this time last year, the dollar has fallen by more than 20% against the euro, 10% against the yen, and 5% on a real broad trade-weighted basis.

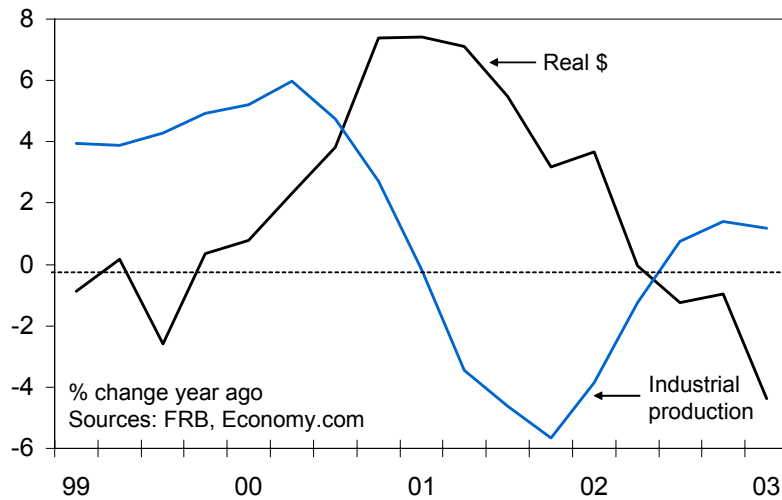
**Dollar.** Weighing on the dollar is the tarnished image of the U.S. economy as the global economy's Aaa credit. Any sign of global economic, financial, or political turmoil during the late 1990s prompted global investors to flock to the perceived safety of U.S. assets. Recent events ranging from 9/11 to the Iraq War have challenged those perceptions. The large and growing U.S. current account deficit, now over 5% of GDP, is also proving too much for foreign exchange markets to overcome. Historically, deficits of this magnitude have ignited large currency and financial market adjustments in other major developed economies. While such a sharp adjustment is not likely in the U.S.—the dollar is far and away the most important global reserve currency, and oil and most other commodities are priced in dollars—a further steady depreciation in the dollar is likely.

The initial benefits of a lower dollar are evident in the first quarter earnings announcements of U.S. multinational companies. U.S. companies with sizable overseas operations are enjoying profit gains from translating their earnings overseas back into weaker dollars. Hard-pressed U.S. manufacturers are also now benefiting as foreign producers are no longer able to cut prices for their goods to gain global market share. Non-petroleum import prices are currently rising at their strongest pace since the mid-1990s. As recently as late 2001, import prices were falling at a record pace. It is no accident that the hemorrhaging in U.S. industrial production was staunch only when the U.S. dollar began to recede (see Chart 10).

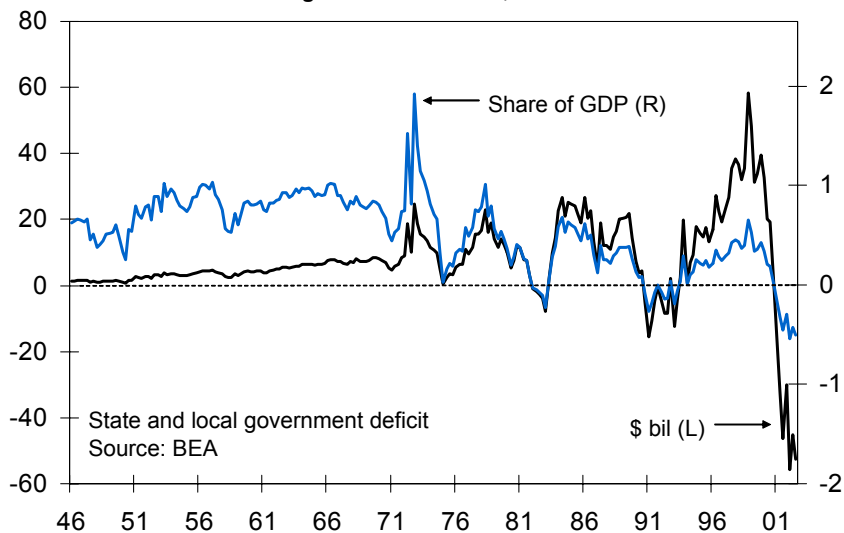
Not all of the U.S. economy benefits when the dollar depreciates. Retailers that import much of what they sell will have difficulty passing along their higher costs to cautious U.S. consumers. Already razor thin retail margins will come under even more pressure. The net benefits of a falling dollar are still sizable, however, suggesting that the nation's trade links will soon no longer be a measurable impediment to growth.

**State deficits.** The precarious fiscal situation of state governments from coast-to-coast is a mounting economic burden. Although the current 2003 fiscal year is nearly over, more than half the nation's states still have budget shortfalls. More than two-thirds are facing shortfalls for FY 2004. According to the BEA, the current cumulative budget deficit is currently equal to a record 0.5% of the nation's GDP (see Chart 11). This compares to a cumulative *surplus* equal to 0.5% of GDP as recently as the late 1990s.

**Chart 10: Weaker Dollar, Firmer Manufacturing**



**Chart 11: Unprecedented State Budget Crisis, State and local government deficit, sum of states**



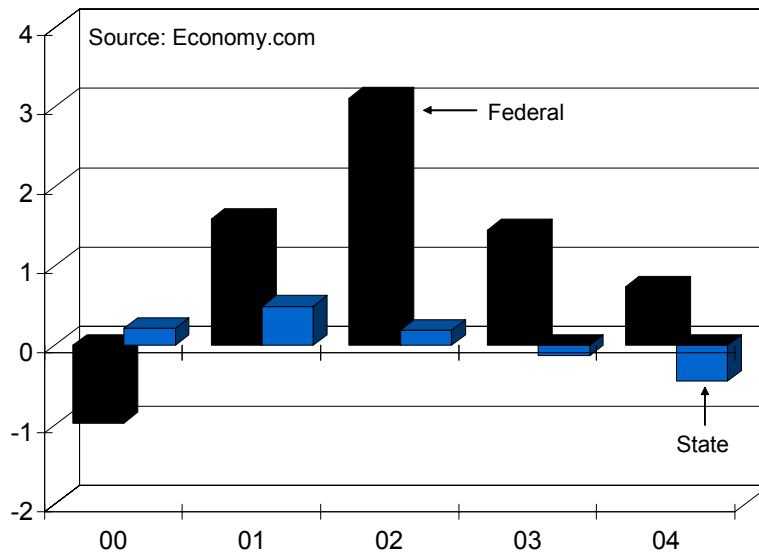
Magnifying the states' fiscal problems is that most have exhausted their available financial resources and tax revenues continue to decline, or at best grow only weakly, while demands on state expenditures remain strong. Thus, states are under intense pressure to fill their budget holes. One increasingly common remedy is to cut state government jobs. Payrolls are now falling on a consistent basis for only the third time since World War II.

State governments have also just begun paring back spending on a wide-range of activities and programs. Public infrastructure spending will be particularly hard hit. Spending fueled by increased caseloads for need-based income maintenance and healthcare programs will be more difficult to rein in, but is also occurring. Even spending on education is coming under scrutiny and will be pared back.

A growing list of states has also begun to raise fees, tuition, and even taxes. The increases will largely take the form of increased cigarette and gasoline taxes, but higher sales tax and personal income tax rates are also on the way.

The negative economic fallout will be substantial. The drag will shave some 20 basis points from real GDP growth this year and 40 basis points next (see Chart 12). This will be a dramatic shift from the past several years, when state governments were an important source of economic support. Indeed, state governments have traditionally been a source of growth during downturns, as state budget surpluses have either narrowed or turned into deficits during every recession since World War II.

**Chart 12: Federal Fiscal Stimulus Offsets State Drag, Stimulus/drag as a % of GDP**



The economic drag from cutting state governments is significant, but it should be more than offset by continued massive federal fiscal stimulus. Surging government outlays, which after excluding interest payments on the federal debt are currently rising at a double-digit pace, will continue apace. Given rising political pressures associated with the fast-approaching presidential election, a potpourri of tax cuts, now being hotly debated, is also expected to soon become law. The package is expected to include a scaling back of the alternative minimum tax and the marriage tax penalty, a boost to the child tax credit, and an acceleration in the personal income tax cuts now legislated to take effect in 2004 and 2006. It will be worth some \$75 billion to the economy this year, and \$350 billion over the next decade. All told, federal fiscal stimulus will provide nearly 150 basis points to growth this year and 75 basis points next.

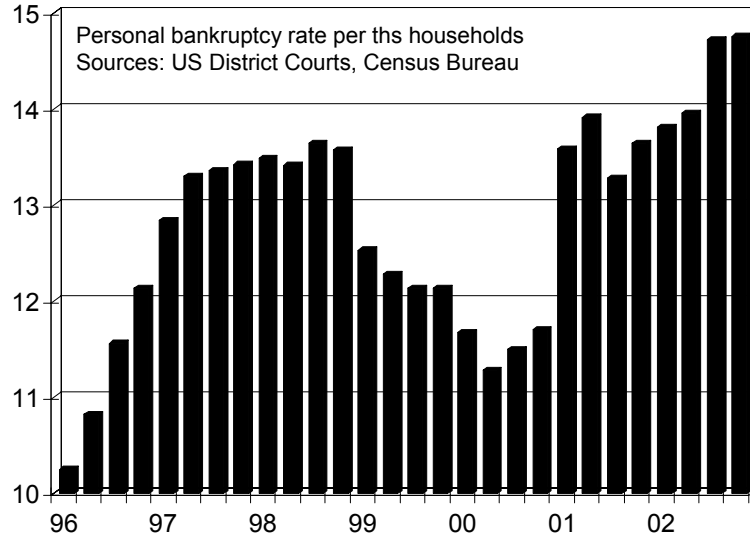
**Household finances.** Escalating household financial stress presents a substantial threat to currently fragile consumer spending. Personal bankruptcy filings have surged to record highs and continue to rise (see Chart 13). New records are also being set for net chargeoff rates on credit cards and other consumer loans, and delinquency rates on manufactured housing and direct auto loans.

Despite the robust housing market and strong house price gains, mortgage credit quality is also weakening. FHA and VA mortgage delinquency rates are breaking records, as are credit problems for subprime mortgage loans. Foreclosure rates on conventional mortgage loans are even hitting new highs.

The most serious financial burdens are on lower and lower-middle income households. According to the Federal Reserve's 2001 Survey of Consumer Finance, over one-fourth of households in the bottom quintile of the income distribution were devoting more than 40% of their income to servicing their debt loads. Nearly one-sixth of those households experienced a serious delinquency (more than 60 days late) on at least one of their debt obligations during the

year. Over one-sixth of households in the second quintile of the distribution were burdened with over a 40% debt load, and more than one-tenth of these households experienced a serious delinquency.

**Chart 13: Households Are Under Financial Stress,  
Personal bankruptcies per ths households**

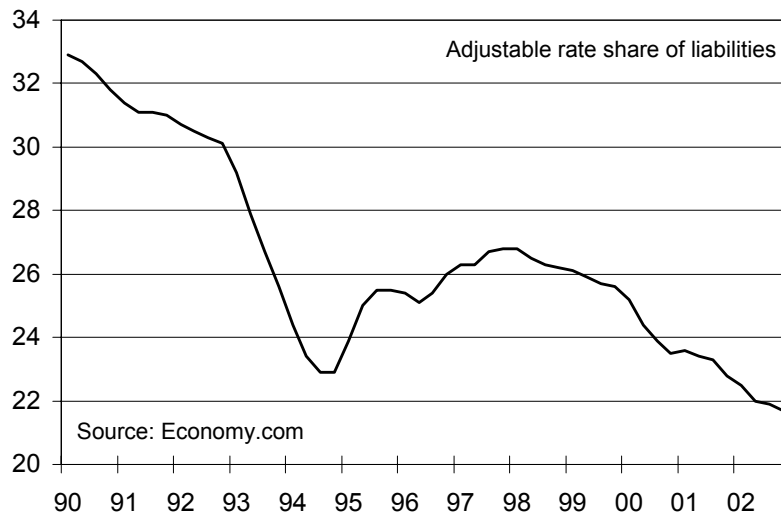


Households burdened with high leverage and serious credit problems will become more circumspect in their spending, particularly if their incomes are under pressure or being disrupted. With payrolls now falling, unemployment increasing, and wage growth slowing, households are indeed turning increasingly cautious. Vehicle sales have noticeably softened so far this year despite even more aggressive financing terms, and even discount-giant Wal-Mart is having difficulty maintaining same store sales growth.

Despite their heavy debt loads, unless the job market continues to deteriorate, households will be able to shoulder them. Lightening the burden are still very low interest rates and the raging mortgage refinancing boom. With fixed mortgage rates of 5.75%, refinancing activity in the first quarter of this year was running at an incredible \$3 trillion annualized rate. At this rate, one-half of all mortgage debt outstanding would be refinanced *this year*. Those households refinancing are either lowering their debt payments or increasing their mortgage balances and taking cash out. Either way, financial pressures on these households are moderating.

The overwhelming majority of refinancing households are also locking in the low fixed mortgage rates. The adjustable mortgage share of originations remains well below 20%. With the consistently low ARM originations of recent years, the share of all household liabilities that adjusts with market interest rates has steadily fallen (see Chart 14). Household finances will thus remain well insulated once interest rates ultimately rise.

**Chart 14: Households Lock In Low Long-term Rates**



A recent tightening in lenders' underwriting standards, particularly for credit cards and non-auto consumer loans, will also soon reap some economic benefits. This tightening is evident in fewer subprime credit card mailings, falling credit limits, and the sharp slowing in the growth of credit card debt. Lenders are tightening in response to their elevated loan losses and heightened regulatory oversight. The initial impact of the tighter standards is to prompt increased credit problems and more cautious spending. Without access to new credit, financially troubled households have difficulty servicing their existing liabilities and maintaining their spending. Ultimately, however, this will prove to be therapeutic for households, lenders, and the broader economy.

Further mitigating any negative economic fallout from this process is that consumer and mortgage lenders remain generally profitable and highly capitalized. Lenders are prepared for substantially greater credit problems and loan losses, and while they will be vigilant, they are unlikely to sharply curtail their lending. A credit crunch like that of a decade ago thus seems highly unlikely except under the darkest of economic scenarios.

