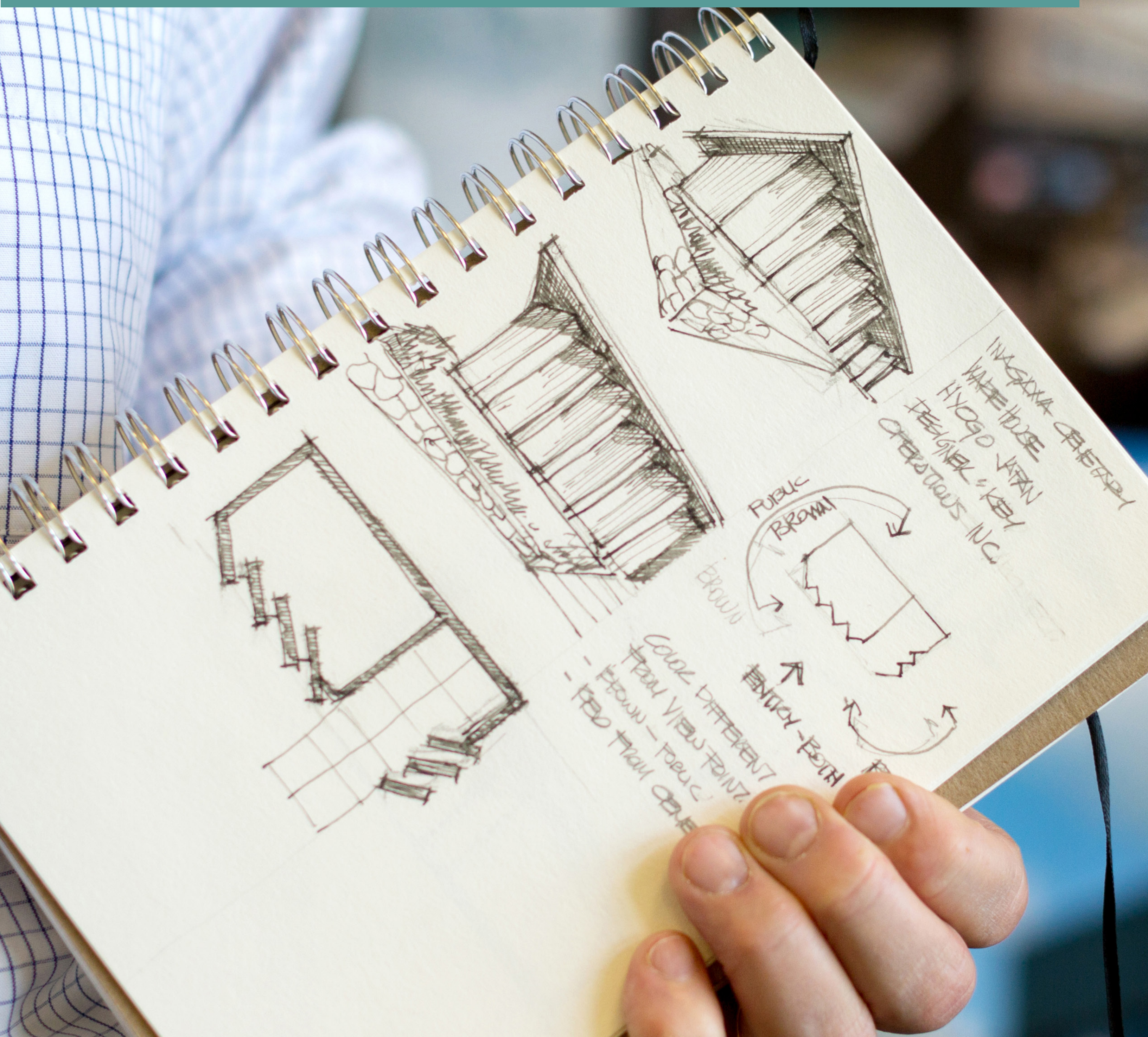
SONOMA COUNTY EDB ECONOMIC DEVELOPMENT BOARD

