

# **Sonoma County's Advantage in the Economic Recovery**

*Prepared for:*

**Sonoma County Economic Development Board**

*May 2004*

**Economy.com, Inc.**

600 WILLOWBROOK LANE

SUITE 600

WEST CHESTER, PA 19382-5500

PHONE: 610.696.8700

# Sonoma County's Advantage in the Economic Recovery

## Table of Contents

|  |           |
|--|-----------|
| <b>Executive Summary</b> .....   | <b>2</b>  |
| The Broad Picture .....  | 3         |
| Rising rates .....   | 4         |
| Household cash flow .....  | 6         |
| Rising debt loads .....  | 7         |
| Borrowing costs .....  | 8         |
| Asset values .....   | 9         |
| Investment and the dollar .....  | 12        |
| Conclusions .....  | 13        |
| <b>Forecast Assumptions</b> .....  | <b>14</b> |
| Monetary Policy .....  | 14        |
| Fiscal policy .....  | 15        |
| U.S. dollar .....  | 17        |
| Energy prices .....  | 18        |
| <b>U.S. Economic Outlook</b> .....   | <b>19</b> |
| Price spikes .....   | 19        |
| Accelerating inflation .....   | 21        |
| Conclusions .....  | 21        |
| <b>Sonoma County's Outlook within an Expanding U.S. and Global Economy</b> ..... | <b>22</b> |
| Recent Performance .....   | 22        |
| Business investment .....  | 22        |
| Foreign exchange .....   | 22        |
| Income growth .....  | 23        |
| Interest rates .....   | 23        |
| Population .....   | 23        |
| Construction .....   | 24        |
| <b>Sonoma County's Basic Economic Clusters</b> .....                             | <b>25</b> |
| Agriculture and Food Processing .....  | 25        |
| Technology/Manufacturing .....   | 27        |
| Information Technology .....   | 30        |
| Tourism and Hospitality .....  | 30        |
| Professional Services .....  | 33        |
| Retailing .....  | 33        |

## Sonoma County's Advantage in the Economic Recovery

### Executive Summary

The U.S. economy is increasingly buoyant. Real GDP growth in the first quarter of the year accelerated at a 5% year-over-year pace, with contributions to growth coming from consumer spending, business investment, defense outlays and exports. Growth in the current quarter is on track to post a gain at least as large.

The previously lagging job market is also quickly improving. Underlying job growth now appears to be sufficient to forestall any further increase in unemployment and underemployment. The job gains are increasingly broad-based across industries and regions of the country, and the leading job market measures are universally positive.

Driving the brightening economy is much-improved business confidence. Economy.com's weekly survey of business confidence has never been higher. Most encouragingly, previously hard-pressed manufacturers have turned sharply more upbeat since late last year. Not only have sales improved, but after several years of falling prices, manufacturers are able to raise prices for their goods.

The economic expansion is approaching its sweet spot. Growth is strong, and inflation and interest rates are low. Unemployment and underemployment are still uncomfortably high, but are now receding. By this time next year, growth is expected to slow, and inflation and interest rates are expected to move higher. Prospects are strong that this will prove to be an orderly process. Given currently low inflation, any rise in rates and slowing in growth should be modest. There are consequential risks that after years of low inflation and interest rates, however, navigating this passage will prove to be a bit trickier than anticipated. Economic transitions are rarely what they are expected to be.

The growing economy and the risks associated with rising interest rates and a shifting value of the U.S. dollar generate a new environment in which Sonoma County's basic industries may operate. On the whole, the environment is positive. For example, improving U.S. and foreign income growth generate potentially stronger demand for the county's wineries, as well as for local travel and tourism.

Potential for a further decline of the value of the dollar should support Sonoma County's export industries, including both wine and electronic equipment. This is particularly helpful since the dollar is expected to decline further against Asian currencies. The weak dollar is very timely since it creates an opportunity to market Sonoma wines to a new generation now just coming of age both within the U.S. and abroad. It also allows local electronics producers to find new niches in the global telecom market.

Nascent inflation and an expected rise in interest rates do generate some risk, particularly for Sonoma County's housing market. Given its rapid price appreciation, a deterioration of housing affordability, and a slowdown in the rate of household formations in the county, higher interest rates could be enough to shift demand toward rental units and to limit demand for single-family homes, particularly at the low and moderate price ranges that rely on mortgage credit.

Overall, the outlook for Sonoma County is much improved from just six months ago and, barring difficulties in the U.S. and global economies adjusting to a higher interest rate environment, growth of local employment, income and output will accelerate.

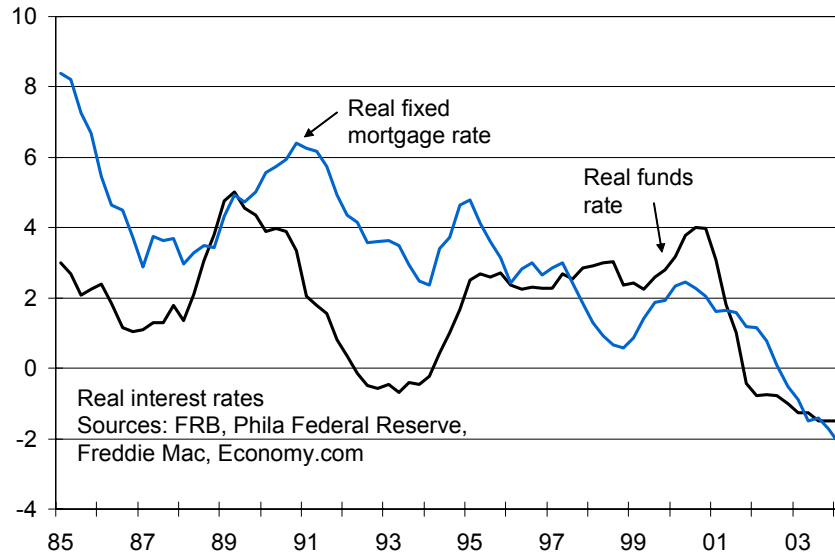
## Sonoma County's Advantage in the Economic Recovery

**The Broad Picture.** The U.S. economy is gaining momentum. Real GDP growth is a robust 5% and there is no indication that it will soon slow. Retailing, home sales and homebuilding, factory orders, public infrastructure spending, defense outlays and exports have all strengthened in recent weeks.

Even the long struggling job market is rapidly reviving. Monthly job gains are well over the key 150,000 monthly threshold signaling that unemployment and underemployment will soon begin to decline, and those gains are increasingly broad-based across industries and regions of the country. Various leading job market indicators from initial and continuing unemployment insurance claims to corporate layoff announcements and postings on Monster.com are encouraging.

Key to the economy's current success are the exceedingly low interest rates of recent years. Monetary policy has been highly stimulatory. The real federal funds rate target, as measured by the difference between the nominal funds rate target and expected consumer price inflation as measured in the long-running Philadelphia Federal Reserve Board survey of economists, has been negative since soon after 9/11 (see Chart 1).<sup>1</sup> The real funds rate target has never been negative for so long.

**Chart 1: Negative Real Interest Rates**



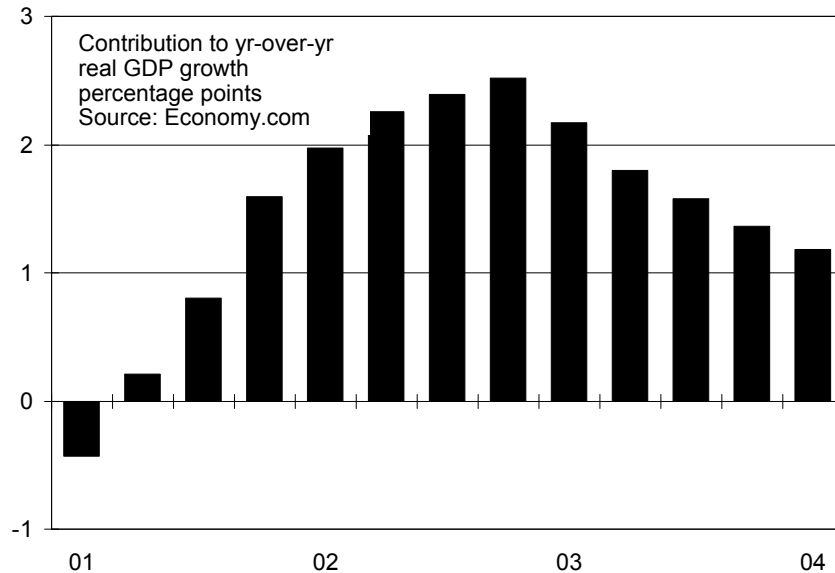
Long-term interest rates are also very low. The real after-tax fixed mortgage rate, as measured by the difference between the after-tax nominal fixed rate of near 5% and high single-digit expected house price growth, is also negative.<sup>2</sup> The only other time real fixed mortgage rates were negative was in the late 1970s.

<sup>1</sup> The Philadelphia Federal Reserve survey has asked economists their 10-year CPI inflation expectations since 1980. Break-even inflation in Treasury inflation protected securities is also currently near 2.5%.

<sup>2</sup> The effective personal income tax rate is currently just over 10%. Expected house price growth is measured by a 3-year moving average of median existing house price growth. This assumes that homebuyers form their expectations based on recent historical experience. A recent survey of homeowners by Case and Shiller suggests that the 5% estimate based on this methodology may in fact understate actual expectations.

Based on a simulation of Economy.com’s macroeconomic system, low interest rates have added 125 basis points to real GDP growth during the year ending in the first quarter, and a similar amount to per annum growth since rates began declining four years ago (see Chart 2).<sup>3</sup> This is comparable to the growth contribution from an increasingly more stimulatory fiscal policy.

**Chart 2: Low Rates Drive Growth**



The impetus from lower interest rates is winding down, however. Interest rates have risen in recent weeks and are set to rise further in coming months. This will test the mettle of the fledgling expansion, as the economy is arguably more rate-sensitive than in the past. Homeowners will find it more difficult to pull cash from their homes, lower and middle-income households will struggle with rising debt burdens, and higher income households will face less buoyant asset values. Forward-buying in the housing and vehicle markets, due in large part to the extraordinarily low rates of recent years, will be a significant weight on future demand as rates rise.

This article considers the prospects for higher rates, the conduits through which they will affect the economy, and the view that this impact will be more pronounced than in the past.

**Rising rates.** Interest rates are on the rise. Long-term rates have risen sharply in the past few weeks, with 10-year Treasury yields rising nearly 100 basis points, to near 4.75%. Fixed mortgage rates are up nearly as much, to over 6%. The Federal Reserve is also on track to begin tightening monetary policy soon, most likely at the early August meeting of the FOMC, but as soon as the late June meeting.

The catalyst for the rise in rates is the improving job market. The better job market signals that the previously halting recovery has evolved into a self-sustaining expansion. The job market will eventually tighten, supporting stronger compensation growth, ultimately pressuring businesses to raise prices more aggressively to cover their costs. All of this will take some time to unfold, but investors are forward-looking and realize that the disinflation of recent years is over and inflation, while still low, is sure to accelerate.

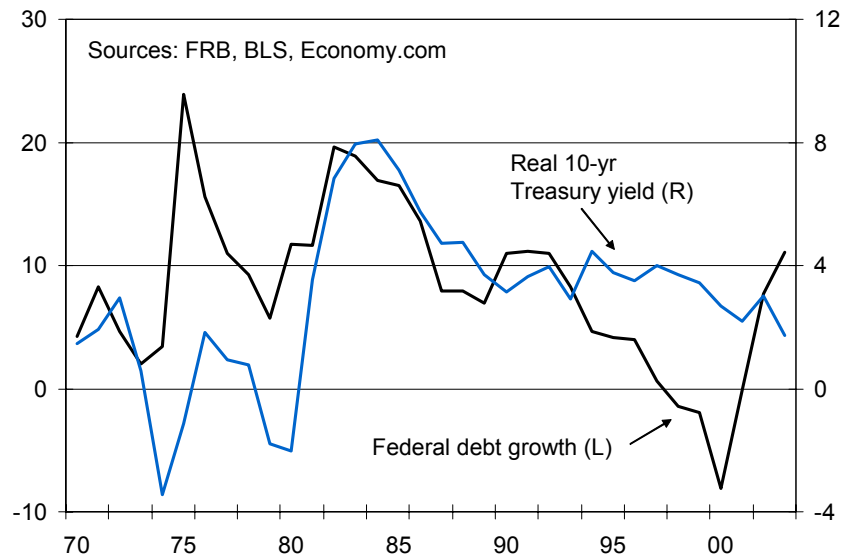
<sup>3</sup> This was determined by simulating the model system assuming interest rates had remained at their first quarter 2000 average, and comparing the results to what actually occurred.

Surging energy and commodity prices are also fanning investors' inflation concerns. Oil prices are at record highs, while prices have doubled and even tripled for commodities ranging from steel and copper to rubber and to various agricultural products. Outside of higher gasoline prices, consumer prices have yet to be significantly affected, although the deflation in manufactured goods prices has abated.

An added impetus for higher rates is the gaping federal budget deficit. According to the nonpartisan Congressional Budget Office, cumulative budget deficits over the next decade will total some \$2 trillion even under the assumptions that the economy remains solid throughout and that the Bush tax cuts expire as currently legislated. If the tax cuts become permanent, as the president has proposed, then the deficits will total \$3.5 trillion; if the one-year fix to the alternative minimum tax becomes permanent, as seems likely, the deficit will amount to a whopping \$4.0 trillion.

Bond investors have yet to incorporate this into their thinking. This will occur as corporate credit demands begin to increase in coming months and bump up against the federal government's own large and expanding credit needs. Econometric analysis shows that persistent federal budget deficits equal to 1% of GDP add approximately 25 basis points to 10-year Treasury yields. A \$4 trillion cumulative deficit amounts to approximately 3% of GDP, adding some 75 basis points to long-term yields. The relationship between deficits and long-term rates is strong enough that it is evident visually (see Chart 3).<sup>4</sup>

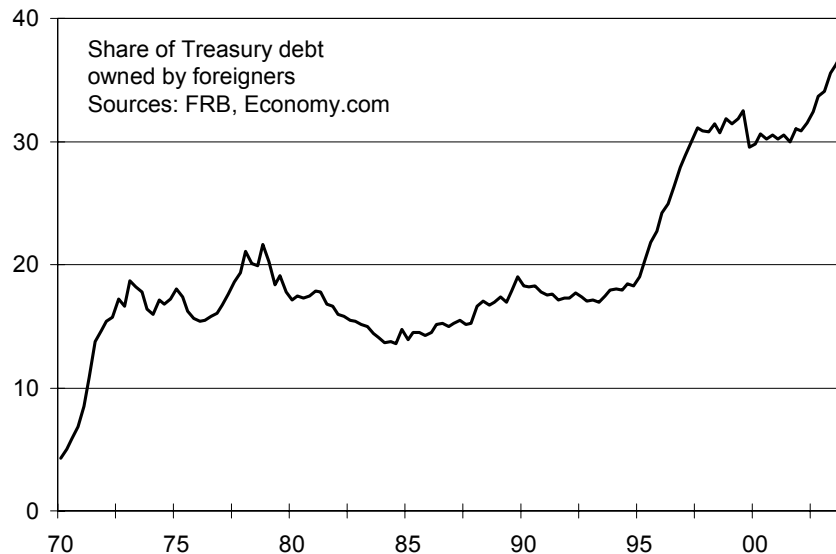
**Chart 3: Persistent Deficits Prompt Higher Rates**



Rates will also receive another boost when the Chinese revalue the yuan. Not only will this add to inflationary pressures, it will eventually dampen voracious Chinese central bank demand for Treasury debt. The Chinese have been particularly avid buyers of Treasury debt, as they rake in dollars via their burgeoning trade surplus with the U.S. The Bank of Japan will also remain a big Treasury buyer until the Chinese revalue, as it soaks up dollars through its interventions in an effort to keep the yen low and Japanese exporters competitive in the Asian trade so important to their economy's nascent revival. All told, foreigners own 37% of all Treasury debt outstanding, up from 30% at the start of this decade and less than 20% at the start of the 1990s (see Chart 4).

<sup>4</sup> Econometric evidence of this relationship can be found at "Fiscal Realities," *Regional Financial Review*, February 2004 and "New Evidence on the Interest Rate Effects of Budget Deficits and Debt", *Federal Reserve Working Paper*, Thomas Laubach, April 2003 <http://www.federalreserve.gov/pubs/feds/2003/200312/200312abs.html>

**Chart 4: Foreign Holdings of Treasurys Soar**



In the long run, abstracting from the ups-and-downs in the business cycle, the federal funds rate target is expected to be near 4.5%. This is equal to the long-run nominal GDP growth, composed of 3% real growth and 1.5% inflation. Yields on 10-year Treasury bonds will be closer to 5.5% and fixed mortgage rates near 7%. This reflects the inflation-risk premium embedded in long-term rates and the prospect of persistently large deficits and more reluctant foreign Treasury buying. Rates will of course be higher at times when the economy is operating above its capacity and inflationary pressures are most pronounced.

**Household cash flow.** Rising interest rates threaten to weigh more heavily on the economy than in times past. A key reason why is that they will crimp household cash flow. Liquidizing homeowners' equity through aggressive mortgage borrowing has become an enormously popular way of raising cash in recent years. All told, homeowners raised nearly \$700 billion in cash last year via mortgage borrowing. This was \$100 billion more than raised in 2002, which was \$150 billion more than raised in 2001. This borrowing will quickly lose its luster as mortgage rates rise.