Consumers will not lead the economy to stronger growth, in part because of their tattered balance sheets, but they are expected to hold their own and will thus not be an impediment to a more sturdy recovery.

**Conclusion.** Despite these constraints on the economy, there are reasons to be optimistic. The resounding military victory in Iraq has rallied investor, business, and consumer confidence, and lowered energy prices. The economy also appears to be in fundamentally good shape. The excesses born of the stock market bubble have been largely righted. The massive overinvestment in IT has been largely worked off, and the systemic corporate wrongdoing has been addressed. The orderly decline in the dollar is providing much needed support to hard-hit manufacturers. More tax cuts to households and small businesses appear to be on the way. In addition, continued very low interest rates are allowing households and businesses to repair their fragile balance sheets and lock in those rates for many years to come.

### **Macro Implications for Sonoma County's Basic Industries**

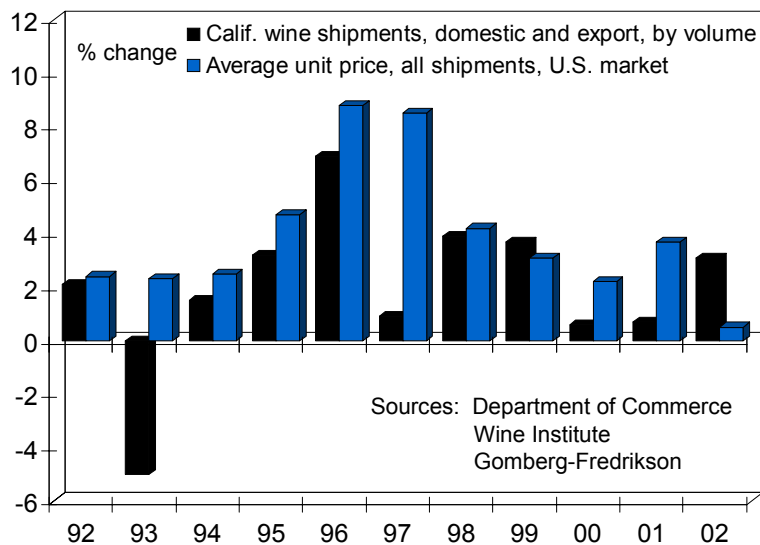
**Consumer goods and services.** The consumer will be an unwilling partner in the economic rebound. Given little pent-up demand for consumer goods and somewhat strained financial conditions, Sonoma County's consumer-oriented industries will see only a moderate pace of

recovery in the coming year. The outlook for such industries will be driven partly by their orientation to broad U.S. and global demand.

**Wine.** Cautious spending patterns, fragile consumer confidence and weak labor markets weaken the near-term outlook for most discretionary purchases, particularly if they are perceived as luxury goods. Already, profits for wineries have narrowed or are nonexistent. Sales volume for California wines rose last year by 3%, its best increase since 1999, but average prices in the U.S. market barely rose. This is the weakest pricing environment in over ten years (see Chart 15). Vintners, in turn, are putting extreme pricing pressure on grape growers, while simultaneously insisting on strict quality standards in light of ample supplies of wine grapes. Cost cutting is the norm across the entire industry, resulting in less seasonal hiring, some layoffs of permanent staff, and reductions in production inputs that ripple through the broad supply network of goods and services in Sonoma County.

One way winemakers are seeking to improve sales is through direct marketing to bypass narrowing wholesale channels. They also are striving to expand export markets to take advantage of a weakening dollar. Indeed, the falling dollar is the industry's greatest advantage at the moment. It improves its competitive position overseas, and also raises prices for import competitors in domestic markets, thus providing a measure of added pricing power. Thus, the pricing environment should improve in the coming year, both at home and abroad, even if the outlook for demand remains uncertain.

**Chart 15: Wine Shipments Rise, But Prices Do Not**

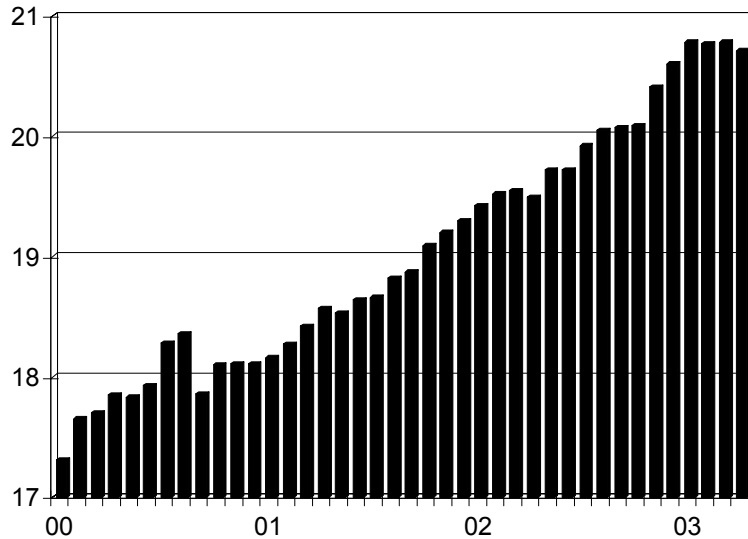


**Tourism.** Sonoma County's travel and tourism industry has been remarkably stable over the past two years. Given the large drive-to market in the region, tourism has been the most stable pillar of Sonoma County's economy, as short-distance auto trips have substituted for long-distance vacations. With much of the region still in recession, however, even this industry is at risk, as indicated by the leveling off of related employment (see Chart 16).

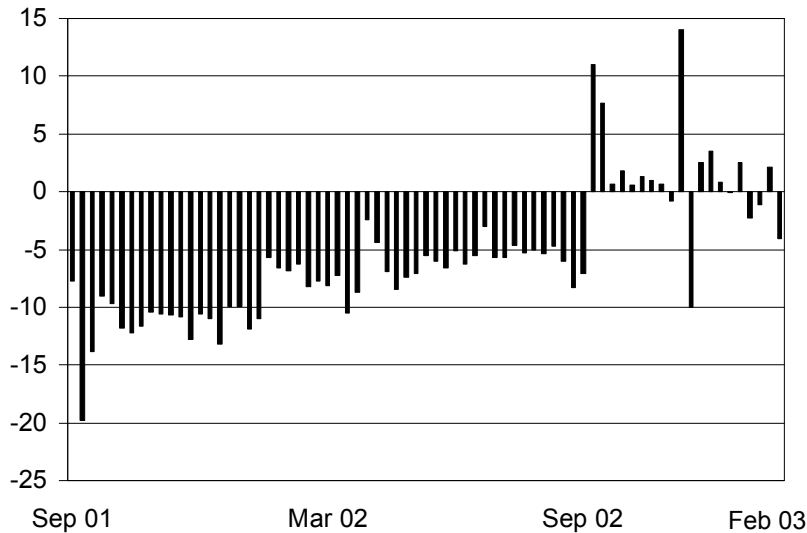
The county's hotel industry stabilized in mid-2002 as indicated by stable occupancy and room rates, although the second half of the year showed no improvement. The county's hotel occupancy rate of 63% last year was off slightly from the 64% in 2001 and is still well below the 70%+ rates seen prior to 9/11 and the 2001 recession. The industry's stability, however, is particularly impressive given the Bay Area's continued recession, at least on the Peninsula and in Silicon Valley. Over 40% of visitors originate from the Bay Area, and an additional 30% come from elsewhere in California. The stability of the southern California economy and the resiliency of the Central Valley support the local hospitality industry.

Pricing is a significant problem. Average hotel rates in the county averaged \$140 in 2002 and 2001, down from \$150 in 2000 according to PKF Consulting. Nationwide trends are similar, making it difficult to raise rates, at least within the context of a national market. Room rates at upper upscale hotels nationwide leveled off six months ago from a downward spiral that began in September 2001, but there is no sign of a turnaround (see Chart 17).

**Chart 16: Sonoma Tourism Industry Just Now Leveling Off, Employment, leisure & hospitality services, ths**



**Chart 17: High-end Hotel Rates Level At Best, Upper upscale hotel chains, room rates, % change year ago**



The outlook will improve only moderately in the near term. Nationwide income growth has slowed since the beginning of this year, below 2% in real terms. Also, spending on travel is still below peaks of 2000, and international travel, particularly from Asia since the SARS outbreak, is very weak. Furthermore, an expansion of available upscale rooms locally since 2000 means local supply is abundant. The industry's turnaround will depend upon three primary factors. First,

from a macro perspective, national leisure and business travel must improve. Leisure travel is Sonoma's natural market, but business travel is important too since many business travelers in San Francisco venture north to Sonoma County. Second, Sonoma must differentiate its tourism product as a haven from day-to-day stresses, and as a robust mix of wine, specialty foods, beaches, and golf as a unique basket of activities. Third, the industry's true turnaround will happen when the Bay Area economy starts to recover, perhaps in mid 2004.

**Retailing.** Sonoma County's consumer spending and retailing will be the most moderate of drivers supporting an economic recovery. The industry has been flat since the 2001 recession as indicated by payroll employment (see Chart 18). Factors limiting expansion of the retailing industry include many of the trends seen nationwide. There is little pent-up demand for any consumer goods. The unemployment rate is at a cyclical high. Consumer confidence is nearly at a cyclical low.

**Chart 18: Sonoma Retailing Is Flat, *Employment, retail trade, ths***



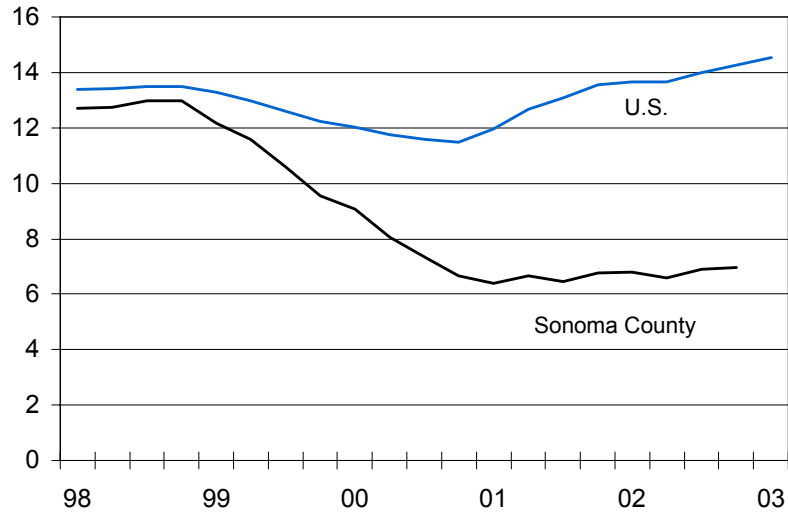
More importantly for Sonoma County, population growth has slowed considerably. The Census Bureau estimates population growth in 2002 to have slowed to just 0.4%, its slowest rate of growth in over 30 years and down from 2% annualized growth in the late 1990s. Indeed, net migration in 2002 turned negative for the first time in recent memory.

Similar population trends are seen in a broader market region. Marin County's population fell by 0.5% last year, and Mendocino County's rose by just 0.5%. Only Lake and Napa counties continue to grow at rates above 1%. Thus, a combination of weak income and confidence trends combined with a downturn in the local population bode ill for local retailing. It will be a lagging industry for the region that will begin to expand again only when the broader economy, based on both local sales and sales to visitors, improves. By 2005, Economy.com projects a population growth rate once again exceeding 2%, giving the industry a boost, but the long-term rate for the second half of the decade is expected to settle down to between 1.5% and 2% annually.

As with other industries, pricing will continue to be problematic. As an ever higher share of consumer goods is imported, a weaker dollar means costs for retailers will rise. But consumers facing moderate prospects for income growth may very well balk at paying higher retail prices, potentially squeezing margins further than they are today.

Once local demographic and economic trends begin to improve in the county, the rather good financial condition of its households will support improving demand for goods and services. A low rate of personal bankruptcy filings is indicative of overall healthy household balance sheets (see Chart 19).

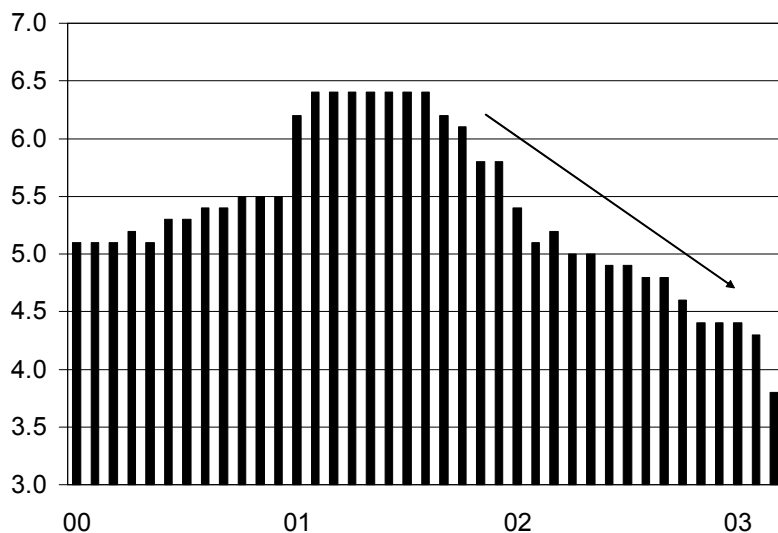
**Chart 19: Household Balance Sheets Are In Good Shape, Personal bankruptcy filings per this households**



**Technology.** Sonoma County’s technology-based industries face fundamentally different driving factors. Rather than being linked to national and international consumer markets, they are tied to new business investment and technological innovation. The projection for accelerated business investment in this year’s second half provides some optimism for the county’s information technology industries. The county also continues to attract a number of small young tech companies fleeing high costs in Silicon Valley or Marin County.

A turnaround in the County’s tech and telecom industries is not likely until next year at the earliest. Cost cutting is the norm here, as it is in so many industries nationwide and locally (see Chart 20). Layoffs of nearly 100 at Advanced Fibre Communications in April added to cuts of 900 by Agilent and 240 by Nokia earlier this year. Nokia has abandoned the county completely.