ARE WE OUT OF THE WOODS: AN ECONOMIC OUTLOOK FOR SONOMA COUNTY

FORECAST REPORT | 2023

SONOMA COUNTY 1850 AGRICULTURE INDUSTRY RECREATION CALIFORNIA



ECONOMIC DEVELOPMENT BOARD

BOARD OF DIRECTORS

KATHRYN HECHT, CHAIR **JORGE ALCAZAR** **SKIP BRAND** **BETZY CHAVEZ**
LINDA KACHIU **JORDAN KIVELSTADT** **WAYNE LEACH** **RICHARD MARZO**
REGINA MAHIRI
ETHAN BROWN, Executive Director

EDB FOUNDATION SPONSORS

FOUNDATION LEVEL

Luther Burbank® Savings

PRESENTING LEVEL

City of Santa Rosa

Exchange Bank Member FDIC Invested in you.

Pacific Gas and Electric Company®

KAISER PERMANENTE®

Redwood Credit Union

PREMIERE LEVEL

Bank of Marin

Sonoma County California Life Opens Up® Sonoma County Tourism sonomacounty.com

Providence Santa Rosa Memorial Hospital

Sonoma Clean Power

Sutter Health

EXECUTIVE LEVEL

Comcast **Pisenti & Brinker LLP**
North Bay Association of Realtors **Summit State Bank**

MEDIA LEVEL

North Bay Business Journal

SONOMA COUNTY BOARD OF SUPERVISORS

CONTENTS

U.S. Economic Outlook

Short-Term Executive Summary

As U.S. inflation recedes, so too does the threat of recession as the Federal Reserve nears the end of its interest rate hikes. The rally in the stock market and narrowing corporate credit spreads suggest investors are buying into this hopeful outlook.

Inflation is throttling back, and prospects are good that it will continue to decelerate. The June report on consumer price inflation strongly supports this view, with overall CPI inflation slowing to 3% year over year, down from a peak near 9% a year prior. The easing in inflation is broad-based, but the moderation in the prices for staples is especially encouraging for financially hard-pressed lower-income households. A gallon of regular unleaded is hovering near $3.50 nationwide, down from last year's all-time high of $5.00, grocery prices have not budged since the end of last year, and apartment rents have gone flat since last summer.

Core CPI inflation, which excludes volatile food and energy prices, is also downshifting definitively. The June increase in core CPI was the smallest since the height of the pandemic, and while this was flattened by favorable seasonal adjustment—so-called residual seasonality caused by the big swing in prices during the pandemic shutdown and reopening—there is little doubt inflation is coming in. These favorable seasonals will continue for another month or two. Even supercore inflation, which has been popularized by Federal Reserve Chair Jerome Powell and measures inflation for services excluding housing and energy services, has been consistent in recent months with the low inflation experienced before the pandemic.

Where credit is due

The slower inflation is mostly due to the fading fallout from the massive supply shocks stemming from the COVID-19 pandemic and Russian war in Ukraine. When CPI inflation peaked a year ago, nearly three-fourths of the inflation was directly or indirectly due to these shocks.

Most significant was the spike in energy prices over fears that Russian oil and natural gas exports would be severely disrupted by Western sanctions. Even though much of the developed world stopped buying Russian oil, it has been diverted to other buyers, including India and China; combined with soft global oil demand, prices have since receded. Natural gas prices have also fallen back as U.S. frackers have kept pace with demand for liquefied natural gas—demand primarily from Europe.

The pull back in oil prices has also been critical to reining in inflation expectations. The cost of gasoline plays an extraordinarily outsize role in people's thinking about inflation, as most everyone drives, and gas prices are highly visible. It is no surprise that one-year ahead inflation expectations as measured by the New York Fed's monthly survey of consumers peaked in June 2022 at 6.8% when gas prices were at their all-time highs. With gas prices now down, inflation expectations have also fallen. This June they were 3.8%, not much higher than the 3% that typically prevailed prior to the pandemic. The normalization of consumer inflation expectations has been critical to the moderation in wage growth and inflation in labor-intensive service industries.