Households have pulled cash from their homes in three ways. Cash-out refinancings, which have soared as homeowners have been able to increase their mortgage balance in the refinancing and still at worst maintain their monthly mortgage payments, is the newest way to raise cash. More traditional home equity lending, including lines of credit and closed-end seconds, has also surged, currently rising at a whopping 35% year-over-year pace.<sup>5</sup> The bulk of the cash has been raised, however, through surging home sales. In many parts of the country where house prices have been rising quickly, homeowners have been able to sell and purchase even more expensive homes and still take cash out given their quickly rising homeowners' equity.<sup>6</sup>

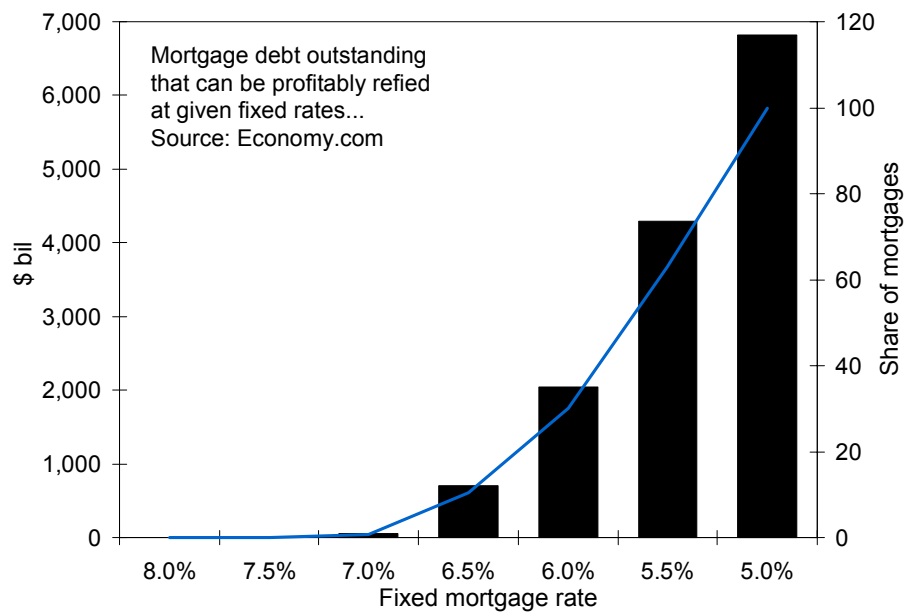
<sup>5</sup> This rapid growth is also explained by the increasing popularity of piggy back loans, in which homebuyers are able to put little down on the home and still avoid paying mortgage insurance by getting a first mortgage loan with a lower loan-to-value ratio and borrow the rest using a home equity loan.

<sup>6</sup> This works since homeowners need only use a small proportion of their homeowners' equity to make a downpayment on their new home.

Households have used this cash to repay other higher cost debts including credit cards, to make home improvements and other investments, and to finance all types of spending. According to a recent survey by Cambridge Credit Counseling Services, of the cash raised via mortgage borrowing, approximately 40% will be used to repay other debt, 25% for other investments, and the remainder for home improvement and other spending.<sup>7</sup>

Mortgage borrowing will quickly become a less ample source of cash with rising mortgage rates. At a 5.5% fixed mortgage rate, where they were just a few weeks ago, some three-quarters of outstanding mortgage debt could be profitably refinanced, meaning the transaction costs in the refinancing can be recouped within one year (see Chart 5). At a 6.5% fixed rate, where rates appear quickly headed, very few homeowners will find it attractive to refinance. Home equity borrowing and cashing-out via home sales will take longer to weaken under the weight of higher rates, but they too will eventually decline.

**Chart 5: Cash Machine Closes at 6.5%**



Mortgage borrowing is not new, but the boost provided to consumer spending from the aggressive borrowing of recent years and the weight it will be on spending once this borrowing subsides are.

**Rising debt loads.** Rising rates will also be inordinately hard on households who have become substantively more levered in recent years. Households’ financial obligations are gobbling up a near record share of after-tax income despite the exceedingly low interest rates of recent years, lengthening debt maturities and falling minimum payments.<sup>8</sup>

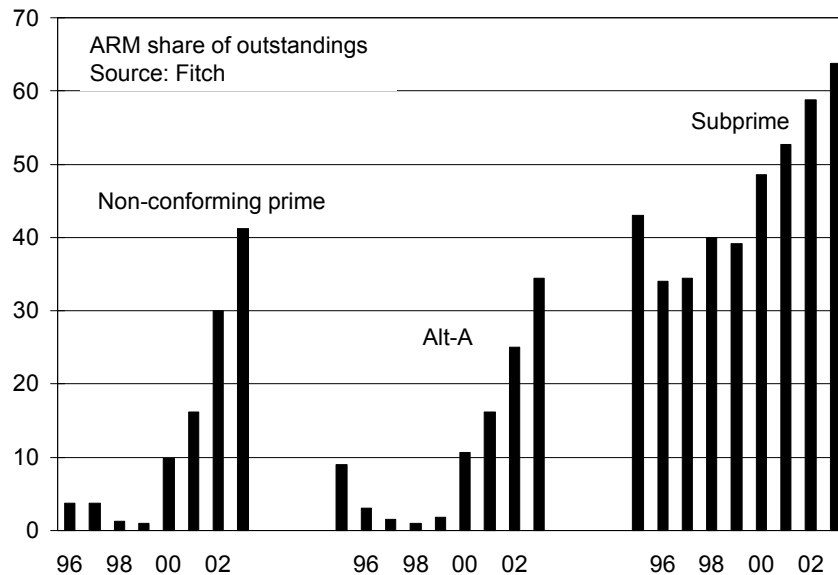
Lower income households are at particular risk given the rising share of their liabilities that adjust quickly with changing interest rates. While the adjustable rate share of all household debt has fallen from a peak of over one-third a decade ago to just over one-fifth today, it has risen measurably for lower

<sup>7</sup> This is consistent with a Federal Reserve Board study of the refinancing boom of 2001 and early 2002. See “Mortgage Refinancing in 2001 and early 2002,” *Federal Reserve Board Bulletin*, Glen Canner et al, December 2002 <http://www.federalreserve.gov/pubs/bulletin/2002/1202lead.pdf>

<sup>8</sup> This is based on the Federal Reserve Board’s financial obligation ratio, which measures the minimum share of after-tax income households must devote to their financial obligations to remain current on those obligations.

income households. This is evident from the high and rising adjustable rate share of subprime and alt-A mortgage debt outstanding, which together account for nearly one-sixth of all outstandings. According to bond rating agency Fitch, some two-thirds of subprime and one-third of alt-A mortgages are ARMs (see Chart 6). This is up from one-third and essentially nothing, respectively, in the mid-1990s. The ARM share of non-conforming prime mortgage debt outstanding, largely composed of large jumbo loans, has also risen sharply, although this is more likely to be longer-dated 3-, 5-, and 7-year ARMs.

**Chart 6: ARM Share Is Rising in Non-conforming Market**



That the ARM share has risen at a time when fixed rates have been so low reflects the need by households to stretch their finances to get into quickly appreciating homes. Many new-time homeowners have been able to qualify for the large loans needed to purchase high-priced homes only by taking on an ARM. Aggressive mortgage lenders have been creative in providing the loan products needed to facilitate these purchases.

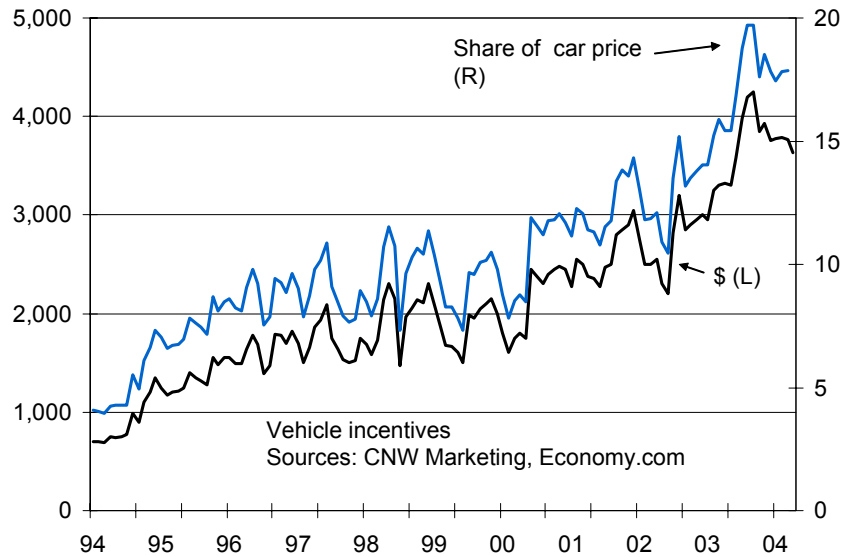
Lower income households are already under substantial financial stress, as is clear from currently record high rates of bankruptcy and mortgage foreclosure. Delinquencies on manufactured housing loans and credit cards and auto repossession rates are also about as high as they have ever been. While a stronger job market should alleviate some of these stresses, there has never been a time when such a large proportion of households have balance sheets as precariously balanced going into a rising rate environment. Although households in the bottom half of the income distribution account for only one-third of consumer spending, according to the Consumer Expenditure Survey, more tentative spending by these households will be a weight on the broad economy.

**Borrowing costs.** The vehicle and housing markets are especially vulnerable to higher rates. Both have been important sources of growth in recent years, and both are likely to be significant constraints on growth as borrowing costs rise. Indeed, both markets are likely measurably more sensitive today to higher rates given all the forward-buying that has occurred in recent years.

Underlying annualized vehicle sales, based on demographic, income and wealth trends, are currently an estimated 16.5 million units. Vehicle sales have been well above this threshold since the turn of the decade, and there are thus currently over 1 million units in spent-up vehicle demand. Evidence of the

mounting spent-up demand is the steadily rising discounts and cheap financing that the automakers need to provide buyers just to maintain current sales rates (see Chart 7).

**Chart 7: More Incentives to Maintain Sales**



The automakers will find it increasingly prohibitive to offer such deals, however, as rates and their own cost of funds rise. Zero-percent financing is only possible because the automakers' short-term borrowing costs are not much more than 1%. Once the Federal Reserve begins tightening policy and short rates rise, these deals will quickly fade. The automakers have proven to be very creative in coming up with new promotional offers to keep sales up, and they should not be underestimated now, but it will appear difficult to come up with something as popular as 0% financing.

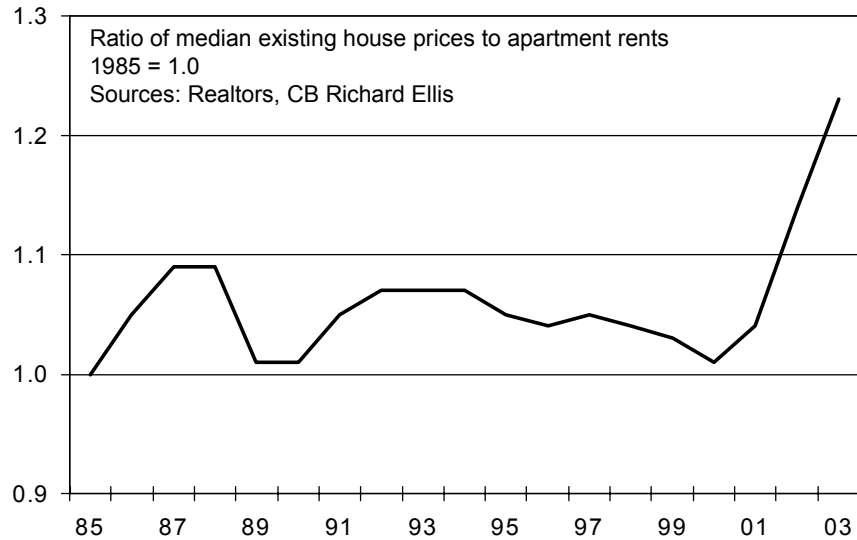
The housing market also appears overdone. Underlying new and existing home sales are an estimated 6 million annualized units, compared to the more than current 7 million unit sales rate. Demographic and wealth needs support the construction of 1.85 million housing units annually, compared to the more than 2 million units now being constructed. The result is mounting rental vacancy rates and unsold housing inventories in a growing number of markets across the country. Driving housing demand has been very aggressive mortgage underwriting, stronger investment demand for housing supported by robust house price gains and an uncertain stock market and low cash yields, and the lingering reluctance to travel. Most importantly, however, have been exceedingly low mortgage rates.

**Asset values.** House prices also appear especially vulnerable to rising rates. Any weakening in housing values will be particularly hard on homeowners, as their financial well-being has become increasingly reliant on their homes. The home has once again become the most important asset in the household balance sheet. At year-end 2003, the value of housing owned by households and non-profits totaled some \$16.5 trillion, compared to stock holdings worth \$13 trillion, according to the Federal Reserve's Flow of Funds. At year-end 1999, stockholdings of \$17 trillion dwarfed housing assets of only \$11.5 trillion.

Even a modest rise in interest rates will quickly change the economics of homebuying versus renting. National apartment rents have remained largely unchanged during the past four years, while house prices have risen by one-third. Housing's price earnings ratio, as measured by the ratio of median existing

house prices to effective apartment rents, have risen sharply as a result, after remaining largely unchanged during the previous 15 years (see Chart 8).

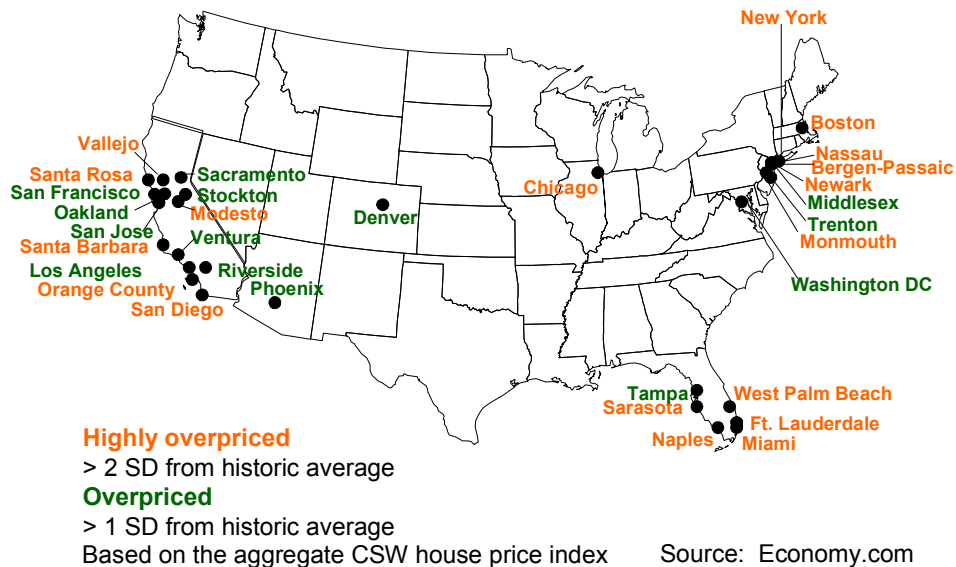
**Chart 8: Growing Gap Between House Prices and Rents**



In metro areas such as Boston and San Francisco, housing PEs have risen even more sharply. Apartment rents in these areas are falling, while house prices are up more than 50%. Indeed, housing markets throughout much of California, the Northeast corridor, and Florida appear particularly frothy (see Chart 9). To identify markets that are at high risk of experiencing flat or even declining housing values, current market prices as measured by the National Association of Realtors are compared to a calculated equilibrium house price that is consistent with underlying demand and supply fundamentals. The equilibrium house price is estimated from a model of housing supply and demand. Markets in which current market prices are well above their equilibrium price, more than two standard deviation away from their historical norms, are deemed to be overpriced.<sup>9</sup>

<sup>9</sup> More information on this methodology and the results are available upon request.

**Chart 9: Overpriced Metro Areas**



Housing demand in this model is determined by household income, house prices, and the user cost of housing. As income rises, so should a household’s ability and desire to purchase a home. The higher the price of a home, the lower the demand. The user cost of housing represents the costs of homeownership, which includes the cost of mortgage credit and the expected future price of housing. The higher the user cost, the weaker the demand for a home purchase. The supply of housing is determined by the costs of construction for the builder, the price of a house, and a measure of excess housing supply. The higher the construction costs, the lower the quantity supplied of housing. The higher the price of a house, the more units builders will supply. Construction costs consist of both the cost of land and other building costs.

It is likely that house prices in these areas will rise even more strongly in immediate response to the recently higher rates. Fence-sitters, those households thinking about purchasing a home but delaying actually making a decision, realize that mortgage rates are not going back down anytime soon and are now jumping into the market. Of course, this last spurt in prices will likely result in much weaker pricing once the fence-sitters are in and housing demand softens.