**Chart 20: Local Telecom Equipment Makers Still Cutting Payrolls, Employment, electronic instrument manufacturing (NAICS 3345), ths**



**Telecom and instruments.** Telecom equipment makers continue to struggle, but there are indications that the industry's steep two-year contraction is abating. Industry shipments continue to fall, but the rate of decline has moderated in recent quarters, and orders have improved over the past few months. Despite the recent stabilization, however, monthly shipments are still only half of the industry's peak in mid 2000. Furthermore, there is still substantial excess manufacturing capacity in the industry and profitability remains negative. Given the ongoing struggles of the telecom services industry, it is plausible that demand for telecom infrastructure equipment will not experience a significant upturn until next year or beyond, and will not likely return to the levels seen during the boom for years to come.

Lackluster demand for telecom services and weak pricing is forcing telecom service providers to keep infrastructure spending to a minimum. Recent uncertainty surrounding FCC policy has also curbed infrastructure investment. The recent triennial review of FCC regulations resulted in some moderate alterations that will ultimately shape the telecom industry. The near-term impact of the recent FCC regulatory changes on the equipment industry will be minimal because the new rules are expected to be challenged in court, and it is not clear if they will hold up.

If the rulings are upheld, however, the new regulations would provide some upside potential for the county's makers of switching gear, since the former Bell companies would be able to build out the so-called last mile of broadband capacity without the need to share the capacity with competitors.

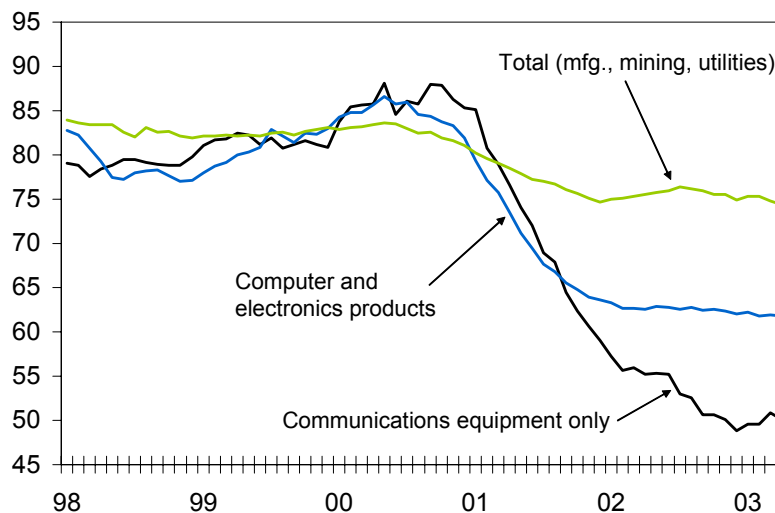
Sonoma County's instrument manufacturers are benefiting from increased defense and federal government tech spending. Defense spending on equipment and software climbed by 11% in the last quarter of 2002 compared to the same period one year ago. Substantial defense spending growth is continuing this year. Already, local firms, such as MicroSource, a maker of microwave radar components, and Sonoma Design Group, a maker of optical surveillance systems, are seeing an increase in orders.

Pricing power among producers of tech hardware remains weak. Manufacturers continue to innovate and improve functionality and capacity of their products, while unit prices remain flat to down slightly. Meanwhile, older products continue to be heavily discounted.

Excess manufacturing capacity continues to weigh on pricing. Capacity utilization in the communications, computers and semiconductor industry has hovered between 61% and 63% for the last year, below average and well below desirable levels.

Excess capacity is most evident in the telecom equipment industry, where capacity utilization is a mere 50% (see Chart 21). Telecom equipment price deflation has accelerated since the middle of last year.

**Chart 21: Communications Capacity Glut, Capacity utilization rate, %**



Technological advances, easing of regulatory barriers and demands for data, Internet and wireless services all bolster the long-term outlook of the telecom services industry, which will spur demand for

telecom equipment. Telecom investment will eventually return to more sustainable levels, with growth tied more closely to carriers' cash flows.

Some segments of telecom equipment have brighter prospects, namely metropolitan and wireless network equipment. While it will take years to overcome the current overinvestment in long-haul infrastructure, significant bottlenecks persist in many metro areas. Upgrading local infrastructure will not only fuel direct demand for local network equipment, but will also help absorb long-haul capacity. Wireless carriers are also adding more high-speed data functionality to their services, which will drive demand for equipment.

A critical long-term advantage for Sonoma County's tech industry is that it is an innovative industry, not a producer of commodity products. The U.S. still maintains a trade surplus in specialized tech components, such as semiconductors and instruments. Firms that concentrate on high value added designs, where proximity to engineering and research staffs is critical, will keep production local.

**Biotech.** Biotech continues to enjoy some infusions of capital. During the 2001 recession, biotech start-ups nationwide enjoyed renewed attention from venture capitalists that shied away from Internet and telecom projects. However, since then, the struggling national economy has increased risk aversion to the point that venture capital investments in biotech fell by half nationwide and in California in the second half of 2002.

The long-term outlook for biotechnology is more favorable. While medical applications will continue to dominate the research focus of firms, environmental, chemical, and agricultural applications will grow in importance. Demographic trends and technological innovation will support strong volume growth. The aging population and rising life expectancy in the population will drive demand for drugs and medical instruments that fight degenerative diseases in innovative ways.

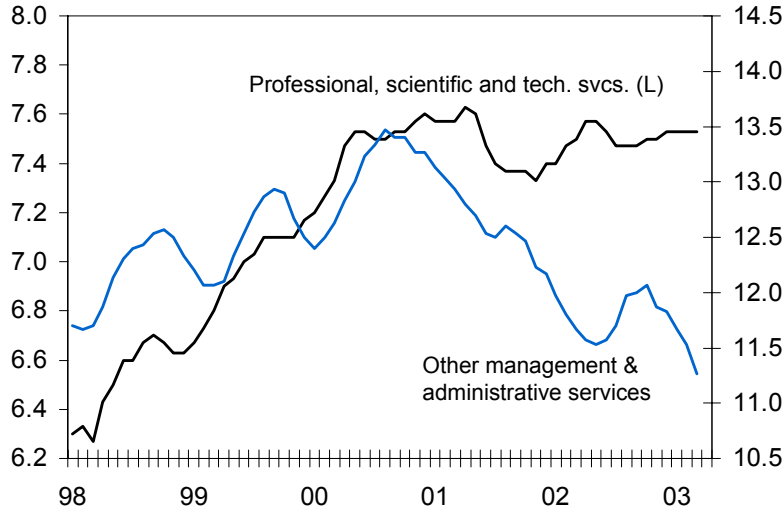
Biotech remains a small industry in Sonoma County, and its long-term potential is uncertain. Biotech firms generally prefer to be part of clusters—preferably around universities where high-quality medical research is conducted—to facilitate the transfer of new knowledge and quality workers. The risk to the county is that it cannot compete with existing clusters in California and elsewhere where university research is abundant and wet-lab space is available.

Yet the overall trend for Sonoma's tech-based industries is clear. Technology firms that produce innovation will maintain a niche in the county. Those that produce commodities will seek lower cost locations. Thus, over the long term, telecom has a future in the county as it creates products that enable service providers to deliver fiber optic broadband and other services more quickly and at less cost. But given the current overcapacity and weak financial position of the major service providers, markets will remain weak for another year. Biotech must prove that it is capable of attracting the skilled researchers and investment capital to keep it in the county for the long term.

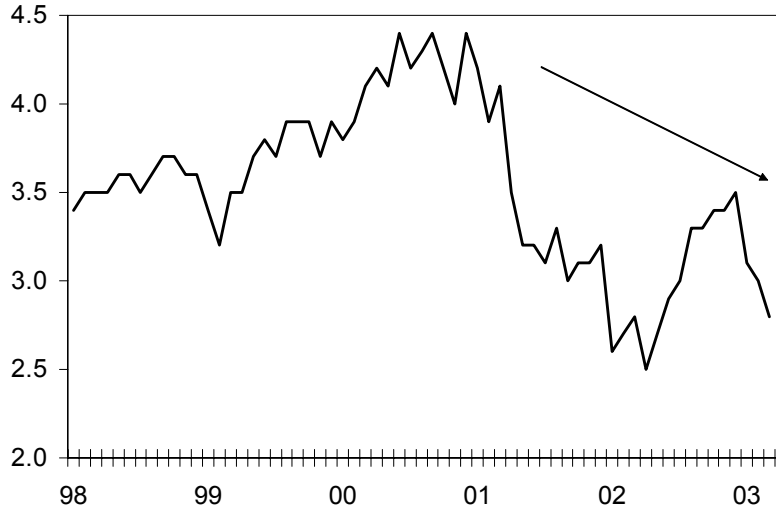
**Professional services.** Current macroeconomic conditions for professional services are perhaps the best among all of the basic industries of Sonoma County. Most professional services still command rising prices and, at the minimum, stable demand. In some cases, such as healthcare and advertising, demand is rising. Legal services, while suffering some weakness over the past two years, has some good near-term potential. Local professional services, which include legal, accounting, architecture, systems design, advertising and scientific research, have held steady over the past two years. Management and administrative support services, however, have seen payrolls fall sharply, indicative of the cost cutting among many industries since the 2001 recession (see Chart 22). One facet of these support services is temporary employment services, which fell sharply at the outset of the recession, and has struggled to bounce back over the past year (see Chart 23). A steadier upward trend for this indicator will be a leading indicator of broader economic recovery as employers seeking to add to their workforces may first turn to temps until uncertainty for product demand is diminished.

Nationwide advertising has gained solid momentum. Spending growth on broadcast television and radio advertising exceeded 5% last year. Print media lags behind, however, seeing no growth at all last year. Newspapers in particular, were weak due to continued weakness of help-wanted advertising. Numerous industries have increased their advertising expenditures since the beginning of this year, however. Even technology companies are beginning to advertise as earnings have begun to improve and they position their brands for an expected improvement in demand next year. Advertising rates are thus stabilizing and could rise some time over the coming six months, particularly for print newspapers, whose help-wanted advertising should be an early indicator of hiring intentions.

**Chart 22: Professional Services Steady, Management Is Weak, Employment, ths**



**Chart 23: Temp Hiring Shows Mixed Outlook for County's Economy, Employment, employment services, ths**



Demand for legal services suffered during the recession, particularly in high-tech areas such as Silicon Valley that had fostered considerable practices in intellectual property, mergers & acquisitions, and initial public offerings. Yet despite all of this, nationwide employment in legal services continues to expand, as it has in San Francisco (current details are not available for Sonoma County). Pricing has weakened, however. Weak corporate profitability has limited what firms are willing to pay for legal services, as indicated by the producer price index for legal services that fell from 5% annual growth in early 2001 to 3.5% in early 2003.

The outlook, however, is for improved demand once the economy begins to gain some traction. Since the U.S. economy, and particularly Sonoma County's economy, is increasingly knowledge-based, intellectual property and patent work will see above-average demand growth over the long term. As the local economy expands, so too will legal services.

Healthcare and education are among the few industries nationwide and locally that are still hiring today. In Sonoma County, healthcare and education employment growth has slowed, but is still up by 2% over the year, providing a much-needed boost to the broader economy. Public and private funding garnered during the final years of the expansion has resulted in an ongoing building boom nationwide. This is reflected locally by new construction projects taking place at Sonoma State University and Santa Rosa Junior College. The pricing environment for both healthcare and education is positive. The aging of the baby boomer generation creates demand for a number of medical, nursing and therapy services. Colleges and universities are raising tuition in light of state and local budget cuts, while the generation of baby boomers' children, now entering their college years, creates steady demand.

While the outlook for the healthcare industry is positive, it is apparent that the industry's growth has already peaked. Since public sources accounted for nearly 60% of hospital revenues nationwide in 2001, federal and state budget deficits and spending constraints pose some downside risk. Offsetting this partially is an increasing preference among consumers for more expensive PPO plans rather than HMOs, which provide greater flexibility in use of specialists.

### **Sonoma County's Basic Industrial Clusters**

Basic industries define the economic activities within a region that drive its growth over the long term. These are industries that export their goods or services to markets outside of the local region. These markets can be elsewhere in the state, nationwide, or globally. The important factor is that their products are sold outside the local market, and thus they generate new income for the local economy. Part of this newly generated income subsequently is spent in the local economy for office space, labor, intermediate production inputs, transportation and the like, thus generating a multiplier effect by spreading the newly earned income broadly through the local economy. Expenditures on labor generate an additional multiplier effect as households purchase goods and services such as autos, homes, clothing, child care, and health and education services.

It is important, therefore, to understand the pattern of the county's basic industries in order to form an outlook for the broader county economy. Through research conducted since 1996, six leading basic industrial clusters have been identified that are responsible for the pace of the county's economic growth. They include agriculture and food & beverage manufacturing, information technology, technology-based manufacturing, tourism, professional services and retailing. The six leading clusters account for just over 40% of employment and about 30% of total output in the county.

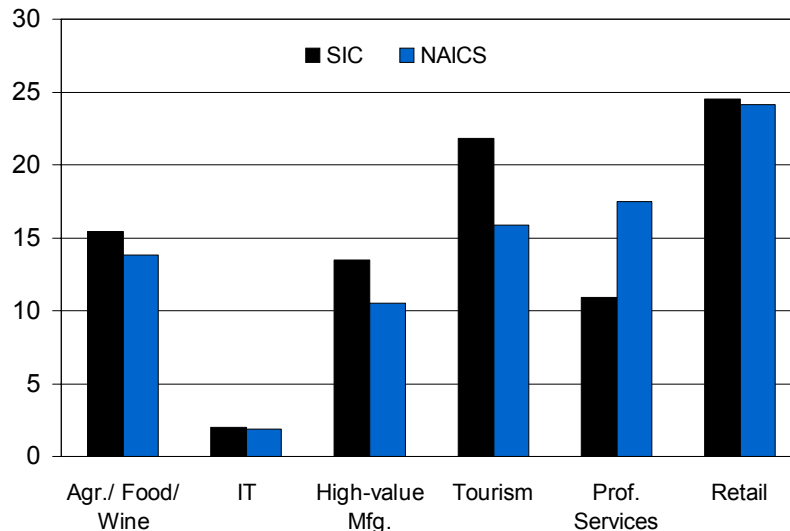
Their definitions have changed slightly this year due to changes in the way data are now classified by industry (see Tables 1 and 2). Prior studies used the Standard Industrial Classification System (SIC), which was current at the time. The SIC system had acquired some deficiencies over time in the way it classified manufacturing of technology-based goods and service-producing industries. While the manufacturing classifications were quite detailed, they had become dated and did not adequately differentiate the production of new technology products. The SIC system had never finely defined a broad number of service industries that have grown in importance over the years. These two shortfalls were particularly apparent when analyzing Sonoma County's economy, for it is heavily concentrated in both high-tech manufacturing, and in services related to information technology, tourism and leisure services.