Inflation also benefits from the fading impact of the pandemic on global supply chains and the job market. This is clearest for new- and used-vehicle prices. While North American vehicle production has largely returned to its pre-pandemic pace, the large Japanese and German vehicle industries are still grappling with supply-chain problems, and production has yet to fully rebound. However, they are making progress, inventories on dealer lots are building, and vehicle prices have rolled over with more price declines coming. Auction prices for used vehicles have been especially weak, falling more than 3% in June alone, according to the Moody's Analytics price measure. Auction prices lead the retail prices that are part of the inflation statistics by as much as several months.

The growth in the cost of housing services is also slowing and set to slow meaningfully more, since rents, which are the basis for measuring housing costs, are under pressure. Nearly 1 million rental units, a record, are in the construction pipeline and headed to completion. The pandemic disrupted shipments of building materials and appliances, badly delaying projects. Most of these delays have been resolved. Shortages of construction workers caused by pandemic restrictions on immigrant workers have also largely abated. The rental vacancy rate, already increasing, is set to rise more. This will weigh further on rents and (with a considerable lag) the growth in the cost of housing services.

Potential Fed misstep

The Fed also gets an honorable mention for contributing to the moderating inflation. While policymakers mistakenly waited too long to begin normalizing interest rates coming out of the pandemic, they have since caught up. The economy's growth has slowed to below its potential as the interest-rate-sensitive manufacturing, single-family housing, and technology industries slumped. While unemployment has remained steadfastly low, the tight job market has eased. The pace of hiring and layoffs has normalized, the number of open positions has declined, and the rate at which workers quit their jobs has returned to something more typical. Fewer quits are partly behind the cooling in wage growth, as job switchers tend to get bigger pay increases.

The Fed's resolute embrace of its 2% inflation target has also helped to anchor inflation expectations, particularly investors' long-term expectations. Five-year, five-year forwards, a measure derived from the term structure of interest rates and reflecting what bond investors think CPI inflation will be for the five-year period that begins five years from now, has remained in a tight range centered around 2.25%. This is spot-on with the Fed's target. (The Fed's preferred inflation measure is the core consumer expenditure deflator. Due to its design, this measure consistently runs about a quarter point weaker than CPI.)

However, there is a reasonable worry the Fed will hike rates too high too fast under the rationale that the economy is operating beyond full employment, and unless growth slows further and the job market eases substantially, inflation will not return to its target anytime soon. Indeed, in the Fed's quarterly Summary of Economic Projections, officials collectively peg the full-employment unemployment rate at 4%, and they expect the unemployment rate to end the year just over that mark, up half a percentage point from its current rate. Their forecast also features two more 0.25-percentage point interest rate hikes this year with the next coming late this month.

Even if the Fed sticks to this script, the resilient economy should be able to just skirt a recession. But the risk is unnecessary. The job market is tight but not clearly operating beyond full employment. If it were, how could wage growth and inflation have moderated so substantially over the past year despite consistently low unemployment? The employment-to-population ratio, another good measure of labor market tightness, actually has increased. Unemployment and the prime-age employment-to-population ratio are also down near where they were pre-pandemic. Yet back then inflation was widely deemed too low—below the Fed's inflation target. So why the belief now that the job market is too tight? And if the job market is operating beyond full employment, how can labor supply be growing so strongly? The labor force has increased extraordinarily by nearly 250,000 per month on average over the past year. Full employment would suggest that labor supply has been tapped out. But it has not.

For sure, inflation has been painfully high. But not because the job market is overly tight. As argued here, it stems mostly from the pandemic (supply-chain and job market disruptions), the Russian war in Ukraine (spiking energy and agricultural prices), and the conflation of these shocks in higher inflation expectations and stronger wage growth. However, with these supply shocks in the rearview mirror, inflation and the need for more rate hikes are fast fading.