Lower and middle net-worth households are more vulnerable to softer housing values both because housing is disproportionately more important to their balance sheets, and it is the lower end of most housing markets that appear the most speculative. In the Washington, D.C. metro area, for example, prices in the bottom one-third of the market have risen at an annualized rate of close to 20% during the past three years compared to just about half that in the top third of the market.<sup>10</sup>

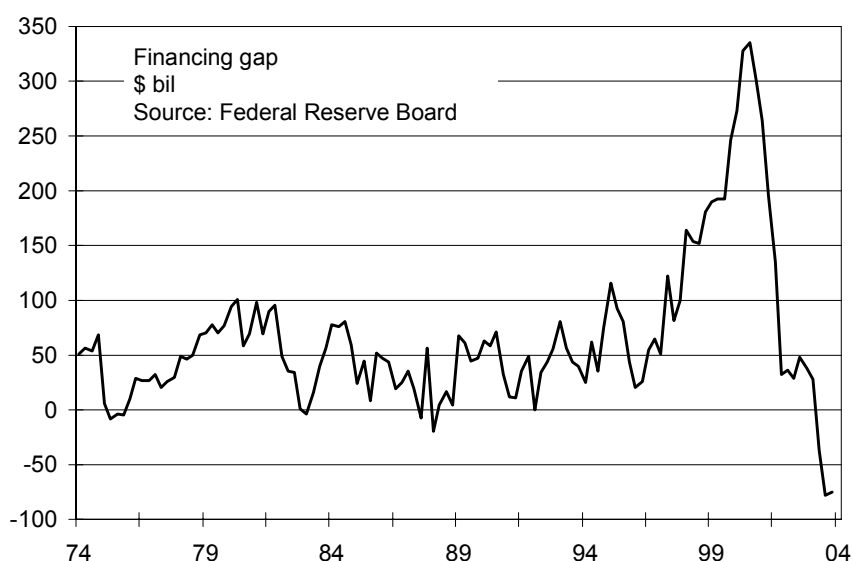
Wealthier households will also have to come to terms with less buoyant stock values. Stock price earnings ratios have been so elevated in large part because of low rates. The S&P 500 PE ratio is currently just over 20, while it has averaged closer to 15 during the past half century. Econometric analysis indicates that the recent 100 basis point rise in 10-year Treasury yields, if sustained, will cut the difference between the current PE and its historical average in half.

<sup>10</sup> This is based on data available from Case Shiller Weiss.

The power of rising interest rates on stock prices is illustrated by the stock market's experience in 1994. During that year when the Federal Reserve aggressively tightened monetary policy and 10-year yields jumped 200 basis points, stock prices went flat, despite surging corporate profits. While the rate hikes this year are not expected to be as significant and earnings prospects remain strong, 2004 is shaping up to be a similar year for the stock market.

**Investment and the dollar.** Not all the conduits through which interest rates affect the economy will be as potent as in the past. Historically, business investment has been sensitive to rising rates. That is much less the case today, as businesses are flush with cash and have no need to borrow to finance their spending. The financing gap, which measures the difference between investment and internally generated cash flow, is as negative as it has ever been (see Chart 10).<sup>11</sup> With so much cash, businesses have no need to borrow from banks or capital markets. Indeed, commercial and industrial loans at commercial banks are still falling. Interest rates matter to investment decisions, but much less so, if the investment is internally funded.

**Chart 10: Business Are Flush**



Rates also matter less in current investment decisions as much of the investment is being driven by a powerful replacement cycle in information technology. Given rapid technological advances, much of the IT purchased in and around Y2K is increasingly less viable. The economic life of computer hardware and software is close to two years and for telecommunication equipment about five years. Businesses have no choice but to ramp up their spending as they have in order to maintain their productivity gains and remain competitive. Replacement driven investment spending is likely less influenced by interest rates than in investment designed to expand capacity.

Business balance sheets are also more insulated from rising rates, as businesses have been assiduous in paring back their short-term liabilities. As a share of total liabilities of corporate nonfinancial businesses, liabilities that adjust quickly with market rates are at a record low of 30%, according to the Federal Reserve's Flow of Funds. This compares to 35% of liabilities at the start of this decade and the

<sup>11</sup> Fueling the surge in cash flow are stronger sales, better pricing, productivity driven declines in labor costs, and the current bonus depreciation allowances.

record 55% that prevailed 30 years ago. Businesses have worked hard to refinance their obligations and lock in the current low interest rates.

The economic impact of higher interest rates may also be cushioned by a less buoyant U.S. dollar. All else being equal, rising U.S. interest rates should strengthen the dollar, which ultimately weighs on the economy via a widening trade deficit. As theory would suggest, the dollar has seemingly firmed in recent weeks. Against the euro, for example, the dollar has gone from a low of nearly 1.3 earlier in the year to less than 1.2 currently. The dollar has experienced similar percentage gains vis-à-vis the Canadian and Aussie dollars.

The dollar's upside does seem very limited, however. Interest rates in the rest of the world are already on the rise. The Bank of England and Reserve Bank of Australia have been tightening policy since late last year. The European Central Bank will be slower to tighten given the still-soft European economy, but it will likely lag the Federal Reserve by only a few months.

The dollar must also struggle with the nation's burgeoning current account deficit. At over 5% of GDP, the deficit is as large as it has ever been and is near a threshold that has precipitated currency crises in other times. For some very obvious reasons, there is little concern that a similar fate would befall the dollar, but the large current account deficit is likely to act as a significant cap on any increase in the dollar's value.

Most importantly, however, the dollar most ultimately fall vis-à-vis the currencies of China and the rest of Southeast Asia. Prospects for such a revaluation appear to be growing as inflationary and speculative pressures build in the Chinese economy. These pressures are being driven by the mounting trade surplus with the U.S. The dollars earned in trade are being converted into yuan, which are flooding the Chinese economy. Stopgap measures to stem the surge in liquidity and credit appear to be failing. The most obvious solution would be a revaluation. A potential window for such a step would be in early 2005, when quotas on global apparel trade are set to end as part of the WTO process. This will result in substantial declines in apparel prices, creating significant problems for the already hard-pressed U.S. apparel and textile industries. This threatens already frayed U.S.-China trade relations, and could induce the U.S. to re-impose some trade restrictions on the Chinese, which the U.S. is able to do under WTO guidelines, as China is a new entrant in to the WTO. The quid pro quo for not making such a move would be a higher yuan and a weaker dollar.

A weaker, not stronger, dollar would mitigate, at least partially, the ill effects of rising interest rates on the U.S. economy.

**Conclusions.** The business cycle is entering a new phase. Since the recession ended just over two years ago, growth has been largely supported by massive fiscal and monetary stimulus. With the recent resumption of substantive job growth, the expansion is now self-sustaining. The jobs are creating incomes sufficient to support future spending, production, and job growth. A virtuous cycle has begun.

With the self-reinforcing cycle come higher interest rates. Long-term interest rates have already measurably risen, and the Federal Reserve Board will soon begin tightening monetary policy. The prospects for persistently large federal budget deficits and less avarice in foreign buying of U.S. fixed income assets will also pressure rates higher.

Interest rates will likely rise modestly and over an extended period, however, given that inflation is still low and inflation expectations are still tame. The rise in rates should also be tempered by the increasing rate sensitivity of the economy. The Federal Reserve can be more leisurely in tightening policy than in the past and still dampen the economy's growth.

The economy is more rate-sensitive most fundamentally because it has become highly dependent on the low rates of recent years. Households have responded to the exceedingly low rates by borrowing more, purchasing more vehicles and homes and other things that are financed, and paying more for stocks. All of this will unwind to some degree as interest rates rise.

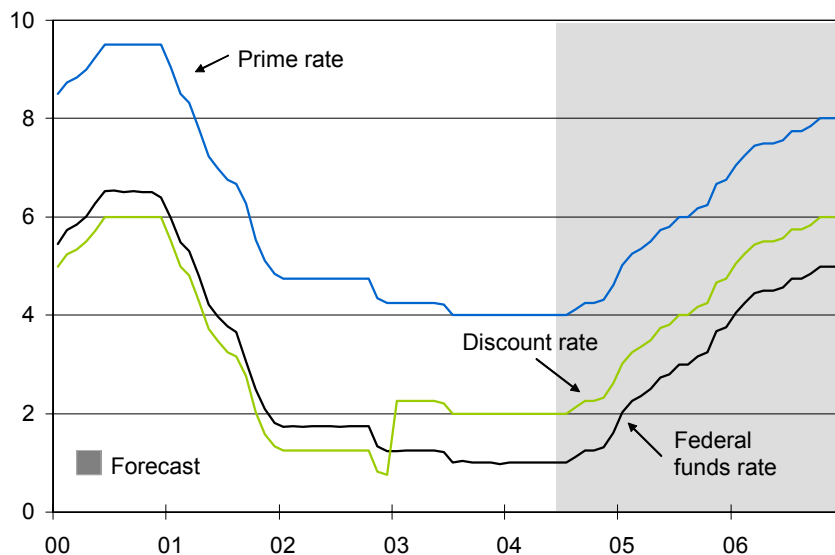
This phase of the business cycle has always been difficult, however. The economy faltered after the 1994 and 1984 rate hikes, periods analogous in many ways to the current one. The rising rates of those periods exposed mistakes made when rates were low. In the mid-1990s, the mistakes were evident in the Orange County bankruptcy and the Mexican peso crisis. In the mid-1980s, the mistakes were evident in the nation's commercial real estate markets and thrift industry. Similar mistakes have assuredly been made in recent years and will soon be exposed.

This will be a significant test of this expansion's mettle and the ability of the Federal Reserve to adroitly conduct monetary policy. The expansion will assuredly continue as it did in the previous two decades, but as in those previous periods, the next year or two will be trying.

### Forecast Assumptions

**Monetary Policy.** A tightening in monetary policy is expected at the early August meeting of the FOMC (see Chart 11). Prompting this action are the strengthening economy and firming inflation. By tightening earlier rather than later, policymakers may also be able to tighten future policy more slowly, and thus avoid some of the more difficult economic adjustments that result from higher rates.

**Chart 11: Monetary Policy**



Indicative of the strengthening economy is the resumption of measurable job growth. Job gains in recent months are averaging over the key job creation threshold of 150,000. If sustained, then unemployment and underemployment will begin to decline, a necessary precondition for a tightening in policy.

Core inflation has also firmed. Core consumer prices are up 1.5% during the past year, compared to closer to 1% late last year when deflation fears were at their highest. The recent pickup in core inflation

reflects an end to the deflation occurring for many goods. This reflects the weaker dollar and surging energy and other commodity prices.

The need to begin tightening policy is also evident from the currently very low rates. The real federal funds rate target, as measured by the difference between the nominal 1% funds rate target and 2% expected CPI inflation as implied by Treasury inflation protected securities, has been negative since soon after 9/11. Monetary policy is currently highly stimulatory.

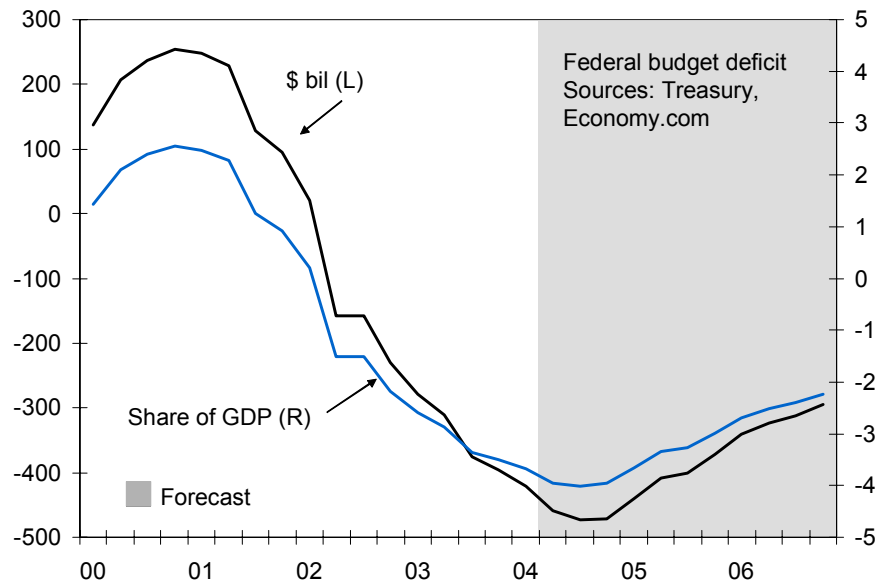
The August timing for a tightening move may also be influenced by the November election. Presidential politics are not expected to have a substantial impact on the conduct of policy. The only reason for tightening would be a stronger job market, and thus a modest rise in interest rates would have little political import. Nevertheless, policymakers are likely less inclined to tighten policy just prior to the election.

Policymakers have indicated that once they begin tightening, they will be able to tighten policy slowly. While inflation is rebounding, it remains low. Current core CPI inflation is still only one-half of what it was a decade ago when the Federal Reserve aggressively tightened policy coming out of the early 1990s recession and weak recovery. Also motivating the desire to be less aggressive this go around is the desire to avoid the severe economic dislocations, including the Orange County bankruptcy and the Mexican peso crisis, that were precipitated by their actions a decade ago. The most obvious economic fissure that could be exposed by higher interest rates today is the apparent froth that exists in a number of regional housing markets.

The federal funds rate is thus expected to rise to only 2.5% by mid-next year. Long run, the federal funds rate target is expected to average close to 4.5%. This is equal to the long-run nominal GDP growth, composed of 3% real growth and 1.5% inflation. It may not be until early 2006 before the funds rate target is this high.

**Fiscal policy.** Federal fiscal policy is highly stimulatory. The magnitude of the stimulus is evident in the yawning budget deficit, which is expected to post a record near \$450 billion this fiscal year, up from \$375 billion in FY 2003 (see Chart 12). The federal government enjoyed a surplus as recently as FY 2001 and a record \$236 billion surplus in FY 2000.

**Chart 12: Fiscal Policy**



Tax policy alone will provide another \$100 billion of stimulus in 2004, on top of the over \$100 billion last year, and nearly \$50 billion in each of the previous two years. More than one-half of this year's tax benefits will accrue to households in the form of larger refund checks and smaller tax bills through the April tax filing deadline. The reduction in marginal tax rates that was part of last summer's fiscal stimulus plan and which was implemented beginning in July were retroactive to the beginning of the year. Most taxpayers thus overwithheld in 2003. Businesses will receive the rest of the tax benefits. Large businesses that make investments before the end of this year will benefit from accelerated depreciation schedules and small businesses from larger investment write-offs.

The federal government's poor fiscal situation is also due to the previously weak economy and stock market, and quickly rising defense, homeland security, and healthcare costs. The previously soft economy has weighed on revenues and raised the costs of providing support to economically distressed households. Tax revenues have been falling since FY 2001. Spending also continues to expand quickly, particularly for those programs that are part of the government's automatic economic stabilizer programs. Excluding interest payments on the national debt, outlays have been expanding at close to a double-digit pace since FY 2002.

Lower stock values compared to their mid-2000 peak also continue to weigh on tax revenues. Capital gains realizations, which rose to nearly \$600 billion in calendar year 2000, are expected to be closer to \$250 billion this year. This alone will reduce tax revenues by some \$75 billion between FY 2000 and FY 2004. A similarly sized decline in tax revenue has occurred due to plunging stock option income.

The surge in defense and homeland security costs has also been a large drain on government coffers. Such spending by all levels of government will rise by nearly \$100 billion this year over last, to \$700 billion. This is on top of a \$100 billion increase in 2003 and a \$60 billion increase in 2002. Bush administration hopes that the costs of maintaining troops in Iraq and Afghanistan and the reconstruction of these countries will be measurably defrayed by rising Iraqi oil revenues and monetary contributions from our allies appear overly optimistic.

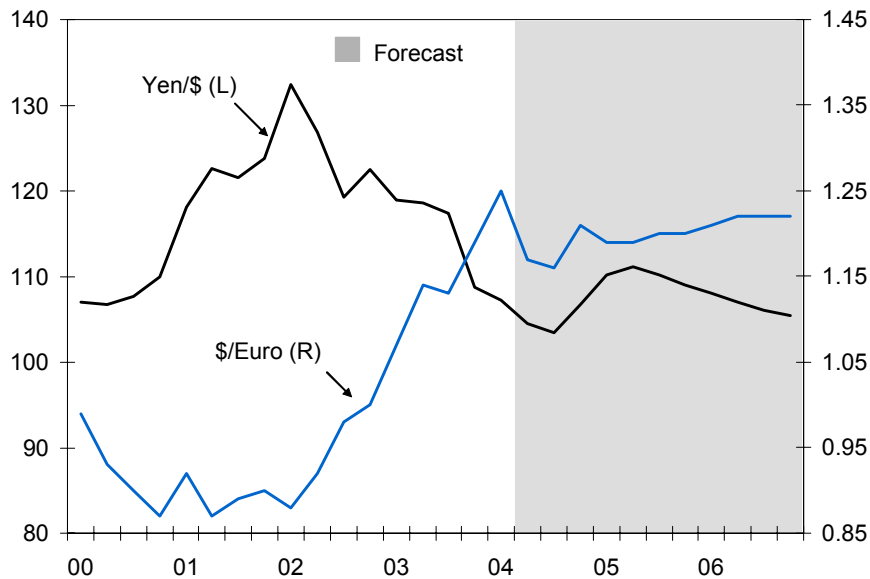
Longer-term budget prospects are also increasingly poor, given the prospects for substantially more government spending, particularly for the military and homeland security, and the lack of progress in

reforming Social Security and Medicare. The federal government is expected to run a whopping cumulative deficit of well over \$3.5 trillion, equal to 3% of GDP, between fiscal years 2005 and 2014.

Even this less than sanguine outlook depends on measurable changes in current tax and spending policies. It is assumed that nearly one-half of the reduction in marginal personal tax rates implemented during the Bush administration will be allowed to sunset by the end of the decade. It is also assumed that various currently promised Social Security and Medicare benefits are modestly scaled back. Partially offsetting the budgetary benefits of these actions is an expected adjustment to the alternative minimum tax.

**U.S. dollar.** The U.S. dollar has weakened measurably during the past two years (see Chart 13). The euro is currently trading at near 1.2 U.S. dollars, and the dollar fetches close to 105 yen. At the U.S. dollar's peak in early 2002, the euro was worth less than 90 cents, and the dollar was fetching more than 135 yen. The dollar is also off considerably vis-à-vis the British pound, the Canadian dollar, and the Aussie dollar. On a broader trade-weighted basis, the dollar is down nearly 15%.