The new North American Industry Classification System (NAICS) corrects for many of the deficiencies in the SIC system and allows for a more fine definition of Sonoma County's industry clusters. Yet the NAICS system is not perfect either, sometimes requiring a small component of a cluster to be dropped from the new definitions. Along with the change to NAICS definitions, employment estimates also were revised from preliminary estimates. Thus, the relative size of the industry clusters, using 2002 data, has changed moderately due to changes in industry classifications as well as due to revised employment counts (see Chart 24).

The agriculture/food/wine cluster currently employs just under 14,000 workers. This is slightly smaller than previously estimated. This is where some of the shortcomings of NAICS are seen as some ancillary

activities such as veterinary services and soil preparation services are not adequately defined. As with the SIC definitions, the current cluster understates the cluster's employment slightly since it does not include workers provided by personnel supply services, which provide temporary labor. Agriculture/food/wine processing is the fourth largest cluster by employment.

**Chart 24: Sonoma County Basic Industrial Clusters, Employment, ths**



Information technology is the smallest employer of the six clusters with just under 2,000 workers or 1% of employment. The new NAICS definitions provide good detail on this industry that includes new classifications such as software publishers and Internet publishers and service providers. Despite the new definitions, the size of the industry did not change much from the old definition.

High-value added manufacturing is the second smallest cluster with just over 5% of total employment. This cluster is smaller than previously estimated due both to changes in definition and to data revisions. NAICS better separates general industrial equipment from electronics and computer equipment, allowing the cluster to better focus on high-value added goods. But more importantly, the revised employment estimates showed a much steeper decline in manufacturing employment across most classifications than the preliminary 2002 estimates.

Tourism is the third largest employer among the clusters with nearly 16,000 workers. The cluster's employment has the largest downward revision from the SIC definition, which did not provide any differentiation among types of eating and drinking establishments. The new NAICS system divides these into full-service and limited-service restaurants, special food services (contractors and caterers) and drinking places serving alcoholic beverages. The new cluster definition excludes the limited-service restaurants in order to focus as much as possible on tourist-specific establishments. This excludes all fast-food restaurants and others that do not provide table service, eliminating about 5,700 workers from the cluster definition, thus creating a smaller, but more meaningful cluster definition.

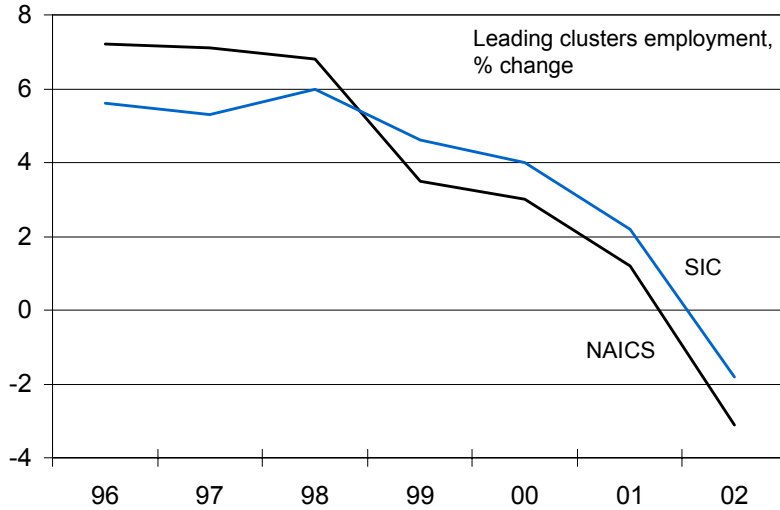
Professional services is the second largest cluster, employing about 17,500. This cluster enlarged significantly using the new NAICS definitions. Certain services such as management, scientific and technical services are separated by NAICS and included in this cluster. Also, employment previously included in manufacturing but which is located at a non-production office is now included in management services. Finally, categories such as waste management and remediation and services to buildings are also included in professional services.

Retail trade remains the largest of the six clusters and its definition is nearly identical in both scope and size to the previous SIC definition. The retail cluster employs over 24,000 workers, or 12% of the total workforce.

The redefinition of the clusters does not change significantly their performance or their role in the economy. Narrowing the definition and using revised data estimates reduced the total number of persons

employed in basic industries from 88,100 to 83,700 last year. A more narrow definition, focused more closely on driving industries, means that the longer-term trend for basic industry job growth is slightly more exaggerated, rising more rapidly during the expansion years, but falling more quickly during the economic downturn when compared to the old SIC-based definitions (see Chart 25).

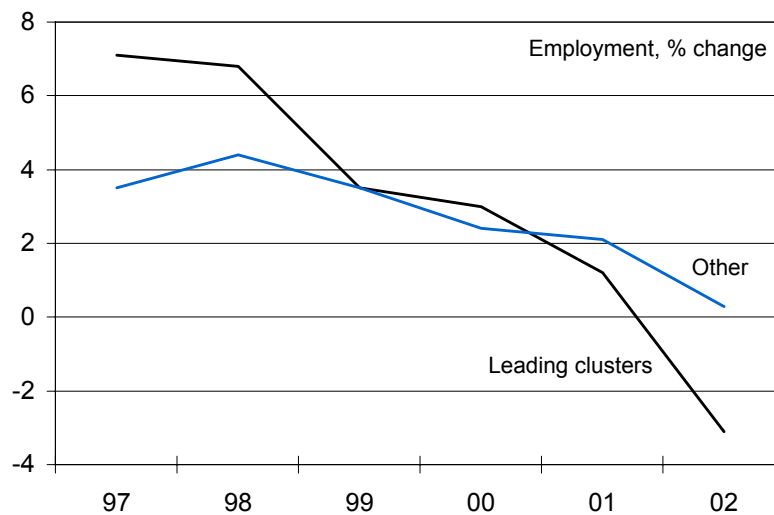
**Chart 25: NAICS-based Industry Clusters Slightly More Volatile, Employment, % change**



### Recent Cluster Trends

**Employment.** The six clusters have indeed set the pace for the entire economy. During the booming years of the late 1990s, the basic clusters outpaced the rest of the economy, generating jobs and income and enticing a strong pace of migration into the county. On the downside, however, the leading clusters cut their payrolls, whereas the remainder of the economy has simply slowed its rate of growth (see Chart 26).

**Chart 26: Basic Clusters Lead The Economy, Employment, % change**

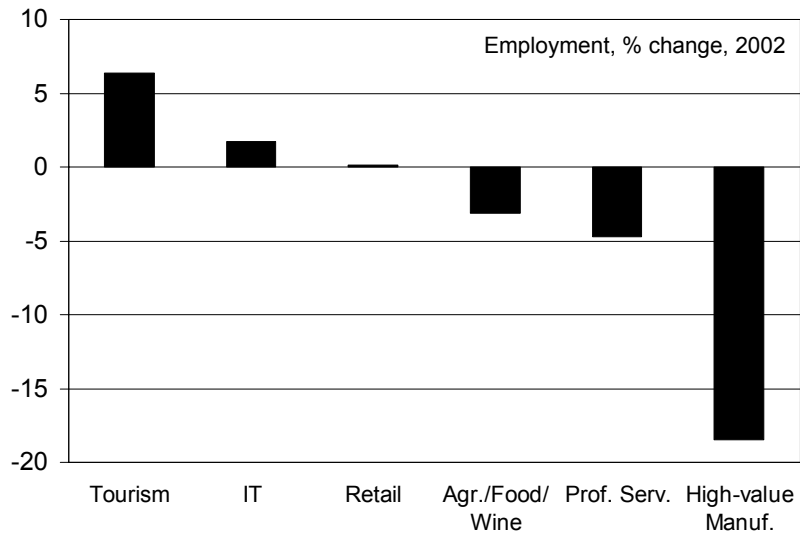


The components of the basic clusters, however, have not performed uniformly, with some continuing to expand while others contract (see Chart 27). The diversity of Sonoma County's basic clusters, which spans from agriculture to manufacturing to services, has helped the county's economy to perform over the past two years not far from the national average, and well above nearby San Francisco and San Jose. Positive growth in tourism and information technology and the stability of retailing have mitigated the losses seen in the remaining clusters.

The gains in tourism reflect the attractiveness of the county within the nearby market region during this period of high demand for short-distance travel since 9/11. The gains in IT reflect the relative stability of software and systems management as compared to hardware and electronics.

The downturn in agriculture, food and beverages is indicative of the severe pricing pressures and expanding supply of grapes and wine. The downturn in employment has been moderate, but cost-cutting is prevalent in the industry. Professional services have fallen also, although the downturn is concentrated primarily within its broad management and business service components. Health and education services continue to expand, and the legal services industry is steady. The sharpest downturn is seen in the payrolls of the high-tech manufacturers. They have faced an onslaught of difficulties that range from the overexpansion of the telecom service industry to weak business investment, strong import competition, plunging prices and a sharp downturn in venture capital investments.

**Chart 27: Diverse Clusters Generate Diverse Results,  
Employment, 2002, % change**



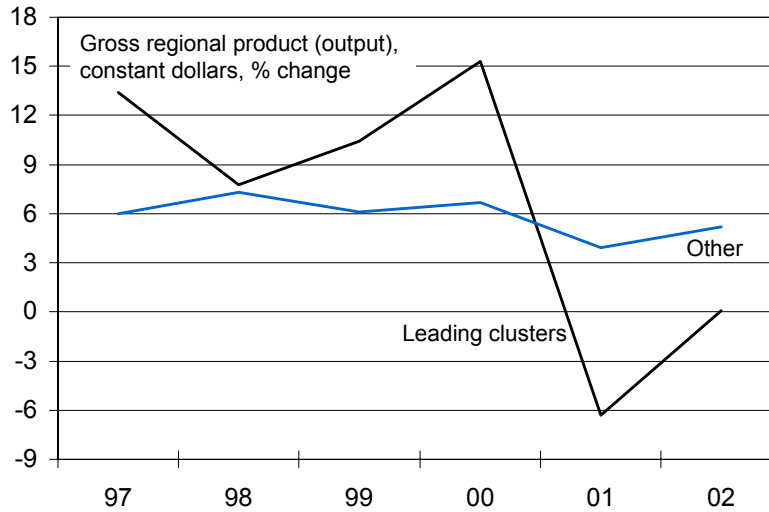
**Output.** In terms of output, the clusters have similarly led the rest of the local economy, growing at a stronger pace during the expansion but falling sharply in the recession year 2001. Output growth of the clusters continued to lag the rest of the economy last year, but at least it leveled off following the previous year's downturn (see Chart 28).

The pattern among the clusters, however, differed from their employment trends (see Chart 29). For example, while employment fell last year in the agriculture/food/wine cluster, its output did rise. This reflects the very strong year that grape growers had due to a good harvest and expanded acreage, and a rise in wine production. Yet strong pricing pressures forced producers to rein in costs.

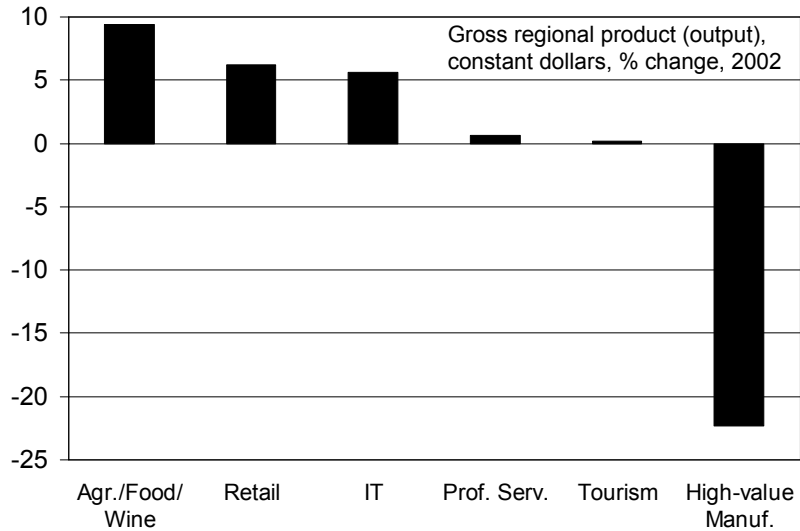
Tourism followed a different pattern. Whereas employment expanded, output did not. This dichotomy is due to the industry's labor intensive nature along with its weak pricing environment. Even with demand somewhat down, it is difficult to cut staff and still adequately manage hotels and resorts. Moreover, new resorts expanded the base of the industry, supporting a rising industry payroll. But with room rates low, the value of the industry's output could not rise.

At the extreme, output among the tech manufacturers plummeted by an estimated nearly 25% last year due to the closure of several plants and the downsizing of many others.

**Chart 28: Basic Clusters' Output Also Leads, *Gross output, % change***



**Chart 29: Output Growth By Cluster, 2002, % change**



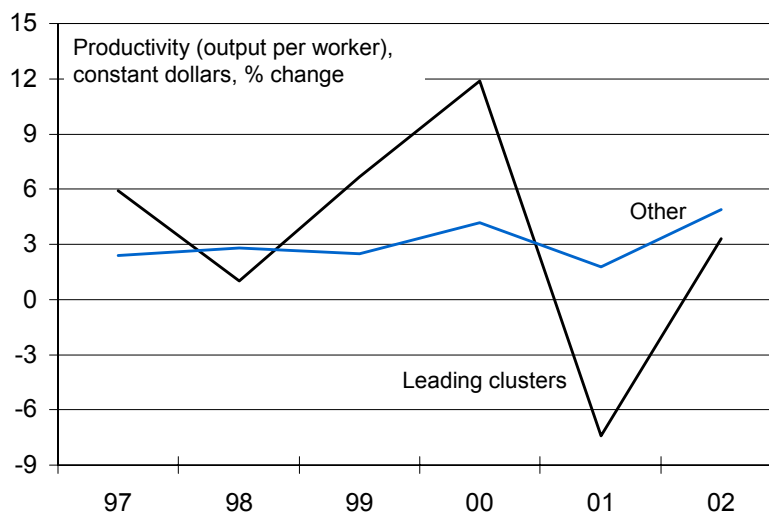
**Productivity.** It took the basic clusters one year to adjust to the conditions of demand and price as their aggregate productivity fell more than 7% in 2001 (see Chart 30). Payrolls adjusted quickly, and continue to do so, in light of current macroeconomic and industry conditions. But rising productivity since last year is the first indication that the local economy is making the transition toward expansion once again. It must await stronger consumer demand and business investment in the national and global markets, but at least it is improving its competitive position for a future of slower demand growth and intense price competition.