Investors buy in

Global investors appear to be coming around to the view that inflation is headed in the right direction, the Fed will soon end its rate hikes and the economy will avoid a downturn. Stock prices are back within a few percentage points of the record high set just before the Fed began ratcheting up rates at the start of 2022. The recent rally began with just a few technology stocks powered by investor optimism over the promise of generative artificial intelligence, but it has since broadened to include the stocks of a wide group of companies. Not only are investors anticipating the end of interest rate hikes, but they expect corporate profits to rebound. Standard & Poor's 500 earnings per share, which are set to fall this year, are expected to post high single-digit gains in 2024, according to analyst forecasts.

Corporate bond investors are just as upbeat about the economy. This is evident in the difference between the yield on high-yield or below-investment-grade corporate bonds and the risk-free 10-year Treasury yield. This yield spread represents the compensation investors demand for the risk that businesses they invest in could run into financial trouble and miss making timely principal and interest payments. The spread recently skinnied down to less than 400 basis points.

This spread was more than 500 bps in the wake of the banking crisis in March and close to 600 bps when oil prices spiked a year ago. The average spread since the high-yield market was established in the 1990s is about 500 bps.

While stock and corporate bond investors ask "What recession?" investors in the Treasury bond market are ostensibly yelling that a recession is dead ahead. That is the seeming message from the inverted Treasury yield curve. When short-term rates rise above long-term rates, and the Treasury curve inverts, as it has for more than a year by some measures, recessions invariably follow. But what if the curve's message is being misinterpreted? To be sure, the curve has inverted because Treasury investors are expecting inflation to moderate, and thus this is an opportune time to buy long-term Treasury bonds. Maybe investors are not forecasting that a recession is needed to tame inflation, but that inflation will moderate with the fading fallout from the pandemic-era supply shocks and the Russian war. In that case, the inverted yield curve is not a harbinger of recession but is consistent with a benign outlook for inflation and the economy.

Hopeful outlook

The deep pessimism about the economy's prospects that most economists and many investors, CEOs and policymakers have clung to for more than a year appears to be giving way to a more hopeful outlook. The consensus has long been that getting inflation back to something with which we all—especially the Fed—feel comfortable would require a significant increase in unemployment. In economic jargon, the economy faces a costly sacrifice ratio. The recent data suggest not. An increase in unemployment may be needed, but not to the extent consistent with a recession. This has been our baseline outlook all along. The economy could still suffer a recession, but if it does, this would be the result of a policy error by the Federal Reserve or simply bad luck, since the slowly growing economy is vulnerable to anything that might veer off script.

Forecast Assumptions

Monetary policy

The Federal Reserve has aggressively raised interest rates since early 2022, pushing the federal funds rate to over 5%. We are assuming that one more quarter-percentage point rate hike at the late-July meeting of the Federal Open Market Committee will mark the terminal funds rate in this hiking cycle.

The funds rate is now well above our estimate of its long-run equilibrium, or r-star, of 2.5%. The funds rate at more than twice its equilibrium rate should be sufficient to slow the economy's growth and succeed in bringing inflation back to the Fed's target by the fall of 2024.

Monetary policy will tighten despite the end of the funds rate hikes, as the Fed allows the Treasury and mortgage-backed securities on its balance sheet to mature and prepay. This quantitative tightening will reduce the central bank's current holdings of over $8 trillion in securities to run off by about $100 billion each month.

Ten-year Treasury yields are fluctuating near 3.75%, just below their estimated long-run equilibrium of closer to 4%. The equilibrium rate is consistent with our estimate of nominal potential GDP of near 4% (2% target inflation plus 2% real potential GDP). We expect yields to hover near 4% for the foreseeable future.