**Chart 13: U.S. Dollar**



The dollar is expected to be more stable, even up a bit, through the end of this year. U.S. monetary policy is shifting toward an eventual tightening. At the same time, the European and Canadian Central Banks are being more accommodative in an effort to support their lagging economies. The Bank of Japan also continues to aggressively buy U.S. dollars in an effort to forestall any rise in the yen.

The dollar is expected to resume falling early in 2005, however. This depreciation is expected to occur against the Chinese, Indian and other East Asian currencies that currently peg or heavily manage their currencies vis-à-vis the dollar. Pressure is mounting, given the rapidly eroding U.S. trade deficit with these nations, to at the very least adjust their pegs. China is assumed to adjust its peg in early 2005 at approximately the same time current quotas on apparel imports to the U.S. are set to expire.

The large and growing U.S. current account deficit will also remain a long-term millstone on the dollar. The deficit is over 5% of GDP and continues to erode. Historically, significant economic and currency adjustments have been ignited in other major developed economies once their current account

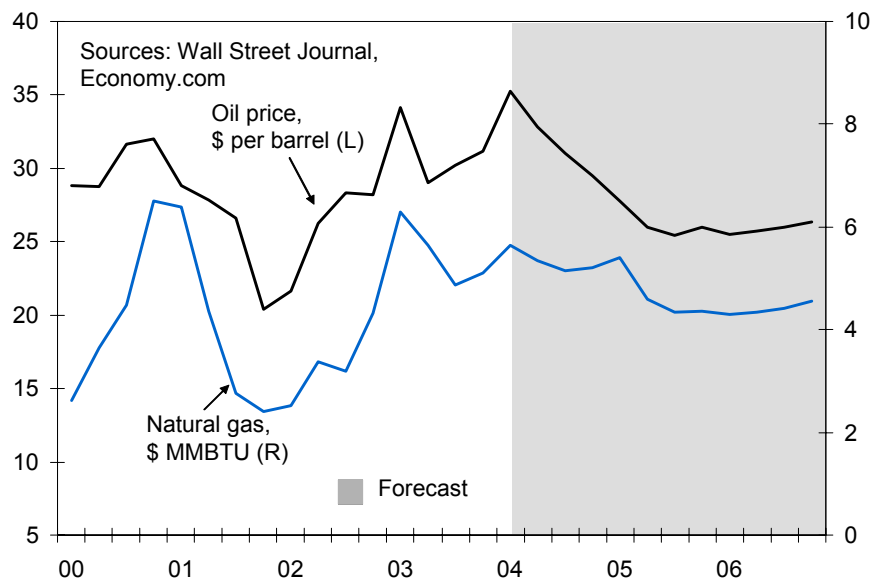
deficit approached 5% of GDP. An adjustment must eventually occur in the U.S.'s trade and current account, which is unlikely to take place without a continued depreciation of the dollar.

The U.S. economy's position as the global economy's Aaa credit has also been tarnished by the ongoing hostilities in Iraq and the global terrorism directed toward the U.S. Throughout the late 1990s, the dollar had benefited as foreign investors flocked to the perceived safety of U.S. assets at the first sign of global economic, financial, or political turmoil.

The real broad trade weighted dollar is thus expected to decline by at least another 10% over the next several years. This decline is expected to be orderly, as the dollar will be supported by its status as the global economy's most important reserve currency and because oil and most other commodities are priced in dollars. The strong likelihood of ongoing global turmoil will also provide underlying support, as it will remain the principal safe haven for harried global investors. Also limiting any decline in the dollar will be strong underlying U.S. productivity growth, particularly when compared to that being experienced throughout the rest of the global economy. This will continue to hold out the promise of better returns to global investors owning U.S. assets.

**Energy prices.** Energy prices remain elevated with the price for West Texas Intermediate trading over \$35 per barrel (see Chart 14). Gasoline prices have spurred to a record high of close to \$1.80 per gallon of regular unleaded. Natural gas prices have also risen to near \$5.50 per MMBTU.

**Chart 14: Oil Prices**



The recent rise in prices is due to strong global demand for energy, particularly from the booming Chinese economy, ongoing concerns regarding energy supplies from Iraq, Russia, and Venezuela, capacity constraints at U.S. refiners, and lean inventories. OPEC cut production quotas this spring, but members are cheating, and total OPEC production has remained largely unchanged during the past year. OPEC's decision to reduce their quotas suggests that they are erring on the side of higher rather than lower prices due to confidence in the strength of the global recovery and the financial effects of a lower U.S. dollar.

Energy prices are expected to moderate later this year, falling to near \$30 per barrel by this time next year. This price outlook is based on the expectation that Iraqi oil comes online more fully in coming

months and that political problems in Russia and Venezuela are generally contained. Futures markets are also anticipating lower prices, although not to the same degree.

Natural gas prices are also expected to decline, but remain somewhat elevated compared to oil prices. New exploration and development has been limited and what exploration has occurred has not been as productive as anticipated. Gas imports are also constrained by a lack of available pipeline and seaport capacity, which is not expected to be remedied until later in the decade. Natural gas accounts for nearly one-fourth of the nation's energy consumption.

Over the next five years, oil prices are expected to average close to \$27 per barrel, and natural gas prices are expected to average near \$5 per million BTU. More substantive price declines will be limited by well-timed cutbacks by Saudi Arabia to make way for increased Iraqi production and intermittent political strife in key oil-producing nations.

### **U.S. Economic Outlook.**

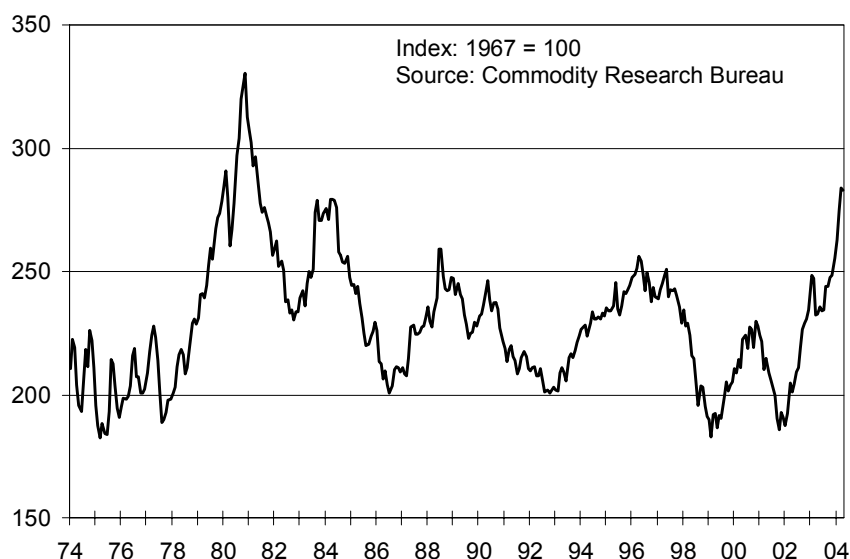
The economy is increasingly buoyant. Real GDP growth during the year ending the first quarter is close to 5%, with contributions to growth coming from consumer spending, business investment, defense outlays, and exports. Growth in the current quarter is on track to post a gain at least as large.

The previously lagging job market is also quickly improving. Underlying job growth now appears to be sufficient to forestall any further increase in unemployment and underemployment. The job gains are increasingly broad-based across industries and regions of the country, and the leading job market measures are universally positive.

Driving the brightening economy is much-improved business confidence. Economy.com's weekly survey of business confidence has never been higher, as very few respondents are responding negatively to the various questions posed. Most encouragingly, previously hard-pressed manufacturers have turned sharply more upbeat since late last year. Not only have sales improved, but also after several years of falling prices, manufacturers are able to raise prices for their goods.

**Price spikes.** Prices for a wide array of commodities and manufactured goods have indeed surged (see Chart 15). Prices for everything from copper, tin, platinum, aluminum, and steel, to oil and natural gas, are nearly double what they were this time last year. The Commodity Research Bureau's index of spot prices for a wide range of such products is near its highest level in a quarter century (see Chart 11).

**Chart 15: Surging Commodity Prices**



Behind this is a confluence of rapidly strengthening demand, rationalized supply, and panic buying by purchasing managers fearful of inadequate supplies. Demand has been particularly strong from the red-hot Chinese economy, followed closely by the rebounding U.S. economy. Chinese authorities are resorting to various credit controls to cool growth, but so far to little avail.

Global supplies of many commodities and manufactured goods were also significantly rationalized during the severe global downturn of the past several years. There has been substantial consolidation and liquidations across many industries. Despite currently higher prices, suppliers have been reluctant to take various mines and factories out of mothballs given reasonable concerns that the strong pricing will prove short-lived.

Utilization rates are rising rapidly and a lengthening list of industries appears to be operating near capacity. The 76% manufacturing utilization rate as reported by the Federal Reserve seems to belie this observation, the Fed data appear to be vastly understating actual utilization. According to the Institute for Supply Management, which conducts its own survey, factories are currently running at a very high 85% rate. The Fed data likely are counting in capacity at factories and mines that industry has furloughed in recent years and does not intend to ever bring back on line.

Further juicing up prices are purchasing managers who are double and triple ordering materials and parts to avoid disrupting production. The inability to purchase adequate supplies of even a minor component could result in costly production downtime across their entire supply chain. This precautionary buying is inducing prices to spike.

Aside from the cost of energy, the soaring commodity and manufactured-goods prices have yet to result in significant retail price inflation. Consumer goods prices are no longer falling, as they were as recently as late last year, but they are not rising substantively either. Big retailers, such as WalMart, still refuse to allow final good producers to pass along their price increases to consumers, who have thus to date been largely insulated from the ill effects of higher commodity prices.

Commodity and manufactured-goods prices are also likely near a top. The Chinese economy is sure to slow at least a bit in coming months, and the supply-side of global commodity markets is slowly

reawakening. Investment in energy exploration and development is up strongly as are rig counts in the Gulf of Mexico. Copper mines in Chile and the Southwest U.S. are being re-opened. Calm will also eventually return to purchasing departments.

**Accelerating inflation.** This is not to suggest that broader inflation will not accelerate. The more or less steady disinflation of the past quarter century is over, and inflation will pick up in the months ahead. The expected rebound in inflation will be modest this year and early next, but is likely to gain some momentum beginning later next year.

One catalyst for measurably higher inflation will be a revaluation in the Chinese yuan. Prospects for such a revaluation appear to be growing as inflationary and speculative pressures build in the Chinese economy. These pressures are being driven by the mounting trade surplus with the U.S. The dollars earned in trade are being converted into yuan, which are flooding the Chinese economy. Stoppgap measures to stem the surge in liquidity and credit appear to be failing. The most obvious solution would be a revaluation.

A potential window for such a step would be in early 2005 when quotas on global apparel trade are set to end as part of the WTO process. This will result in substantial declines in apparel prices, creating significant problems for the already hard-pressed U.S. apparel and textile industries. This threatens already frayed U.S.-China trade relations, and could induce the U.S. to re-impose some trade restrictions on the Chinese, which the U.S. is able to do under WTO guidelines, as China is a new entrant in the WTO. The quid pro quo for not making such a move would be a higher yuan.

A stronger yuan and weaker dollar would likely be too much for U.S. retailers to bear. Imported Chinese goods are such a large proportion of U.S. retailing that even Wal-Mart would be forced to raise prices. This would be a seminal event in the inflation outlook.

Another eventual catalyst for stronger inflation will be a measurably tighter job market. Prices charged for various services that make up approximately two-thirds of overall consumer prices, depend critically on the cost of labor. Service inflation will not accelerate appreciably until labor compensation costs do, which is unlikely until unemployment dips below 5%, the economy's estimated natural rate of unemployment. This is expected to occur late next year.

**Conclusions.** The economic expansion is approaching its sweet spot. Growth is strong and inflation and interest rates are low. Unemployment and underemployment are still uncomfortably high, but are now receding. By this time next year, growth is expected to slow, and inflation and interest rates are expected to move higher. Prospects are strong that this will prove to be an orderly process. Given currently low inflation, any rise in rates and slowing in growth should be modest. There are consequential risks that after years of low inflation and interest rates, however, this unfolding environment will prove to be a bit trickier than anticipated. Economic transitions are rarely what they are expected to be.

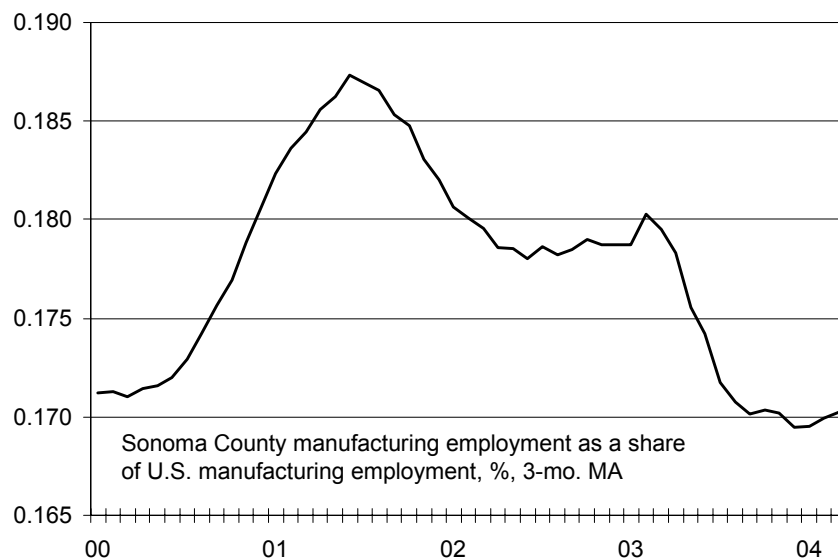
## Sonoma County's Outlook within an Expanding U.S. and Global Economy

This section reviews the recent performance of the Sonoma County economy and its near-term prospects for improvement. It describes how Sonoma County's basic economic clusters will fare under the assumptions described above for the global and U.S. macroeconomic conditions.

**Recent Performance.** Sonoma County's economy is past its worst point of the business cycle and will begin to improve in coming months. Private employment hit its low point over six months ago and shows some signs of improvement. Manufacturing has stabilized following a long decline, and the larger healthcare and business and professional service industries are expanding. House-price appreciation has gradually accelerated since last year, a sure sign that the economy is no longer declining. Moreover, business bankruptcy filings are down by over 30% over the year, indicative that layoffs will further abate. A clear path to recovery is not evident yet, but the local economy is beginning to get back on its feet.

**Business investment.** Nationwide business investment brightens the near-term outlook for Sonoma County's technology producers. As corporate profits in most industries are rising by double-digit rates, corporations now have the willingness and the ability to update technology and continue to drive productivity upward. One of the last industries to do so has been the telecommunications industry. Now too, however, telecoms are investing in technology to speed services, expand the number of services, and link telephony with the Internet. This is all to the good for Sonoma County's telecom valley innovators. New product launches are expanding services, and most importantly payrolls, at firms such as Mahi Networks, Alcatel and Advanced Fibre Communications (see Chart 16).

**Chart 16: Manufacturing Has Improved Over Past Six Months**



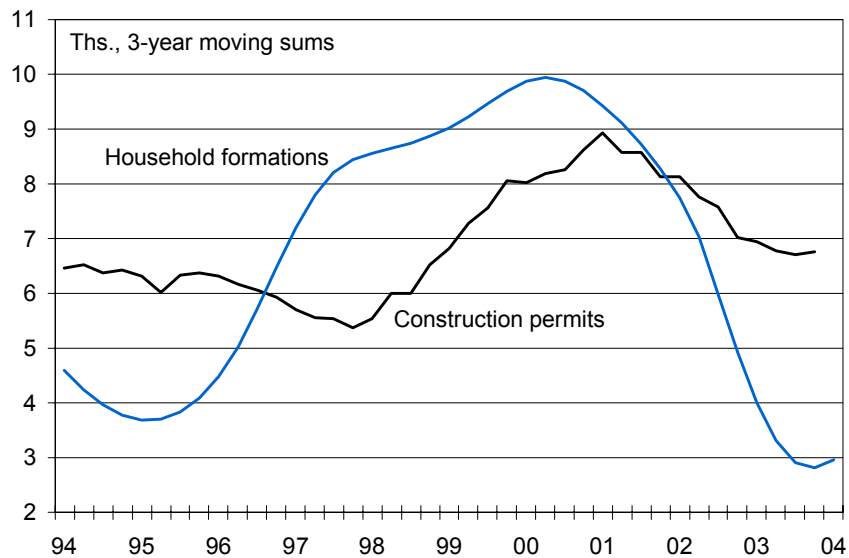
**Foreign exchange.** The dollar has fallen roughly 15% from its peak on a trade-weighted basis. This has benefited Sonoma County's exporters, particularly its winemakers, who have seen considerable competition emerge from wine growing regions around the world. Thus, the value of U.S. wine exports rose by 17% last year, and by nearly 29% in volume. The weak dollar has helped Sonoma County wines compete in a global market that sees a rising number of quality brands and considerable downward pricing pressure.

The outlook, however, remains positive as the dollar may likely fall another 10%. This will occur not so much versus European currencies, but against the Chinese yuan and other Asia-Pacific currencies that compete with China. Sonoma County's wine industry, therefore, may gain further pricing advantage in these markets, which fortunately have favorable demand factors such as strong demographic trends and rising per capita income.

**Income growth.** Stronger income growth nationwide also provides some upside potential for Sonoma County's tourism industry. The hospitality industry should see stronger demand this summer than last, due to stronger labor market conditions, stable consumer confidence and downward pressure on air fares. The greatest risk pertains to drive-in travelers who may be discouraged by high gasoline prices.