Several industries still face difficult times ahead. The sharp downturn in estimated output for technology manufacturing and for tourism means that productivity still fell last year, despite the elimination of several thousand manufacturing jobs (see Chart 31). Technology manufacturing likely will struggle the

longest as it awaits improved demand from the telecommunications industry. Tourism may not suffer quite so long since there are some indications that travel plans for this summer are improving, which may allow prices at hotels and resorts to firm. Nevertheless, there is much uncertainty given that consumer confidence has not risen significantly since April and the risk of terrorism attacks remains high.

Productivity in the other four basic clusters is improving; no more so than in the agriculture/food/wine cluster. Unlike the technology and tourism industries where demand has fallen, aggregate demand continues to rise for wine. But demand has shifted to lower-priced labels, and imports are generating price competition at all levels of product. Thus, rising volume offsets somewhat lower prices, and with payrolls falling, productivity is up. Given that the winemaking industry is amid a long-term cycle of expanded global production, the local industry must strive for continued productivity gains going forward. This is true for nearly all industries, but perhaps more so in industries such as viticulture and winemaking that face long-term trends due to the long lag between initial investment and final product.

**Chart 30: Basic Cluster Productivity Now Improving, % change**



### **Sonoma County Through Recession and Recovery**

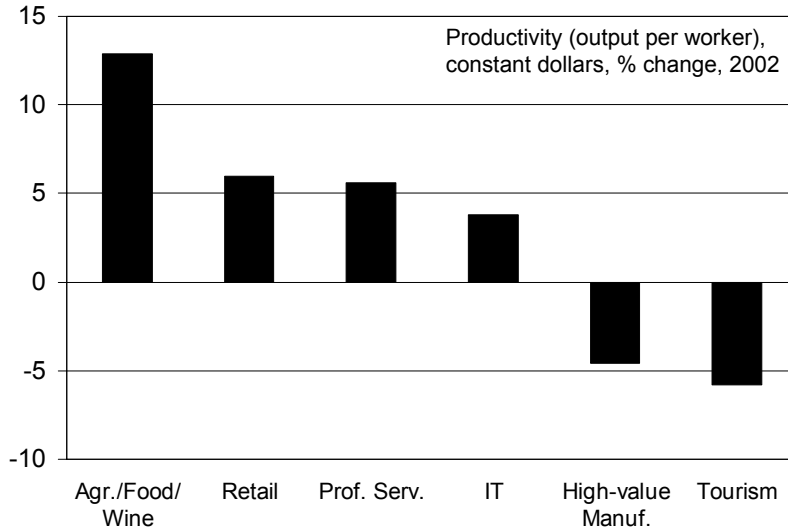
**Cluster Employment Distribution.** The pace of growth of a region’s basic industries is indicative of the nature of the economy. In a mature or stable economy, the basic industries retain their important role of garnering income from outside the region, driving the overall growth of the local economy. But if the basic industries are not expanding relative to the rest of the local economy, then the economy may be considered a mature economy, with potential to grow, but not to outpace national norms.

In a dynamic economy, however, industry structure changes, with the basic industries gaining a larger share of employment and income over time. This generates consistently strong income and job growth and entices households from other regions to seek employment in the local area. They can grow in the near term either through expanding markets or through an ability to gain market share. But this trend cannot last forever unless the basic industries continue to be innovative and productive. In this way, new markets can be captured while remaining competitive in existing markets. Additionally, new basic industries may arise due to local entrepreneurship. A dynamic economy will not be immune to cyclical downturns, but if it maintains its competitive advantages, it will rebound quickly on the upturn of the macro business cycle.

Sonoma County is an example of a dynamic economy in which most of its basic industries have increased their concentration within the local economy over the past decade. The share of employment among the county’s six clusters rose from 39.9% in 1992 to 42.3% in 2002. Retailing is the only cluster in which its share of employment has consistently fallen during this period. In one sense, this should be no

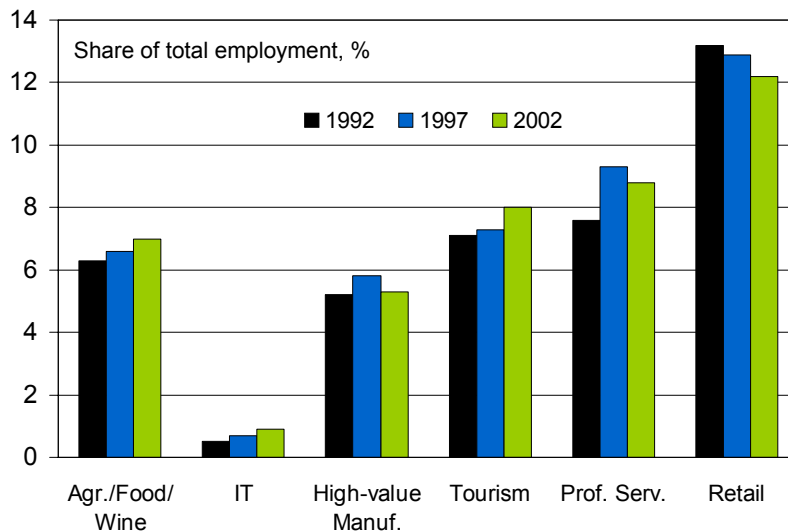
surprise as retailing is not usually thought of as a basic industry at all, but as simply a local service industry. Retailing has been included in our analysis because Sonoma retailers serve a broad market of California's northwest region outside of the county. But the other clusters, serving larger regional, national and international markets, have greater opportunities for growth. Indeed, the concentration of retail employment in Sonoma—12% versus 17% nationally—is relatively low and falling.

**Chart 31: Tourism And Manufacturing Lag In Productivity, 2002, % change**



The concentration of employment in the agriculture/food/wine and tourism clusters rose consistently over the past ten years (see Chart 32). These clearly are industries that create much of the dynamism of the economy today.

**Chart 32: Rising Concentration of Basic Clusters, Employment, % of total**

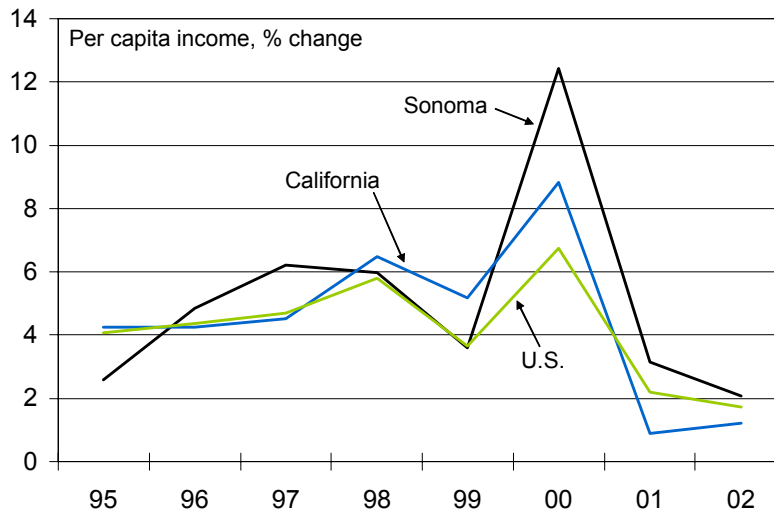


The concentration of high-value manufacturing rose through most of the decade and also was an important contributor to the economy's expansion. But its concentration fell sharply in 2001 when investment spending in telecom and other technology industries faltered.

While the IT cluster is the smallest of the six, its employment concentration continues to rise. Given its small size but its consistent rate of growth, this industry has good potential to be a driving cluster for many years to come.

Professional services rose very rapidly up to the 2001 recession year, when it faltered due to the cyclical demand of management and business services. Yet demand for personal services such as healthcare and education is still supported by high and rising per capita income (see Chart 33). Furthermore, Sonoma County's good quality of life should continue to support independent service providers and those able to telecommute or provide services online.

**Chart 33: Per Capita Income Growth Is Well Above Average, % change**



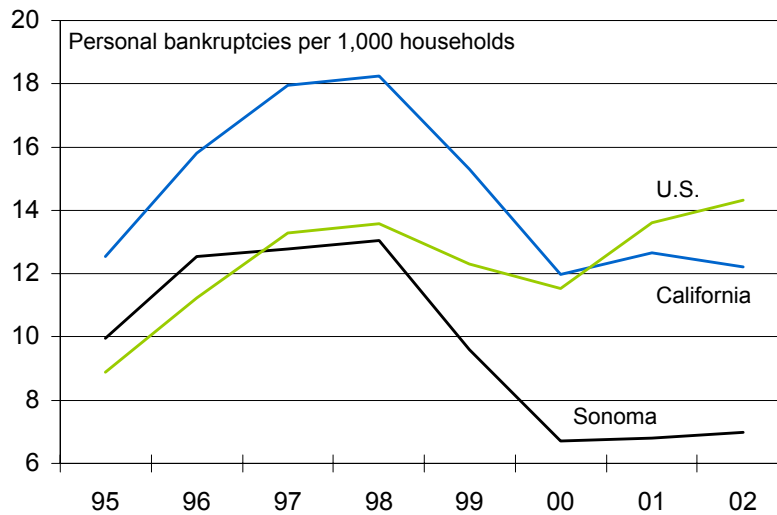
**Income Growth.** One of the great advantages of Sonoma County's basic clusters is that they are, to a large degree, well-paying industries. Per capita income not only exceeds the state and nationwide averages, but it continues to rise at a faster rate than elsewhere. Even during the past two weak years when productivity fell in 2001 and rose only moderately in 2002, local income growth was positive and above average. Thus, barring any unforeseen shocks to the economy, it should emerge during a period of recovery with a strong local economy that is able to support stable demand for housing and local goods and services.

**Credit Quality.** Good credit quality also provides the local economy with considerable strength going forward. As mentioned earlier, personal bankruptcy filings are low and stable in the county. The rate of filings per household in Sonoma County is nearly half the statewide rate, and better than half the national rate. Moreover, the national rate is rising (see Chart 34).

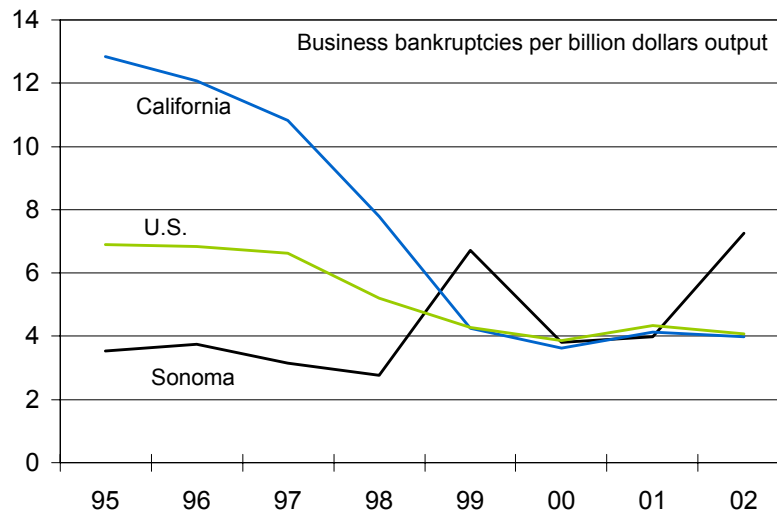
High household income, strong income growth and rising home equity are three factors that help keep personal bankruptcy filings at bay. High household income often, although not always, means a high rate of household saving and investment. Higher saving and ample investment assets mean that even households that face the prospects of employment layoffs have assets that can supplement income flows temporarily. Strong income growth means that this advantage has improved over the past decade, so that when the local economy finally succumbed to recession, households could cope better than elsewhere. Rising home equity has provided an additional boost to household assets. Moreover, with mortgage interest rates at a generational low, there continues to be ample opportunity to refinance mortgage loans and to tap existing equity to supplement income. For four consecutive years—1998 through 2001—the county's house price appreciation outpaced the national average by a wide margin. During this period, the median sales price of single-family homes in the county, as estimated by the California Association of Realtors, rose by an astonishing 72%. Price appreciation has slowed since mid-2001, but still fluctuates between annualized rates of 5% to 10%. Thus, households who have owned their own homes since the late 1990s have gained ample home equity that can be easily turned to cash through mortgage refinancing.

Business bankruptcy filings illustrate a less sanguine picture of corporate balance sheets in Sonoma County (see Chart 35). The filing rate managed to stay low through the recession, but rose above average last year, indicative of the stress that continues in the local economy today. This also provides some indication that the rate of personal filings may understate household financial conditions somewhat. The Census Bureau's estimate of net out-migration of more than 3,000 persons from the county in 2002, the first net outflow in more than ten years, illustrates that many households in financial trouble left the area, and if filing for bankruptcy, have done so elsewhere.

**Chart 34: Personal Bankruptcy Rate Nearly Half The Statewide Average, Filings per ths households**



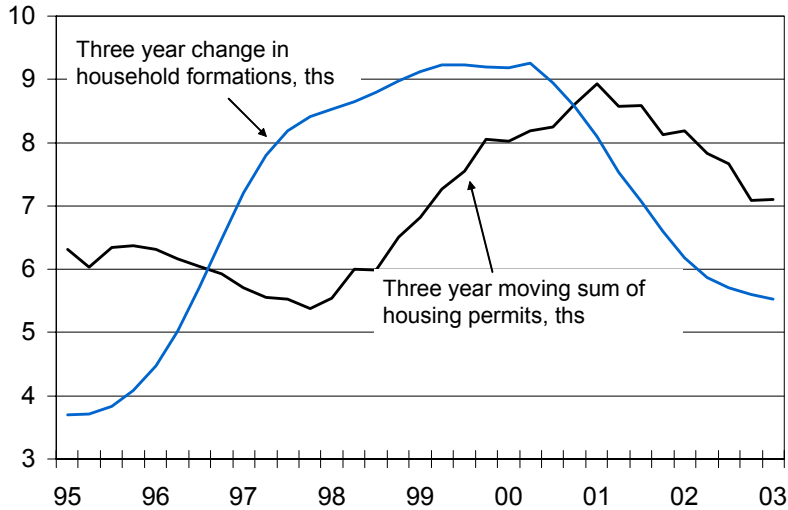
**Chart 35: Business Bankruptcy Filings Beginning To Rise, Filings per billion dollars of gross product**



**Housing markets.** A lack of significant excess supply in the housing market supports house prices, even under current weak economic and demographic conditions. During the 1998 to 2001 period of high price appreciation, demand, as measured by new household formations, clearly outstripped new supply (see

Chart 36). The situation has begun to reverse, with demand now rising more slowly than new supply. Yet the gap is still narrower than during the first half of the 1990s, and low interest rates keep demand higher than would normally be indicated by demographic trends only. Indeed, in the current interest rate environment, demand still appears to exceed supply (see Chart 37).

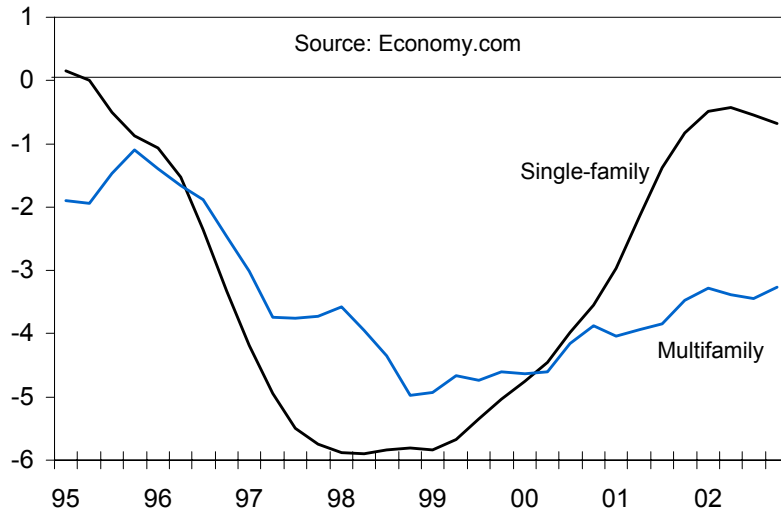
**Chart 36: Housing Supply and Demand Nearly Balanced**



Thus, even during this period when the economy is struggling to recover, an active construction industry is important. First, current price appreciation keeps housing affordability limited. Economy.com estimates that Sonoma County’s housing affordability is at its lowest level in ten years. A current affordability index of 63 means that a median income earning household in the county can afford to purchase a house priced at only 63% of the county’s median sales price. A continued new stream of housing stock will help increase the supply of housing and improve affordability. Second, the construction industry is labor intensive. Thus, an active construction industry helps provide jobs in an otherwise weak labor market. Third, additions to the housing stock will help insure that housing will be available once the economy accelerates and migration shifts from a net outflow to a net inflow.

Meeting the need for a wide range and ample supply of housing is inevitably a challenge in Sonoma County. The need to preserve the unique attributes of the county’s environment, which is a critical factor that supports several of its industry clusters, can be at odds with the need to provide housing. Hence, there is a continued need for cooperative long-term efforts to meet both needs.

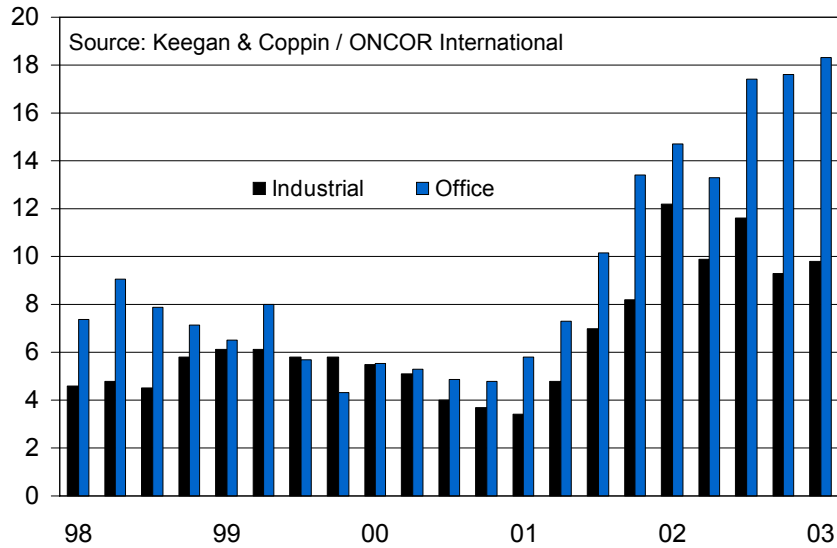
**Chart 37: Low Interest Rates Eliminate Any Excess Supply,  
Months of housing supply**



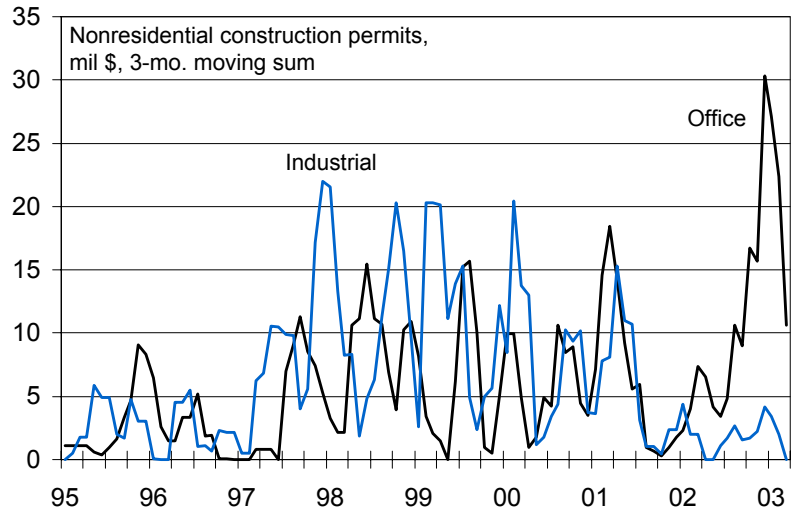
**Nonresidential construction markets.** The office space market has not yet begun to firm. Given the weak pace of service-producing employment growth, the office market may not see any significant improvement until early next year. The office vacancy rate has soared to over 18% through the first quarter of this year according to Keegan & Coppin/ONCOR International (see Chart 38). This is approximately two percentage points above the national average. The closing of small startup companies and the downsizing by medical device and telecom firms have contributed to the rise in vacancy rates. Rates are likely to stay high for some time as new construction will be adding to the supply of office space soon. Permit issuance for new office space construction rose steeply at the end of last year (see Chart 39).

The industrial space market looks a little more balanced as the vacancy rate has eased and construction nearly came to a halt last year. The industrial vacancy rate of just under 10% is only slightly better than the 11.5% national average. The nationwide rate is still rising, while Sonoma's rate has eased slightly. Continued cutbacks among the county's manufacturers, however, indicate there is considerable risk that the rate could rise again before a longer-term improvement is evident.

**Chart 38: High Vacancies in Commercial Real Estate, Vacancy Rates, %**



**Chart 39: Construction Permit Issuance, \$ mil, 3-mo. moving sum**

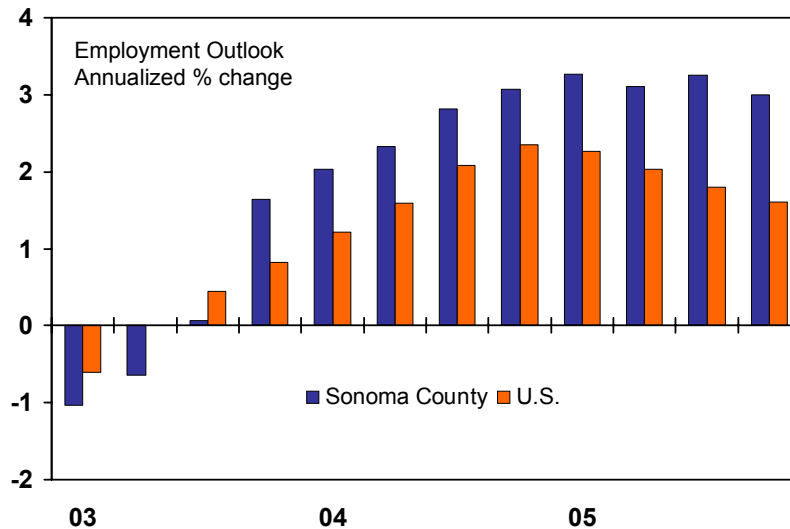


**Economic Outlook For The County**

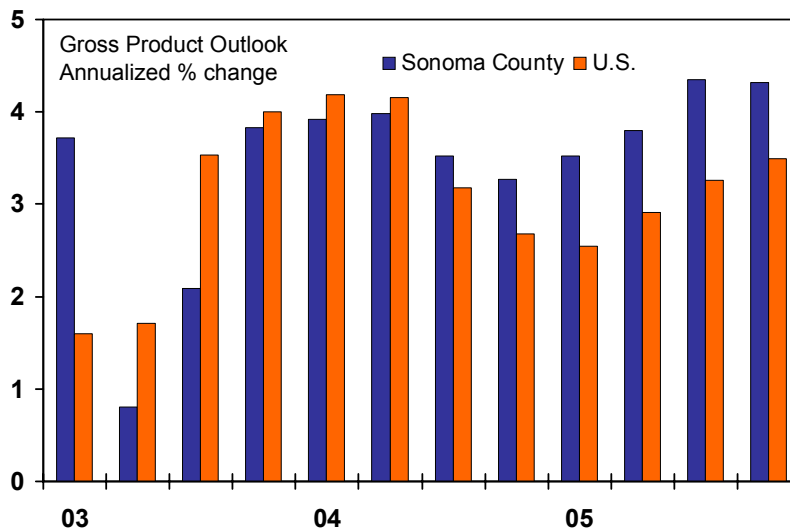
The remainder of this year will be one of continued consolidation within most of Sonoma County’s industries, with some improvement expected in 2004. Once the economy does begin improving, however, the county’s industrial structure will position it to take advantage of shifting macroeconomic trends. The turnaround will be seen first in employment because the county’s labor-intensive tourism industry has the most potential for near-term improvement (see Chart 40). But because the higher value-added industries such as tech-based manufacturing and winemaking will face delayed improvements in demand and pricing, the county’s output growth will only exceed the national average toward the end of 2004 (see Chart 41).

Thus, there will be a delay before a broader improvement in the generation of income and wealth for the county is evident.

**Chart 40: Employment Improves End Of This Year**



**Chart 41: Output Growth Exceeds U.S. Only In 2005**



**Tourism.** Travel and tourism could improve as early as this summer, which will be a leading factor in the County’s recovery. Most consumer trends will improve only modestly in the coming year as there is little pent-up demand in most consumer markets. The travel and tourism industry is one exception, however. Vacations have been modest since the recession and travel plans have kept families closer to home. The big trips have been postponed. This summer and fall, some of the pent-up demand for longer trips will support more vacation spending, and Sonoma County should capture some additional travel to California destinations. The impact on the economy will be positive but moderate. Since the leisure and hospitality industry has not cut back on labor this past year, there is a chance that increased business could

be accommodated by only a moderate gain in employment. But stronger demand would help support higher room rates and improved returns for the industry. The primary risk to this assessment is the perception of safety. Should federal terrorist alerts remain elevated through the summer, travel will remain below potential. Another major terrorist attack elsewhere in the U.S. or overseas could curtail any improvement in travel trends. Barring such problems, tourism will be among the first clusters to lead the county's economy to recovery.

**Agriculture/Food/Wine.** An improvement in tourist arrivals would provide some support for the wine industry, but even if demand improves, the rising global supply of wine will keep downward pressure on prices. Thus, any strong improvement in the industry will be delayed until domestic demand rises sharply and the global economy accelerates enough for U.S. winemakers to take full advantage of the weaker dollar in overseas markets. This will not happen until some time next year at the very earliest.

For both tourism and wine, each dependent upon consumer spending, pricing will be critical in competing well in the near term. Productivity will be key as cost control will be as important as market share. Innovation and marketing will be important to help capture a moderately expanding market. Tourism will have to continue to package a unique Sonoma experience, combining wine, golf, the coast and nature with the security of a somewhat rural destination. The wine industry will have to continue to make its labels stand out in a market increasingly crowded by imports. Even with a weaker dollar, rising production will force overseas producers to look to the huge U.S. market for sales. The wine industry will be slower to turn around, with job growth in the agriculture/food/winemaking cluster not expected to peak until 2005.

**Information technology.** Among Sonoma County's clusters driven by business investment, the strongest outlook is for the relatively small information technology industry. Demand for software and systems services is already rather strong as businesses seek to gain the most from their current computer hardware. Moreover, as business investment begins to support upgrades of computer hardware and electronic equipment, demand for software and systems will further strengthen. Employment growth in the county's IT cluster will remain strong and, with tourism, will lead near-term growth. The small size of the IT cluster, however, will limit its multiplier effects in the broader Economy.

**High-value manufacturing.** The high-value manufacturing cluster will be the slowest to turn around. The industry is limited in the near term by weak demand and by a shortage of venture capital with which to take products from the research stage to an early venture stage of testing and evaluation. Demand for telecommunications equipment will improve in 2004 at the earliest, and possibly 2005 before there is a significant amount of investment in new telecom equipment. Much will depend upon how quickly the former Bell companies are able to build out the last mile of broadband capacity without the need to share the capacity with competitors.

Venture capital support of startups in telecom, medical equipment and biotechnology will depend upon conditions in equity markets. Until clear exit strategies are visible through rising equity markets, venture capital will remain shy of early-round funding, focusing rather on less risky late-stage ventures. Thus, there could remain a gap in funding that could prevent ventures from expanding from pure research into early venture stages, creating a bottleneck in local entrepreneurship.

Both the near-term and long-term outlook for employment in high-value manufacturing is weaker than the other clusters. Job growth will peak in 2005 but will not exceed a 2% rate. The industry is the second smallest cluster in terms of employment and will continue a slow pace of hiring in the future. The industry's outlook is better illustrated by its projected output growth, which will be more in line with the other clusters, expanding by a 3% to 4% rate in coming years, with a peak growth rate occurring in 2006.