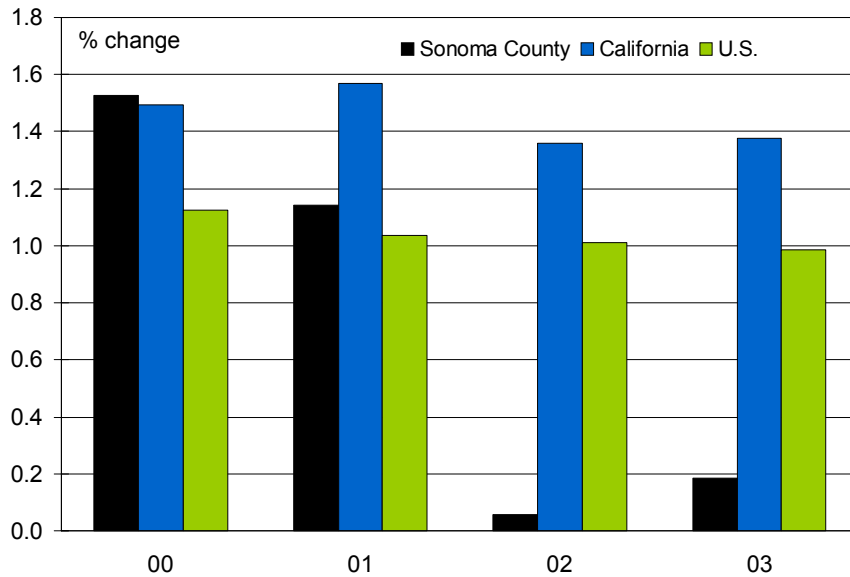
**Interest rates.** Rising interest rates also pose some risk to Sonoma County's economy. With house construction permits now exceeding household formations, this is the first time in nearly ten years where demand does not outstrip supply (see Chart 17). And yet, price appreciation exceeded 15% in the first quarter over a year earlier. Thus, as affordability deteriorates and mortgage interest rates rise further, demand could weaken considerably. By the end of this year, price appreciation is expected to slow to near zero. This impact will largely be on the lower price tiers, where demand relies on mortgage financing. Upper tiers of the market will fare better.

**Chart 17: Demand Pressure on Housing Markets Has Eased**



**Population.** Demographic trends have been weak now for two consecutive years (see Chart 18). Population has not actually declined, but there has been little increase in both 2002 and 2003. A stronger economy and a need to attract skilled workers will generate stronger growth by mid-decade, but do not expect Sonoma County's population growth to lead the U.S. average any time soon. High costs of living and of doing business and increasing congestion will act as long-term buffers to the area's rate of growth. Construction permits fell moderately in the first quarter, indicating that builders recognize weak underlying demand.

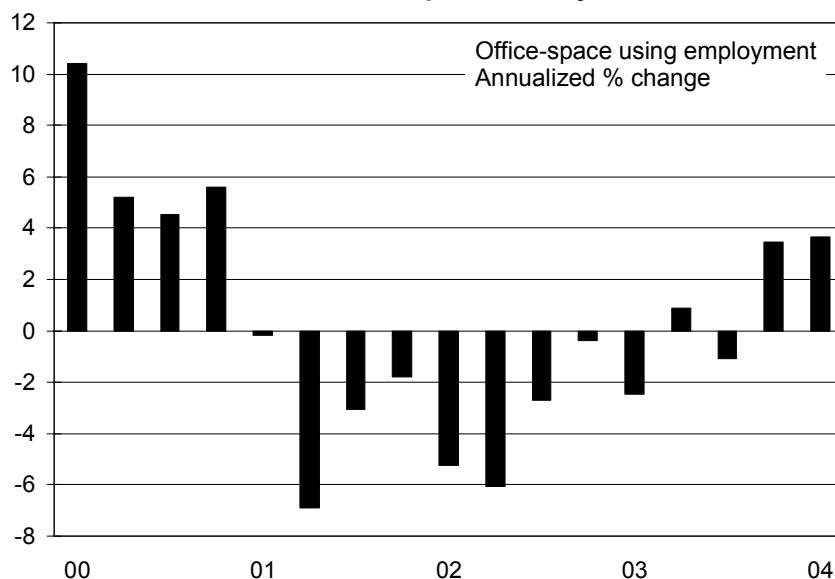
**Chart 18: Weakened Economy Dampens Population Growth**



**Construction.** Construction activity will get a boost from commercial work. Permit issuance for nonresidential structures has not slowed in recent quarters, and a number of commercial infill projects are planned for the cities of Santa Rosa and Petaluma.

Some demand is improving for office space (see Chart 19). Indeed, the area's availability rate for office space, including vacant space and space available for sublet, fell considerably over 2003 from 18.3% to 15.2% at the end of the year, according to Keegan & Coppin. The fact that employment is rising for business and professional services, financial services and other industries that need office space is indicative of an economy strong enough to support such growth. Availability rates for industrial space also have fallen over the year, although demand is limited to smaller space.

**Chart 19: Office Markets Will Improve Slowly**

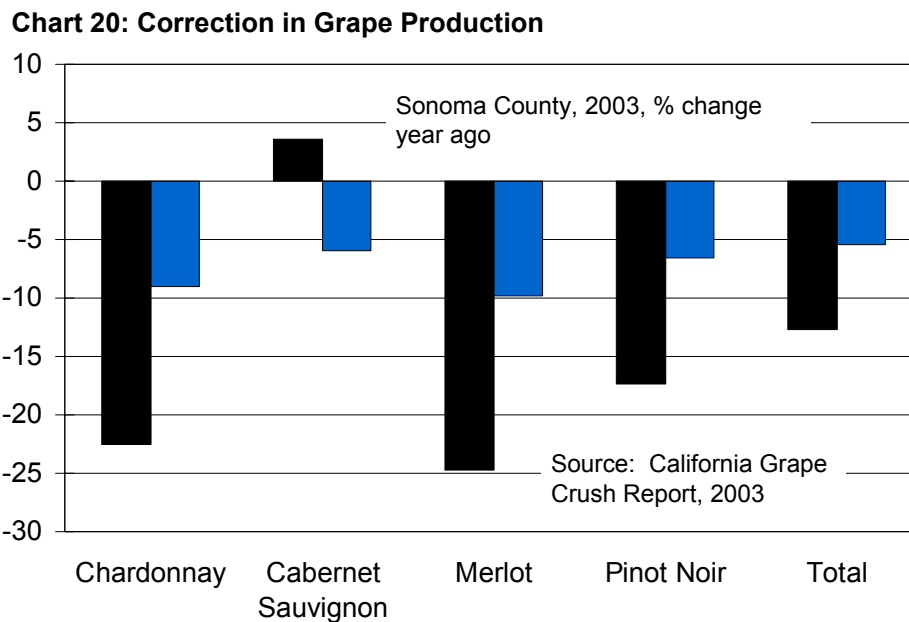


Sonoma County’s turnaround will be slow by historical standards, but by 2005, job growth should be positive for a number of the metro area’s driving industries, allowing Sonoma County to overtake the national average for job growth.

## Sonoma County’s Basic Economic Clusters

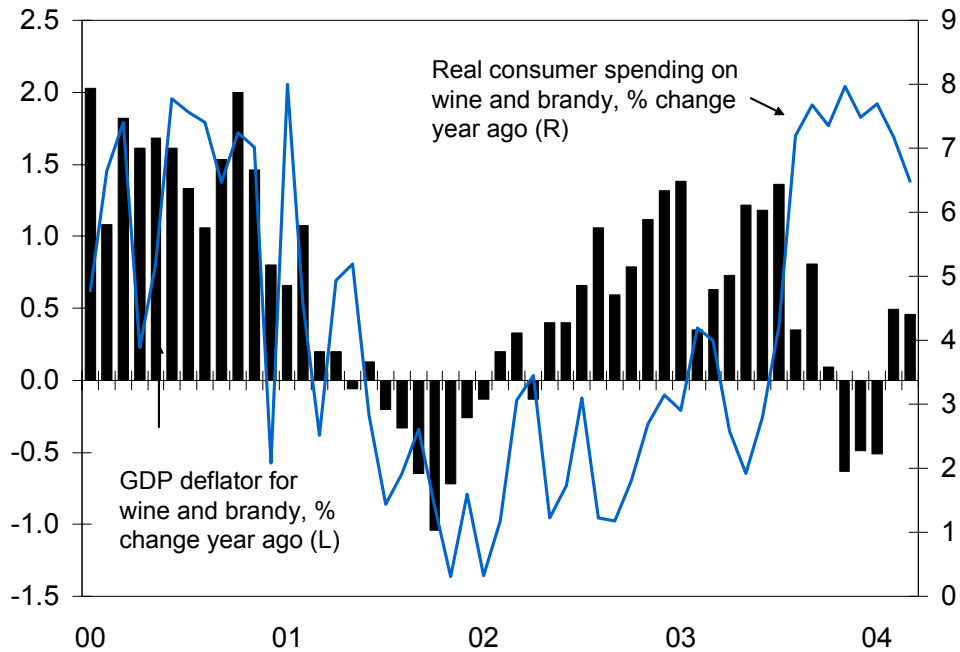
### Agriculture and Food Processing

The year 2003 was certainly one to cut losses and run for Sonoma winemakers, a necessary but painful transition period. With the exception of cabernet, all major varieties saw double-digit drops in production. Despite this, grape growers in Sonoma received even lower prices in 2003 (see Chart 20). While this pain now sets the tone for future gain this year, the continued increase in production for cabernet, Sonoma’s second most widely planted varietal, means a persistent supply glut and weaker pricing potential in this subsector of the Sonoma wine industry.



Real consumer spending of wine in late 2003 grew at a pace rivaling the roaring late-1990s (see Chart 21). Unlike the 1990s, however, this growth was driven not by a strong macroeconomy and concurrent income growth. Much of this new consumption has come from cheap imports and the flood of cheap domestic wines. Total sales for domestic producers rose a weak 1.5% in 2003, while over 70% of growth in wine sales in 2003 was covered by imports. The real test for producers will be in maintaining high consumption rates even as pricing firms up in the coming year.

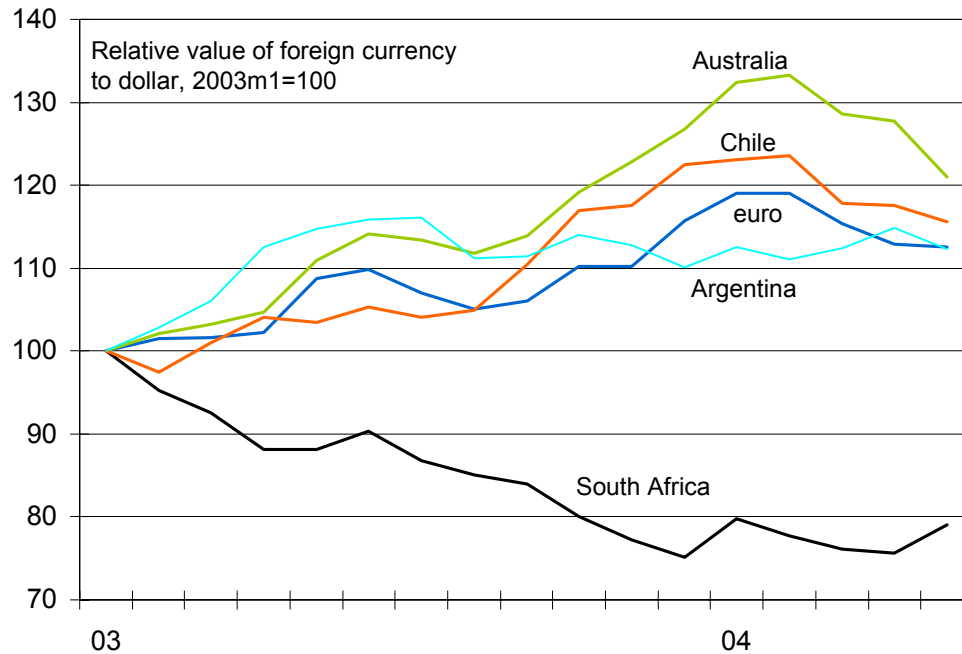
**Chart 21: Improving Wine Demand Driven By Lower Prices**



This year looks set to be the year of the luxury wine, with expectations for a pickup in demand for wines priced above \$15. This is especially good news for Sonoma County producers who tend to cater largely to this market. Indeed, there is some repositioning occurring in the market with local vintners creating new premium products for the high-end market. Evidence more broadly of this trend is a recent increase in luxury goods consumption by consumers, a projected improvement in personal income growth through this year and next, and lower tax burdens. This will be a welcome diversion from the extreme value phenomenon over the past two years, where wines priced as low as \$2 to \$4 a bottle have flooded the market. Already, lower returns are encouraging retailers to minimize their value brand wine offerings.

The weak dollar also is favorable to winemakers. The U.S. dollar has been losing value against most of its winemaking competitors over the past year, thus boosting U.S. winemakers' competitiveness against Australian, European and Chilean rivals (see Chart 22). South Africa is the notable exception where the rand has dropped sharply against the dollar. America is the fourth largest producer of wine in the world, after France, Italy and Spain. The strongest competition is from Australia, Argentina and, surprisingly, China, which is now the seventh largest wine producer in the world.

**Chart 22: Global Pricing Power Has Improved**



Competition from foreign wines remains a persistent problem, although the steady weakening of the dollar over the past year has helped mitigate this threat. Wine import growth slowed from 14% in 2002 to 12% in 2003; import growth slowed to 6% on a year-ago basis by December 2003.

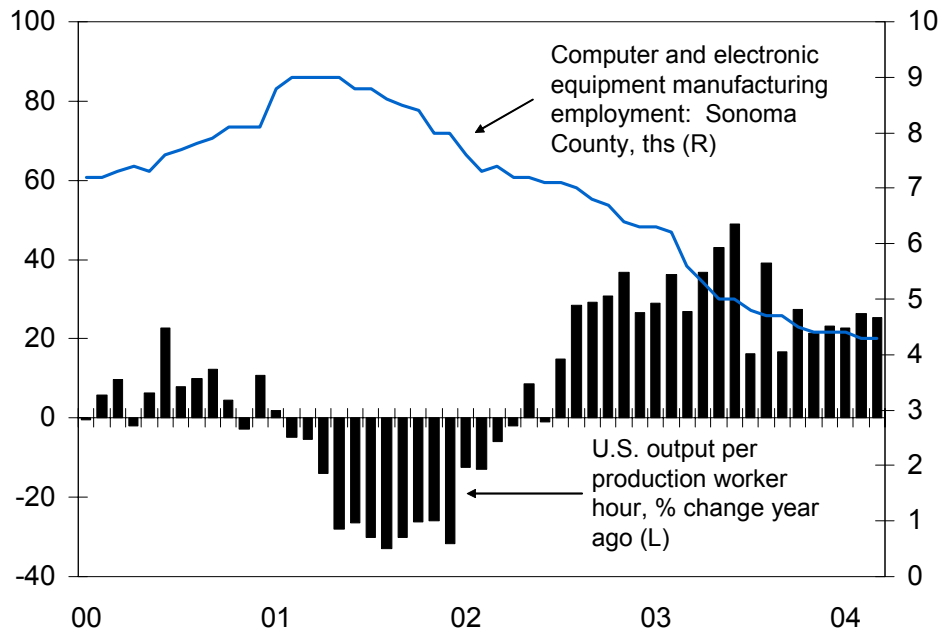
In summary, pricing has stabilized, foreign exchange is favorable to this industry’s exports, the supply imbalance is improving, and both domestic and foreign markets should expand in coming years.

**Technology/Manufacturing**

After its sharp contraction from late 2000 to early 2003, the telecom equipment industry is finally starting to show signs of life. U.S. factory shipments of communications equipment have climbed modestly since early last year, and are up by about 20% since hitting a seven-year low in May 2003. Nevertheless, shipments remain more than one-third below their peak in late 2000. Recent gains are stemming from a modest revival in capital investment from telecom services firms and renewed corporate spending on telecom equipment.

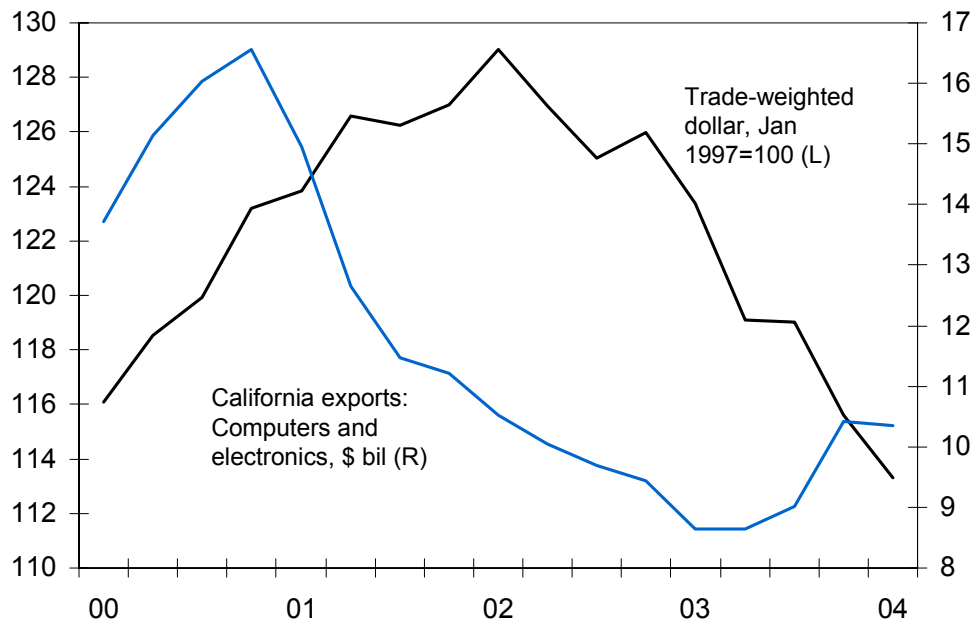
Although demand for IT equipment is on the rise, employment growth remains lackluster. Sonoma County IT manufacturing employment has dropped by more than one-half over the past three years (see Chart 23). It has nearly leveled off, however, and some hiring is expected in the second half of this year. One reason that tech manufacturers have been able to abstain from hiring despite rising production is strong productivity growth. Growth in output per production-worker hour in the IT manufacturing industry nationwide is climbing at a 20% year-over-year pace, but further production gains will eventually translate into modest hiring.

**Chart 23: Productivity Restrains Tech Employment Growth**



U.S. IT equipment producers are benefiting from rising foreign demand. U.S. exports of computer and electronics equipment, which include computers, telecom and networking equipment, semiconductors and other equipment, climbed by 13% in the fourth quarter on a year-over-year basis. California producers are also benefiting from this trend. California IT exports climbed by almost 11% in the final quarter of last year. First quarter exports were level with last year's fourth quarter (see Chart 24). Improving global economic conditions coupled with the depreciation of the U.S. dollar is supporting exports.

**Chart 24: California Tech Exports on the Rise**



Going forward, technological advances, easing of regulatory barriers and demands for data, Internet and wireless services all bolster the long-term outlook for communications equipment companies. Telecom investment will eventually return to more sustainable levels, with growth tied more closely to carriers' cash flows. In the meantime, some segments of telecom equipment have stronger prospects, namely broadband, IP technologies, metropolitan networks and wireless.

While it will take more time to overcome the current overcapacity in long-haul networks, significant bottlenecks persist in many metropolitan areas. Upgrading local infrastructure will not only fuel direct demand for local network equipment, but will also help absorb long-haul capacity; local upgrades allow more customers to use broadband capabilities and thus long-haul bandwidth. Moreover, as carriers become more cost-conscious, they will spend on equipment and software that boost revenues using existing networks.

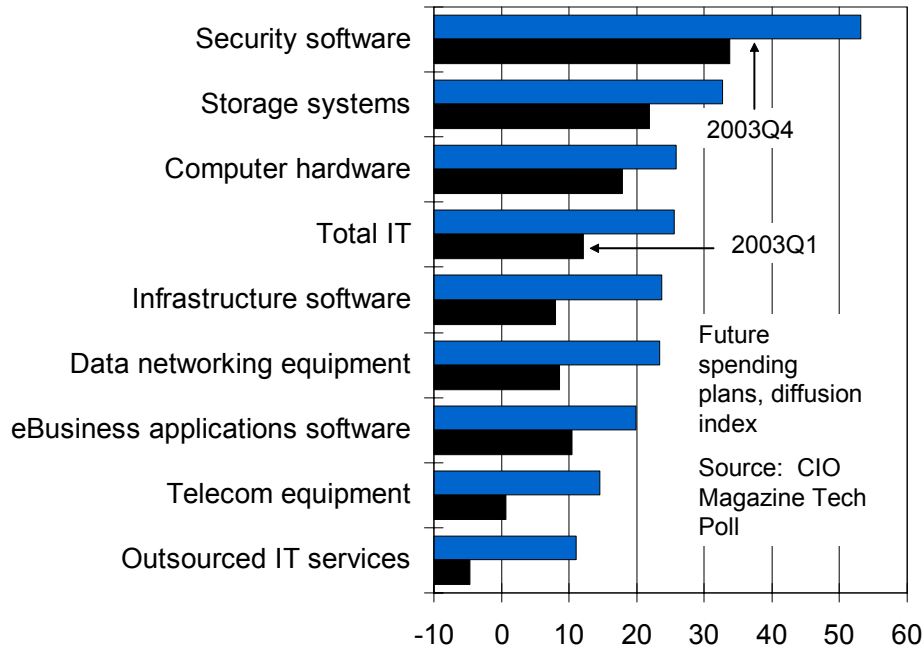
Wireless carriers are adding more high-speed data functionality to their services, and will need to continue upgrading their networks to do so. Ongoing improvements and additions in the wireless services industry will stimulate demand for wireless networking equipment.

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.

## Information Technology

One factor that is supporting information technology is rising overall corporate spending on IT equipment and software. Businesses are growing more confident and, given their prime financial shape, they are increasing their planned spending on information technology, including telecom. According to CIO Magazine's Tech Poll, CIOs' spending plans have improved across the range of IT products and services over the last few quarters (see Chart 25). Spending is rising for a variety of software applications including security, electronic infrastructure, e-business and outsourced IT services.

**Chart 25: IT Spending Plans Are Rising**



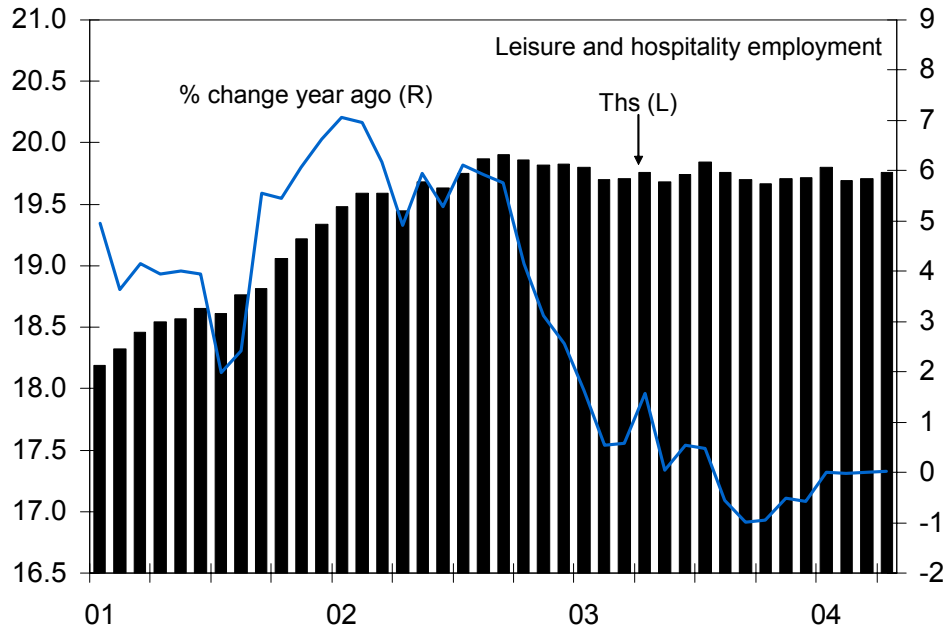
IT services is one of the smallest of Sonoma County's basic clusters, with a payroll of fewer than 2,000 persons. However, it has been one of the most stable employers recently, indicative of the broad stable demand for software and services, rather than electronic hardware, since the 2001 recession.

The outlook for the industry is moderate. Demand will rise with an improving U.S. economy, but software development is one industry most exposed to competition from emerging overseas clusters of tech expertise such as in India, China and East Asia.

## Tourism and Hospitality

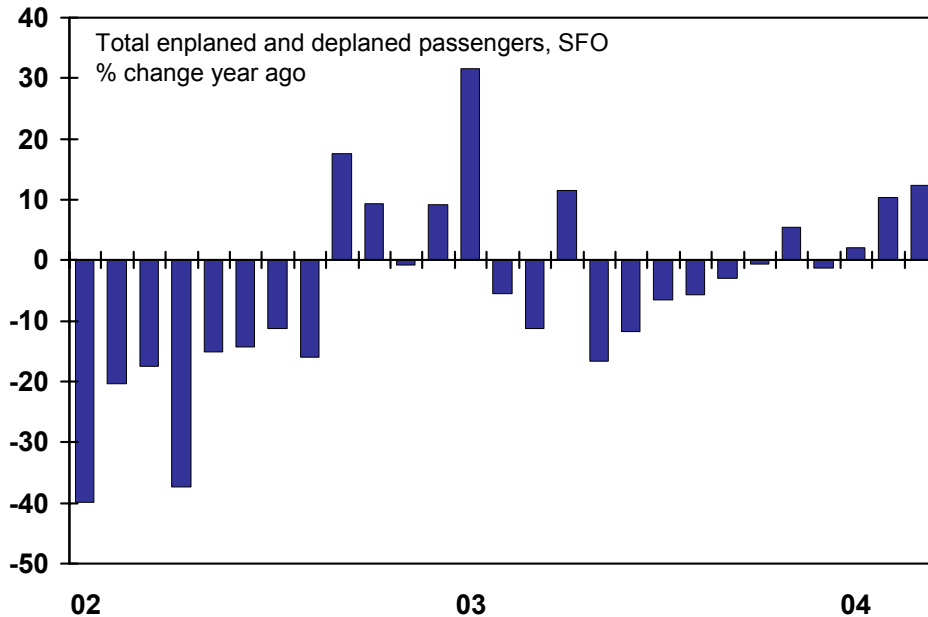
The tourism and hospitality industry is steady. It is the one basic industry in the county that did not suffer a sharp downturn during the 2001 recession and the subsequent weak period of U.S. economic recovery. Employment, however, has remained largely unchanged over the past year, reflecting any lack of pricing power in the industry (see Chart 26). Difficulties in the local industry have been concentrated among the upscale Sonoma County establishments that were planned and completed during the boom years of the late 1990s.

**Chart 26: Leisure & Hospitality—Sonoma's Stable Base**



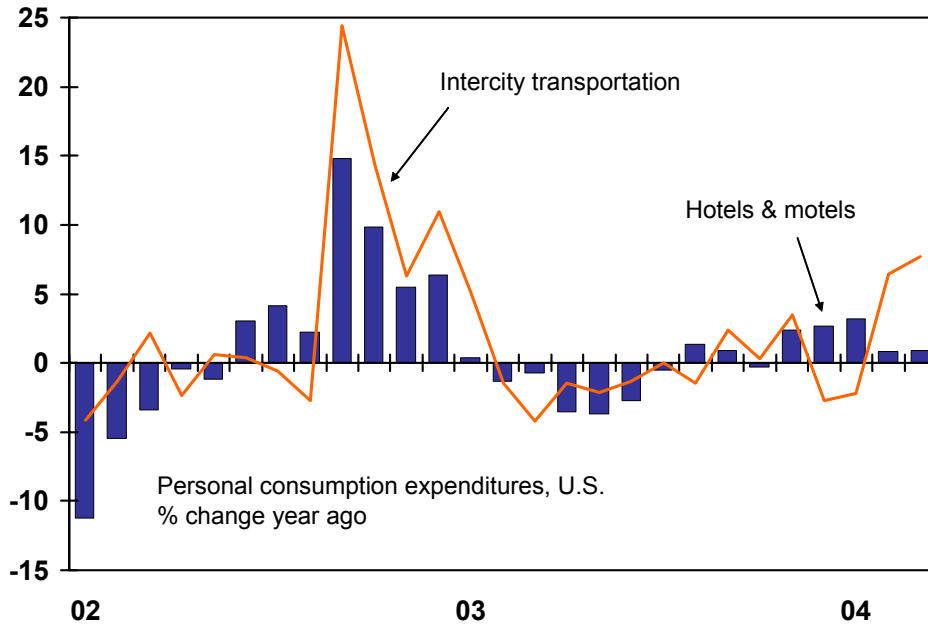
The moribund state of U.S. business travel has hindered the industry's local growth. While Sonoma County itself relies more on vacationers than business travelers, the metro area's fate is indirectly linked to business travel through its reliance on visitors from the San Francisco Bay Area (see Chart 27). Out-of-state visitors frequently take day trips from the Bay Area to visit Sonoma County, and historically, over 40% of overnight visits to Sonoma County have originated in the Bay Area. Yet, business activity has barely begun to level off in and around San Francisco, with only a modest turnaround in sight.

**Chart 27: Bay Area Arrivals Improving**



The pricing environment will remain weak in the near term, as the Bay Area economy struggles to get off the ground, and as the nation's travel recovery remains fragile (see Chart 28). Hotel room rates will remain under pressure until occupancy rates firm on the shoulders of stronger business and vacation activity.

**Chart 28: Travel Spending Rising Modestly**

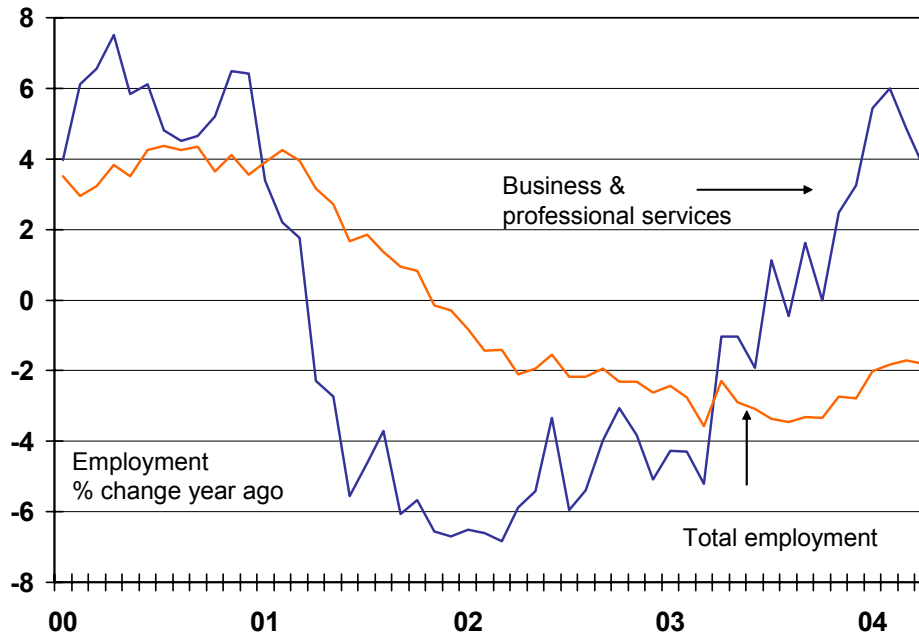


Upside potential this summer arises from several factors. First, low-cost airlines are expanding their service to the West Coast, making travel costs from major metro areas elsewhere in the country less onerous. Moreover, U.S. income growth has accelerated through much of the past six to nine months, improving consumer confidence and a willingness to travel. Finally, business travel will improve in the second half of this year. Strong corporate profits are allowing business travel to increase, and an expanding economy generates much more need for travel related to sales, service, and conferences.

## Professional Services

Professional and business services have seen one of the sharpest improvements in payroll employment over the past year in Sonoma County (see Chart 29). Despite the slow pace of the overall economy in the county and its high per capita income—5% higher than the statewide average and 14% higher than the U.S. average—demand for professional services has remained strong.

**Chart 29: Professional Services On The Rise**



Professional services include legal, accounting, architectural and engineering services that are supported by both personal and corporate demand. Others such as design services, computer systems, consulting services and other scientific and technical services are supported nearly solely by corporate demand. This second group of local services is expected to see stronger growth later this year and into 2005 and 2006, as the economy gets back on its feet and local investment spending accelerates.

## Retailing

Retailing has only recently begun to stabilize in Sonoma County. It has been hit doubly by the lack of growth in travel and tourism and by weakened local income growth since the 2001 recession. Further, spending for luxury goods fell sharply between 2001 and mid-2003, which hurt the many specialty retailers scattered throughout the county.

Conditions are poised to change for the industry, however. Consumer sentiment has turned upward, and consumption of luxury and discretionary goods has improved over the past six months nationwide. As travel and tourism improve in the county, specialty retailers should see improved sales. Moreover, there is considerable upside potential if corporate travel strengthens this year because business travelers generally spend more per day on anything from meals and hotel rooms to souvenirs, art work and specialty products.

Thus, there will be a shift in the coming year away from discount stores and low-priced goods to higher-priced goods, local individual retailers and specialty items related to Sonoma County's wine, specialty foods, artisan products and luxury goods and services.