**Professional Services.** Professional services will be supported by continued outsourcing of business services as the economy gets back on its feet. Further, there should be little letup in demand for health and education services. Indeed, there is considerable ongoing effort to beef up college and high school technical programs in the county.

**Retailing.** Among all the clusters, retailing will face the most challenges in terms of pricing, productivity and innovation. Expanded numbers of retail outlets and rising prices of imported goods will put pressure on margins. A need to improve productivity will be imposed by higher import prices and by the consistent productivity gains of major chain stores. Innovation will be key to maintain competitiveness and to continue to maintain a market base within the neighboring counties of the North Coast as national chains expand their presence in smaller markets and as Internet shopping further expands.

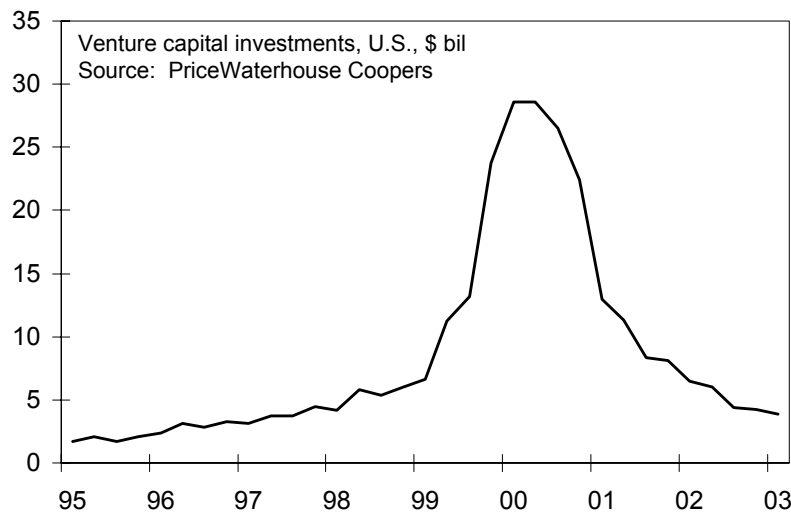
**The decade ahead.** Sonoma County faces a number of challenges in the remainder of this decade. The first will be to maintain an expanding labor force of skilled workers to support the economy's leading clusters. This entails several aspects. The strong efforts to expand the links between higher education and the county's growing industries must continue to be nurtured to promote skills within the local labor force and to attract students from elsewhere. Second, consistent opportunities for networking within the clusters and between the clusters would foster innovation and collaboration in the economy. Third, the supply of housing must be kept adequate so that housing costs do not constrain in-migration. The housing market today is as close to balance between supply and demand as it has been since the mid 1990s. But if the economy were to accelerate rapidly, shortages would appear again quickly. None of these issues is new, but they become ever more important with the rising need to promote innovation, compete on pricing and improve productivity in all industries.

A new challenge will be to maintain and improve county infrastructure and services with less aid from the state. The state's fiscal difficulties are nowhere near resolution. The county will have to rely increasingly on its own resources, and upon public-private partnerships to attain many of its goals in coming years. Here, too, the county has some comparative advantage due to the extensive work over the past decade in bringing business, education, environmental and public service groups together to focus on economic issues.

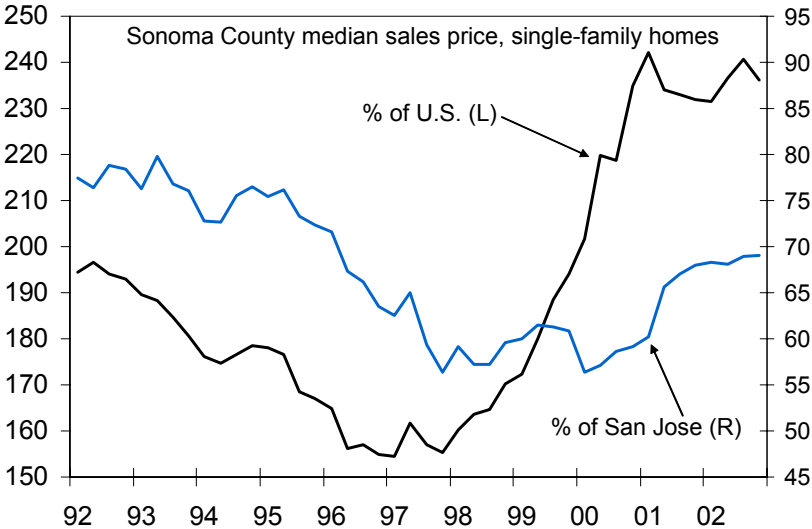
A further challenge will be to continue to innovate with less venture capital. Venture funds claim to be sitting on ample cash for future investments. Yet the coming decade will be different as the amount of venture capital available will not nearly approach the peaks reached in the late 1990s (see Chart 42). Also, VC funds may continue to shy from early venture rounds, adding further friction to the innovative process.

Finally, Sonoma County's competitive position versus Silicon Valley and other centers of technology likely will be less, at least in terms of costs. Sharp declines in costs of office and flex space in Silicon Valley, as well as declines in house prices there, have narrowed the cost advantage that Sonoma had enjoyed over the San Jose metropolitan area and elsewhere (see Chart 43). Thus, factors such as quality of life, an innovative and supportive business climate, educational opportunities and cultural amenities will be increasingly important factors in Sonoma's economic recovery in the coming years.

**Chart 42: Venture Capital Investments, U.S., \$ bil**



**Chart 43: Housing Costs Comparatively High**



# TABLES

**Table 1: Sonoma County Clusters**

Industries within clusters are listed by their North American Industry Classification System codes

## Basic Clusters

- 1) Agriculture, Wineries, and Food Processing
  - 111,112 Farming
  - 311 Food manufacturing
  - 3121 Beverage manufacturing
  - 4238 Machinery, equipment, and supplies, wholesale
  - 4245 Farm-product raw material, wholesale
- 2) Information Technology
  - 5112 Software publishers
  - 5161 Internet publishing and broadcasting
  - 5181 Internet service providers and web search portals
  - 5182 Data processing services
  - 5415 Computer systems design and related services
- 3) High-tech electronics
  - 3341 Computer and peripheral equipment
  - 3342 Communications equipment
  - 3342 Audio and video equipment
  - 3344 Semiconductors and other electronic components
- 4) High-tech Instruments and Optical Goods
  - 3345 Navigational, measuring, electromedical, and control instruments
  - 3346 Manufacturing and reproducing magnetic and optical media
  - 3391 Medical equipment and supplies
- 5) Other High-value Manufacturing
  - 3332 Industrial machinery
  - 3334 Ventilation, heating, air-conditioning, and refrigeration equipment
  - 3351 Electric lighting equipment
  - 3352 Household appliances
  - 3353 Electrical equipment
  - 3359 Other electrical equipment and components
- 6) Resource-based Manufacturing
  - 316 Leather and allied products
  - 321 Wood products
  - 322 Paper manufacturing
  - 327 Nonmetallic mineral products
- 7) Financial Activities excluding real estate
  - 521 Monetary authorities - central bank
  - 522 Credit intermediation and related activities
  - 523 Securities, commodities, and other investments
  - 524 Insurance carriers and related activities
  - 525 Funds, trusts, and other financial vehicles
- 8) Tourism
  - 4811 Scheduled air transportation
  - 4812 Nonscheduled air transportation
  - 4853 Taxi and limousine services
  - 4855 Charter bus industry
  - 487 Scenic and sightseeing transportation
  - 4881 Support activities for air transportation
  - 5121 Motion picture and video industries
  - 5321 Automotive equipment rental and leasing
  - 5615 Travel arrangement and reservation services
  - 711 Performing Arts, Spectator Sports, and Related Industries
  - 712 Museums, Historical Sites, and Similar Institutions
  - 713 Amusement, Gambling, and Recreation Industries
  - 7211 Traveler accommodation
  - 7212 Recreational vehicle parks and recreational camps
  - 7221 Full-Service Restaurants
  - 7223 Special Food Services
  - 7224 Drinking Places (Alcoholic Beverages)

## Non-basic Clusters

- 9) Engineering and Research
  - 5413 Architectural, engineering, and related services
  - 5417 Scientific research and development services
- 10) Legal Services
  - 5411 Legal services
- 11) Health Services
  - 621 Ambulatory health care services
  - 622 Hospitals
  - 623 Nursing and residential facilities
- 12) Other Professional Services
  - 3231 Printing and support activities
  - 5412 Accounting, taxes, bookkeeping, payroll services
  - 5414 Specialized design services
  - 5416 Management, scientific, and technical consulting
  - 5418 Advertising and related services
  - 5419 Other professional, scientific, and technical services
  - 55 Management of companies and enterprises
  - 5611 Office administrative services
  - 5612 Facilities support services
  - 5613 Employment services
  - 5614 Business support services
  - 5616 Investigation and security services
  - 5617 Services to buildings and dwellings
  - 5619 Other support services
  - 562 Waste management and remediation services
- 13) Retail Trade
  - 441 Motor vehicle and parts dealers
  - 442 Furniture and home furnishing stores
  - 443 Electronics and appliance stores
  - 444 Building materials and garden equipment and supplies
  - 445 Food and beverage stores
  - 446 Health and personal care stores
  - 447 Gasoline stations
  - 448 Clothing and accessory stores
  - 451 Sporting goods, hobby, book, and music stores
  - 452 General merchandise stores
  - 453 Misc. store retailers
  - 454 Nonstore retailers

**Table 2: Leading Clusters in Sonoma County**

- 1) Agriculture, Wineries, and Food Processing
- 2) Information Technology
- 3) High-value Added Manufacturing
  - a) High-tech electronics
  - b) High-tech instruments and Optical Goods
  - c) Other high-value manufacturing
- 4) Tourism
- 5) Professional Services
  - a) Engineering and Research
  - b) Other professional services
- 6) Retail Trade

**Table 3: Sonoma County Historical Summary Indicators**

	1997	1998	1999	2000	2001	2002	Annual Growth 97-02
<b>Economy</b>							
Gross Metro Product (Mil 96\$)	12,087.3	12,991.9	13,967.5	15,313.7	15,349.3	15,889.5	5.6
% Annual Change	8.3	7.5	7.5	9.6	0.2	3.5	
Gross Metro Product (Mil \$)	12,306.6	13,432.5	14,718.1	16,503.5	17,109.0	17,803.2	7.7
% Annual Change	10.3	9.2	9.6	12.1	3.7	4.1	
Non-farm Employment (Ths)	165.4	173.0	179.3	186.1	189.8	187.4	2.5
% Annual Change	5.0	4.6	3.6	3.8	2.0	-1.3	
<b>Components of Employment</b>							
Mining and Natural Resources	0.5	0.5	0.4	0.4	0.3	0.3	-9.4
Construction	9.4	10.1	11.9	13.1	13.7	13.4	7.4
Manufacturing	25.9	28.3	29.2	30.2	30.4	26.7	0.6
Trade, Transportation, and Utilities	32.3	33.1	33.2	33.6	34.1	34.2	1.2
Wholesale Trade	5.3	5.5	5.5	5.8	6.0	6.0	2.6
Retail Trade	22.8	23.3	23.5	23.7	24.1	24.1	1.2
Transportation and Utilities	4.3	4.2	4.1	4.1	4.0	4.1	-0.8
Information	3.1	3.4	3.6	4.1	4.5	4.2	6.3
Financial Activities	9.0	9.4	10.0	10.2	10.4	10.5	3.1
Professional and Business Services	17.6	18.8	19.5	20.6	20.0	19.3	1.8
Education and Health Services	19.9	20.7	21.1	22.0	22.9	23.8	3.7
Leisure and Hospitality	16.6	17.1	17.5	17.9	18.7	19.9	3.7
Other Services	5.9	6.2	6.3	6.4	6.8	6.7	2.8
Government	25.2	25.7	26.6	27.6	28.0	28.4	2.4
Labor Force (Ths)	239.6	247.1	250.8	259.1	262.6	266.8	2.2
% Annual Change	4.2	3.1	1.5	3.3	1.3	1.6	
Number of Employed (Ths)	230.6	238.9	244.1	252.3	255.0	254.8	2.0
Number of Unemployed (Ths)	9.0	8.2	6.7	6.8	7.7	12.0	5.9
Unemployment Rate (%)	3.8	3.3	2.7	2.6	2.9	4.5	<b>Average</b> 3.3
<b>Income, Demographics, and Consumption</b>							
Personal Income (Mil \$)	12,444.7	13,452.0	14,178.7	16,195.2	16,888.8	17,370.9	6.9
% Annual Change	8.4	8.1	5.4	14.2	4.3	2.9	
Real Personal Income (Mil 96\$)	12,206.0	13,056.4	13,540.8	15,077.1	15,416.6	15,638.3	5.1
Per Capita Income (\$)	28,468.5	30,168.1	31,270.4	35,174.6	36,205.9	37,086.6	5.4
Median Household Income (\$)	48,257.8	50,029.7	53,076.0	58,505.2	60,034.8	61,064.3	4.8
Personal Bankruptcy Filings	2,090.0	2,173.0	1,627.0	1,158.0	1,183.0	1,223.0	-10.2
Consumer Price Index	171.2	176.9	183.8	193.2	201.5	206.2	3.8
Population (Ths)	437.1	445.9	453.4	460.4	466.5	468.4	1.4
% Annual Change	2.0	2.0	1.7	1.5	1.3	0.4	
Age <4	29.8	28.7	27.8	27.7	27.7	27.6	-1.6
Age 5-19	92.0	94.0	95.6	97.6	99.5	100.3	1.8
Age 20-24	23.7	25.0	26.7	28.0	29.2	30.2	5.0
Age 25-44	136.9	137.1	136.2	134.5	133.4	131.2	-0.9
Age 45-64	97.4	103.4	109.4	114.4	118.2	121.0	4.4
Age >65	57.4	57.7	57.8	58.2	58.4	58.2	0.2
Households (Ths)	163.1	166.3	169.1	172.4	174.6	174.9	1.4
% Annual Change	2.1	1.9	1.7	2.0	1.3	0.1	
Net Migration (Ths)	7.0	7.1	6.0	5.3	4.2	-0.3	
<b>Residential Housing Market</b>							
Total Housing Permits	1,961.0	3,062.0	3,036.0	2,505.0	2,583.0	1,992.4	<b>Average</b> 2,523.2
% Annual Change	31.9	56.1	-0.9	-17.5	3.1	-22.9	
Single Family Permits	1,785.0	2,098.0	2,348.0	2,013.0	1,717.0	1,399.0	1,893.3
Multi Family Permits	176.0	964.0	688.0	492.0	866.0	593.4	629.9
Median Exist. Home Price (SA, Ths \$)	225.8	246.7	276.4	325.7	364.8	403.0	12.3
% Annual Change	4.7	9.3	12.1	17.8	12.0	10.5	
Existing Home Sales (Ths)	11.6	13.3	14.2	12.5	10.7	10.3	-2.2
Mortgage Originations (Mil \$)	2,839.0	5,163.0	4,498.7	3,990.5	8,651.2	11,008.0	31.1
Affordability Index	79.8	79.0	75.8	68.0	65.0	63.0	<b>Average</b> 71.7
<b>Nonresidential Construction</b>							
Nonres. Building Permits (Mil \$)							<b>Average</b>
Total	173.8	225.0	226.2	208.8	211.7	244.4	215.0
Office Buildings	17.4	35.5	23.4	21.7	26.5	50.1	29.1
Retail Space	24.4	34.3	32.8	27.8	35.9	54.0	34.9
Industrial	42.7	37.7	48.7	29.5	22.2	8.9	31.6

**Table 3: Sonoma County Forecasted Summary Economic Indicators**

	2003	2004	2005	2006	2007	2008	Annual Growth 03-08
<b>Economy</b>							
Gross Metro Product (Mil 96\$)	16,289.3	16,909.0	17,575.0	18,327.5	19,039.9	19,753.7	3.9
% Annual Change	2.5	3.8	3.9	4.3	3.9	3.7	
Gross Metro Product (Mil \$)	18,542.9	19,557.5	20,674.0	21,971.9	23,241.6	24,545.2	5.8
% Annual Change	4.2	5.5	5.7	6.3	5.8	5.6	
Non-farm Employment (Ths)	186.6	189.9	195.7	201.6	207.1	212.6	2.6
% Annual Change	-0.4	1.8	3.1	3.0	2.7	2.7	
<b>Components of Employment</b>							
Mining and Natural Resources	0.3	0.3	0.3	0.3	0.3	0.3	-0.7
Construction	13.6	13.3	13.4	13.7	14.0	14.3	1.0
Manufacturing	25.2	25.1	25.4	25.7	25.9	26.0	0.7
Trade, Transportation, and Utilities	34.1	34.4	35.4	36.2	36.9	37.5	2.0
Wholesale Trade	5.9	5.9	6.1	6.3	6.4	6.6	2.2
Retail Trade	24.0	24.3	24.9	25.5	25.9	26.4	1.9
Transportation and Utilities	4.1	4.2	4.3	4.4	4.5	4.6	2.1
Information	4.3	4.5	4.7	4.9	5.1	5.3	4.1
Financial Activities	10.6	10.9	11.3	11.6	11.9	12.2	3.0
Professional and Business Services	19.1	19.9	21.0	22.2	23.5	24.8	5.3
Education and Health Services	24.4	25.0	25.9	26.9	27.8	28.8	3.4
Leisure and Hospitality	21.0	21.9	22.9	23.9	25.0	26.0	4.4
Other Services	6.8	7.0	7.2	7.4	7.7	7.9	2.9
Government	27.4	27.7	28.2	28.7	29.2	29.6	1.5
Labor Force (Ths)	268.5	273.6	279.9	287.2	294.6	302.2	2.4
% Annual Change	0.7	1.9	2.3	2.6	2.6	2.6	
Number of Employed (Ths)	255.4	260.8	268.0	275.6	283.1	290.6	2.6
Number of Unemployed (Ths)	13.1	12.8	11.9	11.7	11.6	11.6	-2.4
Unemployment Rate (%)	4.9	4.7	4.3	4.1	3.9	3.8	<b>Average</b> 4.3
<b>Income, Demographics, and Consumption</b>							
Personal Income (Mil \$)	18,090.7	19,045.2	20,171.8	21,376.4	22,595.6	23,846.9	5.7
% Annual Change	4.1	5.3	5.9	6.0	5.7	5.5	
Real Personal Income (Mil 96\$)	15,953.8	16,495.5	17,119.1	17,783.0	18,420.8	19,048.3	3.6
Per Capita Income (\$)	38,404.4	39,832.2	41,272.0	42,776.0	44,333.6	45,894.5	3.6
Median Household Income (\$)	62,428.3	64,361.0	66,246.6	68,290.7	70,331.6	72,326.8	3.0
Personal Bankruptcy Filings	1,186.6	1,027.0	981.8	1,090.2	1,130.2	1,146.8	-0.7
Consumer Price Index	212.0	216.7	222.3	227.8	233.1	238.5	2.4
Population (Ths)	471.1	478.1	488.8	499.7	509.7	519.6	2.0
% Annual Change	0.6	1.5	2.2	2.3	2.0	2.0	
Age <4	27.6	27.9	28.5	29.2	30.0	30.9	2.3
Age 5-19	101.0	102.8	105.1	107.3	109.2	111.0	1.9
Age 20-24	31.3	32.4	33.7	34.9	35.9	37.0	3.4
Age 25-44	129.3	128.8	129.5	130.4	131.2	132.2	0.5
Age 45-64	123.8	127.6	132.5	137.4	141.8	145.5	3.3
Age >65	58.1	58.6	59.5	60.6	61.7	63.1	1.7
Households (Ths)	175.8	178.9	183.6	188.3	192.8	197.4	2.3
% Annual Change	0.5	1.7	2.7	2.6	2.4	2.4	
Net Migration (Ths)	1.0	5.3	8.8	9.0	7.8	7.6	
<b>Residential Housing Market</b>							
Total Housing Permits	2,411.5	2,417.5	2,479.1	2,582.3	2,586.7	2,594.3	<b>Average</b> 2,511.9
% Annual Change	21.0	0.3	2.6	4.2	0.2	0.3	
Single Family Permits	1,847.6	1,819.7	1,859.7	1,888.5	1,848.1	1,821.7	1,847.6
Multi Family Permits	563.9	597.8	619.4	693.8	738.6	772.6	664.3
Median Exist. Home Price (SA, Ths \$)	424.9	429.3	440.2	454.4	472.7	487.5	2.8
% Annual Change	5.4	1.0	2.6	3.2	4.0	3.1	
Existing Home Sales (Ths)	7.9	7.2	7.5	8.0	8.3	8.6	1.8
Mortgage Originations (Mil \$)	11,222.7	3,302.8	3,302.8	3,508.0	3,798.1	4,035.0	-18.5
Affordability Index	63.7	62.0	61.2	57.2	56.3	56.1	<b>Average</b> 59.4
<b>Nonresidential Construction</b>							
Total	200.6	224.9	240.1	250.1	266.0	280.2	<b>Average</b> 243.6
Office Buildings	23.7	24.4	27.5	29.1	31.3	33.2	28.2
Retail Space	56.6	68.6	70.9	73.2	75.6	78.1	70.5
Industrial	4.2	6.8	7.9	9.0	10.3	11.5	8.3

**Table 4: Sonoma County Historical Employment by Leading Clusters**  
**Thousands**

	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>Compound Ann. Growth Rate 97-02</b>	<b>Pct. Share of Employment 2002</b>
Total	175.9	185.4	191.9	197.0	200.3	198.0	2.4	100.0
% Change	5.0	5.4	3.5	2.7	1.7	-1.2		
1. Agriculture	11.6	13.3	15.0	14.7	14.3	13.8	3.6	7.0
% Change	4.9	15.1	12.2	-1.7	-3.0	-3.1		
2. Information Technology	1.2	1.3	1.5	1.8	1.8	1.9	8.8	0.9
% Change	13.0	8.9	14.8	15.0	4.3	1.7		
3. High-value Manufacturing	10.2	11.3	11.0	11.9	12.9	10.5	0.6	5.3
% Change	12.0	10.2	-2.6	8.5	8.4	-18.5		
4. Tourism	12.9	13.5	14.0	14.3	14.9	15.9	4.3	8.0
% Change	0.9	4.7	3.9	2.4	4.2	6.4		
5. Professional Services	16.4	17.4	17.9	19.0	18.4	17.5	1.3	8.8
% Change	15.0	6.2	3.0	5.9	-3.2	-4.7		
6. Retail Trade	22.7	23.3	23.5	23.7	24.1	24.1	1.2	12.2
% Change	4.4	2.4	0.9	0.9	1.6	0.1		
Sum of Clusters	75.1	80.1	82.9	85.4	86.4	83.8	2.2	42.3
% Change	7.1	6.8	3.5	3.0	1.2	-3.1		
Other	100.8	105.3	108.9	111.5	113.9	114.2	2.5	57.7
% Change	3.5	4.4	3.5	2.4	2.1	0.3		

**Table 4: Sonoma County Forecasted Employment by Leading Clusters**  
**Thousands**

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Compound Ann. Growth Rate 03-08</b>	<b>Pct. Share of Employment 2008</b>
Total	198.9	203.4	209.7	215.8	221.6	227.6	2.7	100.0
% Change	0.4	2.3	3.1	2.9	2.7	2.7		
1. Agriculture	13.7	14.1	14.5	15.0	15.4	15.9	3.0	7.0
% Change	-1.0	2.6	3.2	3.1	3.0	3.1		
2. Information Technology	1.9	2.1	2.2	2.3	2.4	2.5	4.9	1.1
% Change	4.4	5.8	5.2	4.6	4.6	4.6		
3. High-value Manufacturing	9.8	9.9	10.1	10.2	10.3	10.3	1.1	4.5
% Change	-6.9	1.1	1.8	1.0	0.7	0.6		
4. Tourism	16.6	17.4	18.2	19.1	19.9	20.7	4.5	9.1
% Change	4.6	4.6	4.8	4.4	4.4	4.3		
5. Professional Services	17.7	18.5	19.6	20.6	21.7	22.9	5.3	10.1
% Change	1.0	4.8	5.5	5.5	5.3	5.3		
6. Retail Trade	24.0	24.4	25.0	25.5	26.0	26.5	2.0	11.6
% Change	-0.5	1.5	2.5	2.2	1.8	1.9		
Sum of Clusters	83.8	86.3	89.5	92.6	95.6	98.8	3.4	43.4
% Change	0.0	3.1	3.7	3.4	3.3	3.3		
Other	115.1	117.0	120.2	123.2	126.0	128.8	2.3	56.6
% Change	0.8	1.7	2.7	2.5	2.3	2.2		

**Table 5: Sonoma County Historical Gross Regional Product (Output) by Leading Clusters**  
*Million of 1996 dollars*

							Compound Ann.	Pct. Share of
	1997	1998	1999	2000	2001	2002	Growth Rate	Total Output
							97-02	2002
Total	12,087.3	12,991.9	13,967.5	15,313.7	15,349.3	15,889.5	5.6	100.0
% Change	8.3	7.5	7.5	9.6	0.2	3.5		
1. Agriculture	757.8	701.5	830.7	1,079.1	969.9	1,061.0	7.0	6.7
% Change	25.8	-7.4	18.4	29.9	-10.1	9.4		
2. Information Technology	130.0	138.6	168.7	182.8	182.5	192.7	8.2	1.2
% Change	25.7	6.7	21.7	8.3	-0.2	5.6		
3. High-value Manufacturing	612.5	775.8	869.4	1,127.1	840.7	653.5	1.3	4.1
% Change	13.9	26.7	12.1	29.6	-25.4	-22.3		
4. Tourism	458.2	497.2	524.4	538.9	549.3	550.6	3.7	3.5
% Change	3.2	8.5	5.5	2.8	1.9	0.2		
5. Professional Services	1,018.8	1,074.2	1,169.3	1,284.1	1,249.9	1,257.4	4.3	7.9
% Change	14.3	5.4	8.9	9.8	-2.7	0.6		
6. Retail Trade	1,041.1	1,144.2	1,219.9	1,304.2	1,375.0	1,459.7	7.0	9.2
% Change	7.8	9.9	6.6	6.9	5.4	6.2		
Sum of Clusters	4,018.4	4,331.3	4,782.4	5,516.2	5,167.2	5,174.8	5.2	32.6
% Change	13.4	7.8	10.4	15.3	-6.3	0.1		
Other	8,068.9	8,660.6	9,185.2	9,797.5	10,182.1	10,714.6	5.8	67.4
% Change	6.0	7.3	6.1	6.7	3.9	5.2		

**Table 5: Sonoma County Forecasted Gross Regional Product (Output) by Leading Clusters**  
*Million of 1996 dollars*

	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>Compound Ann. Growth Rate</b>	<b>Pct. Share of Total Output</b>
							<b>03-08</b>	<b>2008</b>
Total	16,289.3	16,909.0	17,575.0	18,327.5	19,039.9	19,753.7	3.9	100.0
% Change	2.5	3.8	3.9	4.3	3.9	3.7		
1. Agriculture	1,030.7	1,085.0	1,171.0	1,263.9	1,339.0	1,403.0	6.4	7.1
% Change	-2.9	5.3	7.9	7.9	5.9	4.8		
2. Information Technology	202.9	217.7	232.3	247.6	262.8	278.5	6.5	1.4
% Change	5.3	7.3	6.7	6.6	6.2	5.9		
3. High-value Manufacturing	825.6	848.6	879.6	904.1	923.1	939.8	2.6	4.8
% Change	26.3	2.8	3.7	2.8	2.1	1.8		
4. Tourism	560.6	586.8	613.7	643.9	673.5	703.2	4.6	3.6
% Change	1.8	4.7	4.6	4.9	4.6	4.4		
5. Professional Services	1,282.7	1,349.8	1,431.0	1,524.3	1,617.5	1,714.0	6.0	8.7
% Change	2.0	5.2	6.0	6.5	6.1	6.0		
6. Retail Trade	1,443.9	1,491.6	1,543.7	1,604.3	1,653.6	1,703.0	3.4	8.6
% Change	-1.1	3.3	3.5	3.9	3.1	3.0		
Sum of Clusters	5,346.5	5,579.5	5,871.2	6,188.1	6,469.5	6,741.6	4.7	34.1
% Change	3.3	4.4	5.2	5.4	4.5	4.2		
Other	10,942.8	11,329.5	11,703.8	12,139.5	12,570.3	13,012.1	3.5	65.9
% Change	2.1	3.5	3.3	3.7	3.5	3.5		