# 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**

|  | 1998     | 1999     | 2000     | 2001     | 2002     | 2003     | Annual Growth<br>98-03    |
|--|----------|----------|----------|----------|----------|----------|---------------------------|
| <b>Economy</b>                               |          |          |          |          |          |          |                           |
| Gross Metro Product (Mil 96\$)               | 11,787.1 | 12,672.6 | 14,274.9 | 14,324.5 | 14,459.4 | 14,539.9 | 4.3                       |
| % Annual Change                              | 8.1      | 7.5      | 12.6     | 0.4      | 0.9      | 0.6      |                           |
| Gross Metro Product (Mil \$)                 | 12,062.8 | 13,040.8 | 14,704.3 | 15,036.4 | 15,466.9 | 15,823.8 | 5.6                       |
| % Annual Change                              | 8.9      | 8.1      | 12.8     | 2.3      | 2.9      | 2.3      |                           |
| Non-farm Employment (Ths)                    | 173.0    | 179.3    | 186.1    | 189.8    | 186.2    | 180.6    | 0.9                       |
| % Annual Change                              | 4.6      | 3.6      | 3.8      | 2.0      | -1.9     | -3.0     |                           |
| <b>Components of Employment</b>              |          |          |          |          |          |          |                           |
| Mining and Natural Resources                 | 0.5      | 0.4      | 0.4      | 0.3      | 0.3      | 0.3      | -9.5                      |
| Construction                                 | 10.1     | 11.9     | 13.1     | 13.7     | 13.3     | 12.8     | 4.8                       |
| Manufacturing                                | 28.3     | 29.2     | 30.2     | 30.4     | 27.3     | 25.2     | -2.3                      |
| Trade, Transportation, and Utilities         | 33.1     | 33.2     | 33.6     | 34.1     | 34.1     | 33.7     | 0.4                       |
| Wholesale Trade                              | 5.5      | 5.5      | 5.8      | 6.0      | 6.0      | 6.1      | 2.0                       |
| Retail Trade                                 | 23.3     | 23.5     | 23.7     | 24.1     | 24.0     | 23.8     | 0.4                       |
| Transportation and Utilities                 | 4.2      | 4.1      | 4.1      | 4.0      | 4.1      | 3.9      | -1.7                      |
| Information                                  | 3.4      | 3.6      | 4.1      | 4.5      | 4.2      | 3.9      | 2.8                       |
| Financial Activities                         | 9.4      | 10.0     | 10.2     | 10.4     | 10.3     | 10.4     | 2.1                       |
| Professional and Business Services           | 18.8     | 19.5     | 20.6     | 20.0     | 19.0     | 18.8     | 0.0                       |
| Education and Health Services                | 20.7     | 21.1     | 22.0     | 22.9     | 23.3     | 22.7     | 1.9                       |
| Leisure and Hospitality                      | 17.1     | 17.5     | 17.9     | 18.7     | 19.7     | 19.7     | 3.0                       |
| Other Services                               | 6.2      | 6.3      | 6.4      | 6.8      | 6.7      | 6.4      | 0.5                       |
| Government                                   | 25.7     | 26.6     | 27.6     | 28.0     | 28.0     | 26.8     | 0.9                       |
| Labor Force (Ths)                            | 244.8    | 248.4    | 257.0    | 263.9    | 266.8    | 267.9    | 1.8                       |
| % Annual Change                              | 2.9      | 1.4      | 3.5      | 2.7      | 1.1      | 0.4      |                           |
| Number of Employed (Ths)                     | 236.7    | 241.7    | 250.2    | 256.2    | 254.8    | 255.1    | 1.5                       |
| Number of Unemployed (Ths)                   | 8.1      | 6.7      | 6.8      | 7.8      | 12.0     | 12.8     | 9.5                       |
|  |          |          |          |          |          |          | <b>Average</b>            |
| Unemployment Rate (%)                        | 3.3      | 2.7      | 2.7      | 2.9      | 4.5      | 4.8      | 3.5                       |
| <b>Income, Demographics, and Consumption</b> |          |          |          |          |          |          |                           |
| Personal Income (Mil \$)                     | 13,452.0 | 14,292.5 | 16,204.1 | 16,173.4 | 16,060.8 | 16,388.0 | 4.0                       |
| % Annual Change                              | 8.1      | 6.3      | 13.4     | -0.2     | -0.7     | 2.0      |                           |
| Real Personal Income (Mil 96\$)              | 14,015.6 | 14,649.8 | 16,203.0 | 15,853.2 | 15,529.2 | 15,559.1 | 2.1                       |
| Per Capita Income (\$)                       | 30,168.2 | 31,521.4 | 35,200.5 | 34,736.7 | 34,475.5 | 35,112.8 | 3.1                       |
| Median Household Income (\$)                 | 49,690.5 | 53,076.0 | 58,093.0 | 57,063.8 | 55,940.6 | 56,334.1 | 2.5                       |
| Personal Bankruptcy Filings                  | 2,173.0  | 1,627.0  | 1,158.0  | 1,183.0  | 1,223.0  | 1,300.0  | -9.8                      |
| Consumer Price Index                         | 176.9    | 184.0    | 193.1    | 199.0    | 201.7    | 205.2    | 3.0                       |
| Population (Ths)                             | 445.9    | 453.4    | 460.3    | 465.6    | 465.9    | 466.7    | 0.9                       |
| % Annual Change                              | 2.0      | 1.7      | 1.5      | 1.1      | 0.1      | 0.2      |                           |
| Age < 4                                      | 28.7     | 27.8     | 27.7     | 27.7     | 27.4     | 27.3     | -1.0                      |
| Age 5-19                                     | 94.0     | 95.6     | 97.6     | 99.4     | 99.7     | 100.1    | 1.3                       |
| Age 20-24                                    | 25.0     | 26.7     | 28.0     | 29.2     | 30.1     | 31.0     | 4.5                       |
| Age 25-44                                    | 137.1    | 136.2    | 134.5    | 133.1    | 130.5    | 128.1    | -1.4                      |
| Age 45-64                                    | 103.4    | 109.4    | 114.4    | 118.0    | 120.3    | 122.7    | 3.5                       |
| Age > 65                                     | 57.7     | 57.8     | 58.2     | 58.3     | 57.8     | 57.5     | -0.1                      |
| Households (Ths)                             | 166.3    | 169.1    | 173.1    | 175.4    | 176.1    | 176.4    | 1.2                       |
| % Annual Change                              | 1.9      | 1.7      | 2.4      | 1.3      | 0.4      | 0.2      |                           |
| Net Migration (Ths)                          | 7.1      | 6.0      | 5.3      | 3.7      | -1.5     | -0.8     |                           |
| <b>Residential Housing Market</b>            |          |          |          |          |          |          |                           |
| Total Housing Permits                        | 3,062.0  | 3,036.0  | 2,505.0  | 2,583.0  | 1,928.0  | 2,239.6  | <b>Average</b><br>2,558.9 |
| % Annual Change                              | 56.1     | -0.9     | -17.5    | 3.1      | -25.4    | 16.2     |                           |
| Single Family Permits                        | 2,098.0  | 2,348.0  | 2,013.0  | 1,717.0  | 1,350.0  | 1,513.5  | 1,839.9                   |
| Multi Family Permits                         | 964.0    | 688.0    | 492.0    | 866.0    | 578.0    | 726.2    | 719.0                     |
| Median Exist. Home Price (SA, Ths \$)        | 243.4    | 277.7    | 338.4    | 382.0    | 414.2    | 463.5    | 13.7                      |
| % Annual Change                              | 10.1     | 14.1     | 21.8     | 12.9     | 8.4      | 11.9     |                           |
| Existing Home Sales (Ths)                    | 13.3     | 14.1     | 11.8     | 10.0     | 8.9      | 9.0      | -7.4                      |
| Mortgage Originations (Mil \$)               | 5,163.0  | 4,498.7  | 3,990.5  | 8,651.2  | 10,529.3 | 14,193.3 | 22.4                      |
|  |          |          |          |          |          |          | <b>Average</b>            |
| Affordability Index                          | 90.5     | 89.8     | 72.0     | 64.7     | 62.7     | 62.4     | 73.7                      |
| <b>Nonresidential Construction</b>           |          |          |          |          |          |          |                           |
| Nonres. Building Permits (Mil \$)            |          |          |          |          |          |          | <b>Average</b>            |
| Total  | 225.0    | 226.2    | 208.8    | 211.7    | 244.4    | 199.2    | 219.2                     |
| Office Buildings                             | 35.5     | 23.4     | 21.7     | 26.5     | 50.1     | 11.8     | 28.2                      |
| Retail Space                                 | 34.3     | 32.8     | 27.8     | 35.9     | 54.0     | 35.9     | 36.8                      |
| Industrial                                   | 37.7     | 48.7     | 29.5     | 22.2     | 8.9      | 12.5     | 26.6                      |

**Table 4: Sonoma County Forecasted Summary Indicators**

|  | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | Annual Growth<br>04-09    |
|--|----------|----------|----------|----------|----------|----------|---------------------------|
| <b>Economy</b>                               |          |          |          |          |          |          |                           |
| Gross Metro Product (Mil 96\$)               | 14,867.8 | 15,422.5 | 16,146.8 | 16,920.6 | 17,664.5 | 18,390.6 | 4.3                       |
| % Annual Change                              | 2.3      | 3.7      | 4.7      | 4.8      | 4.4      | 4.1      |                           |
| Gross Metro Product (Mil \$)                 | 16,400.2 | 17,227.9 | 18,328.6 | 19,546.1 | 20,761.4 | 22,000.3 | 6.1                       |
| % Annual Change                              | 3.6      | 5.1      | 6.4      | 6.6      | 6.2      | 6.0      |                           |
| Non-farm Employment (Ths)                    | 180.4    | 185.1    | 191.2    | 197.0    | 202.7    | 208.3    | 2.9                       |
| % Annual Change                              | -0.1     | 2.6      | 3.3      | 3.1      | 2.9      | 2.8      |                           |
| <b>Components of Employment</b>              |          |          |          |          |          |          |                           |
| Mining and Natural Resources                 | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | 0.2      | -1.4                      |
| Construction                                 | 13.0     | 12.6     | 12.6     | 12.9     | 13.3     | 13.8     | 1.2                       |
| Manufacturing                                | 24.2     | 24.4     | 24.7     | 24.9     | 25.0     | 25.2     | 0.8                       |
| Trade, Transportation, and Utilities         | 33.9     | 34.8     | 35.9     | 36.8     | 37.5     | 38.2     | 2.4                       |
| Wholesale Trade                              | 6.2      | 6.4      | 6.6      | 6.8      | 6.9      | 7.1      | 2.5                       |
| Retail Trade                                 | 23.8     | 24.4     | 25.2     | 25.8     | 26.3     | 26.9     | 2.5                       |
| Transportation and Utilities                 | 3.9      | 4.0      | 4.1      | 4.2      | 4.2      | 4.3      | 2.1                       |
| Information                                  | 3.8      | 4.0      | 4.1      | 4.3      | 4.5      | 4.6      | 3.9                       |
| Financial Activities                         | 10.5     | 10.9     | 11.3     | 11.7     | 12.0     | 12.3     | 3.3                       |
| Professional and Business Services           | 19.7     | 20.8     | 22.2     | 23.5     | 24.8     | 26.1     | 5.8                       |
| Education and Health Services                | 22.9     | 23.6     | 24.5     | 25.4     | 26.2     | 27.1     | 3.5                       |
| Leisure and Hospitality                      | 20.0     | 20.9     | 22.0     | 23.1     | 24.2     | 25.3     | 4.8                       |
| Other Services                               | 6.3      | 6.5      | 6.8      | 7.0      | 7.2      | 7.5      | 3.6                       |
| Government                                   | 26.0     | 26.4     | 26.9     | 27.3     | 27.7     | 28.1     | 1.6                       |
| Labor Force (Ths)                            | 268.4    | 274.6    | 282.6    | 290.7    | 298.6    | 306.5    | 2.7                       |
| % Annual Change                              | 0.2      | 2.3      | 2.9      | 2.9      | 2.7      | 2.6      |                           |
| Number of Employed (Ths)                     | 256.0    | 262.1    | 270.3    | 278.7    | 286.8    | 294.7    | 2.9                       |
| Number of Unemployed (Ths)                   | 12.4     | 12.5     | 12.2     | 12.0     | 11.9     | 11.7     | -1.1                      |
|  |          |          |          |          |          |          | <b>Average</b>            |
| Unemployment Rate (%)                        | 4.6      | 4.6      | 4.3      | 4.1      | 4.0      | 3.8      | 4.2                       |
| <b>Income, Demographics, and Consumption</b> |          |          |          |          |          |          |                           |
| Personal Income (Mil \$)                     | 17,269.3 | 18,371.0 | 19,533.6 | 20,806.9 | 22,102.2 | 23,418.0 | 6.3                       |
| % Annual Change                              | 5.4      | 6.4      | 6.3      | 6.5      | 6.2      | 6.0      |                           |
| Real Personal Income (Mil 96\$)              | 16,114.6 | 16,888.1 | 17,647.2 | 18,437.3 | 19,212.3 | 19,956.2 | 4.4                       |
| Per Capita Income (\$)                       | 36,607.9 | 38,241.0 | 39,746.2 | 41,491.4 | 43,228.3 | 44,966.0 | 4.2                       |
| Median Household Income (\$)                 | 58,204.6 | 60,295.9 | 62,311.1 | 64,642.8 | 66,910.2 | 69,138.6 | 3.5                       |
| Personal Bankruptcy Filings                  | 1,213.8  | 1,098.3  | 1,071.8  | 1,070.3  | 1,068.3  | 1,088.2  | -2.2                      |
| Consumer Price Index                         | 207.0    | 209.3    | 213.2    | 218.1    | 223.1    | 228.2    | 2.0                       |
| Population (Ths)                             | 471.7    | 480.4    | 491.5    | 501.5    | 511.3    | 520.8    | 2.0                       |
| % Annual Change                              | 1.1      | 1.8      | 2.3      | 2.0      | 2.0      | 1.9      |                           |
| Age < 4                                      | 27.5     | 28.0     | 28.8     | 29.5     | 30.4     | 31.3     | 2.6                       |
| Age 5-19                                     | 101.4    | 103.3    | 105.5    | 107.4    | 109.2    | 110.6    | 1.8                       |
| Age 20-24                                    | 32.0     | 33.1     | 34.3     | 35.3     | 36.4     | 37.8     | 3.4                       |
| Age 25-44                                    | 127.1    | 127.3    | 128.2    | 129.1    | 130.1    | 131.0    | 0.6                       |
| Age 45-64                                    | 125.9    | 130.2    | 135.1    | 139.5    | 143.2    | 146.8    | 3.1                       |
| Age > 65                                     | 57.8     | 58.5     | 59.6     | 60.7     | 62.1     | 63.3     | 1.8                       |
| Households (Ths)                             | 178.7    | 183.0    | 187.8    | 192.4    | 197.0    | 201.4    | 2.4                       |
| % Annual Change                              | 1.3      | 2.4      | 2.7      | 2.4      | 2.4      | 2.3      |                           |
| Net Migration (Ths)                          | 3.3      | 6.9      | 9.2      | 8.0      | 7.6      | 7.1      |                           |
| <b>Residential Housing Market</b>            |          |          |          |          |          |          |                           |
| Total Housing Permits                        | 3,012.3  | 2,541.3  | 2,573.0  | 2,611.4  | 2,661.0  | 2,700.5  | <b>Average</b><br>2,683.2 |
| % Annual Change                              | 34.5     | -15.6    | 1.3      | 1.5      | 1.9      | 1.5      |                           |
| Single Family Permits                        | 2,264.8  | 1,914.5  | 1,888.4  | 1,876.1  | 1,889.0  | 1,915.9  | 1,958.1                   |
| Multi Family Permits                         | 747.5    | 626.8    | 684.6    | 735.3    | 772.0    | 784.5    | 725.1                     |
| Median Exist. Home Price (SA, Ths \$)        | 501.2    | 509.8    | 526.7    | 543.0    | 559.0    | 573.7    | 2.7                       |
| % Annual Change                              | 8.2      | 1.7      | 3.3      | 3.1      | 2.9      | 2.6      |                           |
| Existing Home Sales (Ths)                    | 10.2     | 9.1      | 9.7      | 10.2     | 10.6     | 10.9     | 1.4                       |
| Mortgage Originations (Mil \$)               | 7,440.6  | 3,984.3  | 4,312.2  | 4,635.5  | 4,937.1  | 5,187.6  | -7.0                      |
|  |          |          |          |          |          |          | <b>Average</b>            |
| Affordability Index                          | 57.0     | 55.3     | 52.6     | 52.7     | 53.7     | 54.1     | 54.2                      |
| <b>Nonresidential Construction</b>           |          |          |          |          |          |          |                           |
| Nonres. Building Permits (Mil \$)            |          |          |          |          |          |          | <b>Average</b>            |
| Total  | 236.3    | 270.4    | 289.8    | 305.8    | 319.8    | 333.0    | 292.5                     |
| Office Buildings                             | 17.5     | 24.3     | 28.8     | 31.4     | 33.4     | 35.3     | 28.4                      |
| Retail Space                                 | 54.7     | 70.7     | 74.2     | 77.1     | 79.7     | 82.4     | 73.1                      |
| Industrial                                   | 15.0     | 15.9     | 17.1     | 18.5     | 19.6     | 20.9     | 17.8                      |

**Table 5: Sonoma County Historical Employment by Cluster**  
*Thousands*

|                                   | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | Compound Ann.<br>Growth Rate<br>98-03 | Pct. Share of<br>Employment<br>2003 |
|-----------------------------------|-------|-------|-------|-------|-------|-------|---------------------------------------|-------------------------------------|
| Total                             | 185.4 | 191.9 | 197.0 | 200.4 | 196.8 | 191.3 | 0.6                                   | 100.0                               |
| % Change                          | 5.4   | 3.5   | 2.6   | 1.7   | -1.8  | -2.8  |                                       |                                     |
| 1. Agriculture/Food Processing    | 13.0  | 14.6  | 14.4  | 14.4  | 14.8  | 15.0  | 2.9                                   | 7.9                                 |
| % Change                          | 15.1  | 12.5  | -1.4  | -0.2  | 2.4   | 1.8   |                                       |                                     |
| 2. Information Technology         | 1.5   | 1.7   | 2.0   | 2.1   | 1.6   | 1.6   | 0.5                                   | 0.8                                 |
| % Change                          | 8.7   | 13.9  | 15.3  | 5.7   | -22.6 | -4.5  |                                       |                                     |
| 3. High-tech Electronics          | 2.0   | 2.0   | 2.3   | 2.3   | 2.0   | 1.6   | -4.1                                  | 0.8                                 |
| % Change                          | 4.2   | -0.7  | 14.9  | 2.8   | -14.3 | -19.3 |                                       |                                     |
| 4. High-tech Instruments/Optical  | 9.3   | 9.2   | 10.0  | 10.6  | 8.2   | 6.6   | -6.8                                  | 3.4                                 |
| % Change                          | 12.5  | -1.9  | 8.5   | 6.9   | -22.9 | -19.9 |                                       |                                     |
| 5. Other High-value Manufacturing | 0.7   | 0.6   | 0.5   | 0.5   | 0.3   | 0.3   | -14.7                                 | 0.2                                 |
| % Change                          | 5.2   | -16.8 | -10.1 | -5.3  | -26.4 | -13.2 |                                       |                                     |
| 6. Resource-based Manufacturing   | 1.9   | 2.1   | 2.0   | 1.9   | 1.7   | 1.6   | -3.0                                  | 0.9                                 |
| % Change                          | 8.2   | 10.7  | -6.6  | -4.9  | -11.5 | -1.5  |                                       |                                     |
| 7. Financial Activities           | 6.8   | 7.2   | 7.2   | 7.3   | 7.3   | 7.2   | 1.3                                   | 3.8                                 |
| % Change                          | 4.1   | 6.5   | -0.6  | 1.7   | -0.1  | -0.7  |                                       |                                     |
| 8. Tourism                        | 13.7  | 14.2  | 14.6  | 15.2  | 16.2  | 16.1  | 3.3                                   | 8.4                                 |
| % Change                          | 4.5   | 3.8   | 2.3   | 4.2   | 6.5   | -0.4  |                                       |                                     |
| 9. Engineering and Research       | 1.7   | 1.6   | 1.9   | 1.9   | 2.0   | 2.0   | 3.7                                   | 1.1                                 |
| % Change                          | 13.3  | -4.1  | 18.3  | 0.9   | 3.2   | 1.7   |                                       |                                     |
| 10. Legal Services                | 1.3   | 1.3   | 1.2   | 1.1   | 1.2   | 1.1   | -2.8                                  | 0.6                                 |
| % Change                          | 4.7   | -0.7  | -5.6  | -7.4  | 1.1   | -1.2  |                                       |                                     |
| 11. Health Services               | 15.5  | 16.1  | 16.9  | 17.2  | 17.5  | 16.8  | 1.7                                   | 8.8                                 |
| % Change                          | 4.1   | 3.7   | 5.3   | 1.6   | 1.4   | -3.5  |                                       |                                     |
| 12. Other Professional Services   | 15.5  | 16.1  | 16.9  | 16.3  | 15.6  | 15.4  | -0.1                                  | 8.1                                 |
| % Change                          | 5.4   | 3.8   | 4.9   | -3.7  | -4.3  | -1.0  |                                       |                                     |
| 13. Retail Trade                  | 23.3  | 23.5  | 23.7  | 24.1  | 24.0  | 23.8  | 0.4                                   | 12.4                                |
| % Change                          | 2.4   | 0.9   | 0.9   | 1.6   | -0.3  | -1.2  |                                       |                                     |
| Sum of Clusters                   | 106.2 | 110.2 | 113.5 | 114.9 | 112.2 | 109.2 | 0.6                                   | 57.1                                |
| % Change                          | 6.2   | 3.8   | 3.0   | 1.2   | -2.4  | -2.7  |                                       |                                     |
| Other                             | 79.2  | 81.6  | 83.4  | 85.4  | 84.6  | 82.1  | 0.7                                   | 42.9                                |
| % Change                          | 4.4   | 3.1   | 2.2   | 2.4   | -1.0  | -3.0  |                                       |                                     |

**Table 6: Sonoma County Forecasted Employment by Cluster**  
Thousands

|                                   | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | Compound Ann.<br>Growth Rate | Pct. Share of<br>Employment |
|-----------------------------------|-------|-------|-------|-------|-------|-------|------------------------------|-----------------------------|
|                                   |       |       |       |       |       |       | 04-09                        | 2009                        |
| Total                             | 191.1 | 196.1 | 202.4 | 208.5 | 214.4 | 220.3 | 2.9                          | 100.0                       |
| % Change                          | -0.1  | 2.6   | 3.2   | 3.0   | 2.8   | 2.7   |                              |                             |
| 1. Agriculture/Food Processing    | 15.0  | 15.4  | 15.8  | 16.2  | 16.6  | 17.1  | 2.7                          | 7.8                         |
| % Change                          | -0.3  | 2.5   | 2.8   | 2.6   | 2.7   | 2.7   |                              |                             |
| 2. Information Technology         | 1.5   | 1.6   | 1.7   | 1.8   | 1.9   | 2.0   | 4.9                          | 0.9                         |
| % Change                          | -1.1  | 5.6   | 5.2   | 4.9   | 4.5   | 4.4   |                              |                             |
| 3. High-tech Electronics          | 1.4   | 1.5   | 1.6   | 1.6   | 1.7   | 1.7   | 3.1                          | 0.8                         |
| % Change                          | -9.8  | 7.1   | 3.6   | 2.0   | 1.6   | 1.5   |                              |                             |
| 4. High-tech Instruments/Optical  | 6.1   | 6.1   | 6.2   | 6.2   | 6.3   | 6.3   | 0.6                          | 2.9                         |
| % Change                          | -6.8  | 0.2   | 1.0   | 0.7   | 0.6   | 0.6   |                              |                             |
| 5. Other High-value Manufacturing | 0.3   | 0.3   | 0.2   | 0.2   | 0.2   | 0.2   | -3.6                         | 0.1                         |
| % Change                          | -10.9 | -5.5  | -3.3  | -3.3  | -3.1  | -2.9  |                              |                             |
| 6. Resource-based Manufacturing   | 1.6   | 1.5   | 1.5   | 1.5   | 1.4   | 1.4   | -2.4                         | 0.6                         |
| % Change                          | -2.9  | -2.8  | -2.5  | -2.3  | -2.3  | -2.3  |                              |                             |
| 7. Financial Activities           | 7.2   | 7.4   | 7.7   | 7.8   | 8.0   | 8.1   | 2.3                          | 3.7                         |
| % Change                          | -0.3  | 3.2   | 2.9   | 2.2   | 1.8   | 1.6   |                              |                             |
| 8. Tourism                        | 16.4  | 17.2  | 18.1  | 19.0  | 19.9  | 20.8  | 4.9                          | 9.4                         |
| % Change                          | 1.8   | 5.1   | 5.3   | 4.9   | 4.7   | 4.4   |                              |                             |
| 9. Engineering and Research       | 2.1   | 2.2   | 2.4   | 2.6   | 2.7   | 2.9   | 7.1                          | 1.3                         |
| % Change                          | 2.9   | 6.3   | 8.3   | 7.5   | 7.0   | 6.7   |                              |                             |
| 10. Legal Services                | 1.1   | 1.1   | 1.2   | 1.2   | 1.2   | 1.2   | 0.5                          | 0.5                         |
| % Change                          | -0.1  | -0.6  | 1.0   | 0.9   | 0.6   | 0.4   |                              |                             |
| 11. Health Services               | 17.0  | 17.6  | 18.4  | 19.1  | 19.9  | 20.6  | 4.0                          | 9.4                         |
| % Change                          | 0.9   | 3.5   | 4.4   | 4.2   | 3.9   | 3.8   |                              |                             |
| 12. Other Professional Services   | 16.2  | 17.1  | 18.3  | 19.3  | 20.4  | 21.5  | 5.7                          | 9.7                         |
| % Change                          | 5.5   | 5.5   | 6.6   | 5.9   | 5.4   | 5.2   |                              |                             |
| 13. Retail Trade                  | 23.8  | 24.4  | 25.2  | 25.8  | 26.3  | 26.8  | 2.5                          | 12.2                        |
| % Change                          | 0.1   | 2.4   | 3.4   | 2.4   | 2.1   | 1.9   |                              |                             |
| Sum of Clusters                   | 109.8 | 113.6 | 118.2 | 122.4 | 126.5 | 130.6 | 3.5                          | 59.3                        |
| % Change                          | 0.5   | 3.4   | 4.1   | 3.6   | 3.3   | 3.2   |                              |                             |
| Other                             | 81.3  | 82.5  | 84.2  | 86.1  | 87.9  | 89.7  | 2.0                          | 40.7                        |
| % Change                          | -0.9  | 1.5   | 2.0   | 2.2   | 2.1   | 2.1   |                              |                             |

**Table 7: Sonoma County Historical Gross Regional Product (Output) by Cluster**  
*Millions of current dollars*

|                                   | 1998     | 1999     | 2000     | 2001     | 2002     | 2003     | Compound Ann.<br>Growth Rate<br>98-03 | Pct. Share of<br>Total Output<br>2003 |
|-----------------------------------|----------|----------|----------|----------|----------|----------|---------------------------------------|---------------------------------------|
| Total                             | 12,062.8 | 13,040.8 | 14,704.3 | 15,036.4 | 15,466.9 | 15,823.8 | 5.6                                   | 100.0                                 |
| % Change                          | 8.9      | 8.1      | 12.8     | 2.3      | 2.9      | 2.3      |                                       |                                       |
| 1. Agriculture/Food Processing    | 708.6    | 832.5    | 992.9    | 887.0    | 906.6    | 899.3    | 4.9                                   | 5.7                                   |
| % Change                          | -2.3     | 17.5     | 19.3     | -10.7    | 2.2      | -0.8     |                                       |                                       |
| 2. Information Technology         | 123.3    | 156.7    | 194.9    | 196.1    | 192.3    | 210.2    | 11.3                                  | 1.3                                   |
| % Change                          | 3.3      | 27.1     | 24.4     | 0.6      | -1.9     | 9.3      |                                       |                                       |
| 3. High-tech Electronics          | 181.6    | 180.0    | 215.3    | 224.9    | 168.7    | 193.6    | 1.3                                   | 1.2                                   |
| % Change                          | 10.1     | -0.9     | 19.6     | 4.5      | -25.0    | 14.7     |                                       |                                       |
| 4. High-tech Instruments/Optical  | 583.6    | 680.4    | 845.5    | 837.1    | 554.0    | 599.0    | 0.5                                   | 3.8                                   |
| % Change                          | 8.6      | 16.6     | 24.3     | -1.0     | -33.8    | 8.1      |                                       |                                       |
| 5. Other High-value Manufacturing | 126.8    | 132.5    | 141.6    | 67.2     | 53.0     | 47.4     | -17.9                                 | 0.3                                   |
| % Change                          | 9.3      | 4.5      | 6.9      | -52.5    | -21.2    | -10.5    |                                       |                                       |
| 6. Resource-based Manufacturing   | 88.5     | 105.6    | 102.3    | 100.4    | 117.3    | 116.0    | 5.6                                   | 0.7                                   |
| % Change                          | 6.8      | 19.3     | -3.1     | -1.8     | 16.8     | -1.1     |                                       |                                       |
| 7. Financial Activities           | 737.3    | 768.8    | 836.6    | 871.4    | 950.0    | 969.9    | 5.6                                   | 6.1                                   |
| % Change                          | 12.3     | 4.3      | 8.8      | 4.2      | 9.0      | 2.1      |                                       |                                       |
| 8. Tourism                        | 503.6    | 534.6    | 583.7    | 617.2    | 696.0    | 725.4    | 7.6                                   | 4.6                                   |
| % Change                          | 12.5     | 6.2      | 9.2      | 5.7      | 12.8     | 4.2      |                                       |                                       |
| 9. Engineering and Research       | 173.1    | 168.8    | 214.3    | 202.6    | 197.8    | 193.9    | 2.3                                   | 1.2                                   |
| % Change                          | 22.8     | -2.5     | 27.0     | -5.5     | -2.3     | -2.0     |                                       |                                       |
| 10. Legal Services                | 117.8    | 123.9    | 132.0    | 124.9    | 127.9    | 127.6    | 1.6                                   | 0.8                                   |
| % Change                          | 7.0      | 5.2      | 6.5      | -5.4     | 2.4      | -0.3     |                                       |                                       |
| 11. Health Services               | 728.6    | 771.7    | 857.5    | 870.2    | 963.8    | 967.9    | 5.8                                   | 6.1                                   |
| % Change                          | 9.5      | 5.9      | 11.1     | 1.5      | 10.8     | 0.4      |                                       |                                       |
| 12. Other Professional Services   | 1,045.4  | 1,167.5  | 1,323.4  | 1,471.7  | 1,418.8  | 1,471.0  | 7.1                                   | 9.3                                   |
| % Change                          | 9.6      | 11.7     | 13.3     | 11.2     | -3.6     | 3.7      |                                       |                                       |
| 13. Retail Trade                  | 1,169.6  | 1,210.2  | 1,304.3  | 1,314.6  | 1,371.7  | 1,374.7  | 3.3                                   | 8.7                                   |
| % Change                          | 8.7      | 3.5      | 7.8      | 0.8      | 4.3      | 0.2      |                                       |                                       |
| Sum of Clusters                   | 6,287.7  | 6,833.3  | 7,744.3  | 7,785.3  | 7,717.9  | 7,895.9  | 4.7                                   | 49.9                                  |
| % Change                          | 8.5      | 8.7      | 13.3     | 0.5      | -0.9     | 2.3      |                                       |                                       |
| Other                             | 5,775.2  | 6,207.6  | 6,960.0  | 7,251.1  | 7,749.0  | 7,927.8  | 6.5                                   | 50.1                                  |
| % Change                          | 9.3      | 7.5      | 12.1     | 4.2      | 6.9      | 2.3      |                                       |                                       |

**Table 8: Sonoma County Forecasted Gross Regional Product (Output) by Cluster**  
*Millions of current dollars*

|                                   | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | Compound Ann.<br>Growth Rate | Pct. Share of<br>Total Output |
|-----------------------------------|----------|----------|----------|----------|----------|----------|------------------------------|-------------------------------|
|                                   | 04-09    | 2009     |          |          |          |          |                              |                               |
| Total                             | 16,400.2 | 17,227.9 | 18,328.6 | 19,546.1 | 20,761.4 | 22,000.3 | 6.1                          | 100.0                         |
| % Change                          | 3.6      | 5.0      | 6.4      | 6.6      | 6.2      | 6.0      |                              |                               |
| 1. Agriculture/Food Processing    | 941.6    | 1,015.6  | 1,106.7  | 1,196.6  | 1,278.0  | 1,363.2  | 7.7                          | 6.2                           |
| % Change                          | 4.7      | 7.9      | 9.0      | 8.1      | 6.8      | 6.7      |                              |                               |
| 2. Information Technology         | 226.8    | 245.9    | 268.5    | 293.7    | 319.7    | 346.7    | 8.9                          | 1.6                           |
| % Change                          | 7.9      | 8.4      | 9.2      | 9.4      | 8.8      | 8.5      |                              |                               |
| 3. High-tech Electronics          | 201.2    | 212.9    | 224.1    | 235.5    | 246.0    | 256.4    | 5.0                          | 1.2                           |
| % Change                          | 3.9      | 5.8      | 5.3      | 5.1      | 4.5      | 4.2      |                              |                               |
| 4. High-tech Instruments/Optical  | 614.5    | 640.1    | 670.5    | 701.7    | 730.9    | 759.5    | 4.3                          | 3.5                           |
| % Change                          | 2.6      | 4.2      | 4.7      | 4.7      | 4.2      | 3.9      |                              |                               |
| 5. Other High-value Manufacturing | 44.4     | 43.6     | 43.5     | 44.0     | 44.5     | 45.1     | 0.4                          | 0.2                           |
| % Change                          | -6.5     | -1.7     | -0.2     | 1.0      | 1.1      | 1.5      |                              |                               |
| 6. Resource-based Manufacturing   | 116.7    | 118.0    | 120.7    | 123.5    | 125.8    | 128.0    | 1.9                          | 0.6                           |
| % Change                          | 0.6      | 1.1      | 2.3      | 2.4      | 1.9      | 1.7      |                              |                               |
| 7. Financial Activities           | 1,016.7  | 1,076.6  | 1,144.2  | 1,212.4  | 1,279.6  | 1,346.8  | 5.8                          | 6.1                           |
| % Change                          | 4.8      | 5.9      | 6.3      | 6.0      | 5.5      | 5.2      |                              |                               |
| 8. Tourism                        | 761.9    | 805.4    | 861.8    | 925.4    | 989.6    | 1,055.4  | 6.7                          | 4.8                           |
| % Change                          | 5.0      | 5.7      | 7.0      | 7.4      | 6.9      | 6.6      |                              |                               |
| 9. Engineering and Research       | 200.2    | 211.7    | 228.7    | 248.0    | 268.0    | 288.8    | 7.6                          | 1.3                           |
| % Change                          | 3.2      | 5.8      | 8.0      | 8.4      | 8.1      | 7.8      |                              |                               |
| 10. Legal Services                | 131.2    | 138.0    | 147.5    | 158.2    | 169.0    | 180.0    | 6.5                          | 0.8                           |
| % Change                          | 2.9      | 5.2      | 6.9      | 7.2      | 6.8      | 6.5      |                              |                               |
| 11. Health Services               | 998.1    | 1,042.2  | 1,109.8  | 1,186.2  | 1,262.2  | 1,341.8  | 6.1                          | 6.1                           |
| % Change                          | 3.1      | 4.4      | 6.5      | 6.9      | 6.4      | 6.3      |                              |                               |
| 12. Other Professional Services   | 1,559.9  | 1,687.0  | 1,846.8  | 2,023.3  | 2,205.8  | 2,394.2  | 8.9                          | 10.9                          |
| % Change                          | 6.0      | 8.2      | 9.5      | 9.6      | 9.0      | 8.5      |                              |                               |
| 13. Retail Trade                  | 1,401.7  | 1,452.9  | 1,526.8  | 1,603.8  | 1,681.0  | 1,756.5  | 4.6                          | 8.0                           |
| % Change                          | 2.0      | 3.6      | 5.1      | 5.0      | 4.8      | 4.5      |                              |                               |
| Sum of Clusters                   | 8,215.0  | 8,689.9  | 9,299.6  | 9,952.4  | 10,600.2 | 11,262.6 | 6.5                          | 51.2                          |
| % Change                          | 4.0      | 5.8      | 7.0      | 7.0      | 6.5      | 6.2      |                              |                               |
| Other                             | 8,185.3  | 8,538.0  | 9,028.9  | 9,593.7  | 10,161.3 | 10,737.7 | 5.6                          | 48.8                          |
| % Change                          | 3.2      | 4.3      | 5.8      | 6.3      | 5.9      | 5.7      |                              |                               |