Fiscal policy

Lawmakers came through in the 11th hour and passed legislation suspending the Treasury debt limit until January 1, 2025. The legislation included modest cuts to budgeted spending on non-defense, non-Veterans Affairs discretionary outlays through fiscal 2025, a scaling back of future IRS funding, changes to work requirements for food assistance, and a clawing back of some unspent COVID-19 relief funds. The legislation also ends the moratorium on student loan payments in September, although this was already incorporated in our outlook. In its totality, the legislation will reduce real GDP by 0.2% at the peak of the impact in the fourth quarter of 2024, reduce employment by approximately 150,000 jobs, and increase the unemployment rate by 0.1 percentage point. These are very modest impacts.

Despite the debt limit agreement, fiscal policy is set to be somewhat expansionary at least through mid-decade. The federal government's annual budget deficit will increase from less than $1.4 trillion in fiscal 2023 to $1.6 trillion in fiscal 2024 and $1.7 trillion in fiscal 2025. The nation's publicly traded debt-to-GDP ratio, which is currently approaching 100%, up from 80% prior to the pandemic, will steadily rise in coming years.

Early 2025, after the next presidential election, is shaping up to be a period of significant change to fiscal policy. Not only will the debt limit need to be taken up again, but the expiration of some of the tax cuts passed under President Trump and the expiration of Obamacare health insurance subsidies under President Biden will need to be addressed. And of course, there is the nation's unsustainable long-term fiscal outlook.

U.S. dollar

The value of the U.S. dollar has fallen from its highs during the pandemic but remains extraordinarily strong, receiving a substantial boost from the Fed's tight monetary policy and the flight to quality into U.S. assets prompted by heightened global uncertainties. On a real broad trade-weighted basis, the dollar is more than half a standard deviation above its long-run average since it began to freely float in the early 1970s.

The dollar's value will remain strong until it is clear that the Federal Reserve is set to ease monetary policy and while geopolitical uncertainties, including the Russian war in Ukraine and tensions between the U.S. and China, continue to fester.

The dollar's reserve currency status will remain unchallenged.

Energy prices

Global oil prices continue to hover near $75 per barrel. This reflects the largely graceful implementation of the European Union's sanctions on Russian oil and a price cap on Russian oil imposed by Western nations led by the U.S. While Chinese oil demand has picked up, it has been modest given the country's tepid economic recovery to date.

However, oil prices are expected to move back to well over $80 per barrel by late this year as the Chinese economy swings into full gear and Russia responds to the EU sanctions and the price cap. OPEC will also cut production further, if necessary, to ensure prices rebound. Prices consistently below $80 per barrel create fiscal problems for many OPEC members.

But prices should also remain well below $100 per barrel as more supplies will slowly but steadily come from North American oil frackers. Along with potential oil releases from the U.S. Strategic Petroleum Reserve and the reserves held by other nations, and the drawdown of private global inventories, any loss of Russian oil to global markets should be filled.

The estimated long-run equilibrium price of oil is near $70 per barrel.

Pandemic and Russian war

The pandemic continues to recede and is thus becoming less disruptive to global supply chains, tourism, business travel, immigration, and labor markets. While there may be future waves of the virus, we expect each new wave to be less disruptive to the healthcare system and the economy than the preceding wave. Governments, households and businesses are increasingly adept at adjusting to the virus, even in China, which dropped its zero-COVID policy at the start of this year.

The Russian war in Ukraine is expected to continue for the foreseeable future, but its fallout on energy, agriculture, and other commodity markets and the global economy should fade. Global oil markets have adjusted well to the disruptions caused by the war.

Forecast Risks

Fed policy

Federal Reserve officials elected to refrain from an 11th consecutive rate hike at June's meeting. However, policymakers have been unequivocally hawkish since then and are likely to again raise rates. The Moody's Analytics July baseline forecast calls for one more 25-basis point increase to the federal funds rate before the Fed pauses to evaluate the U.S. economy's reaction to its restrictive policy. The financial system is stabilizing, but the Fed's tightening could expose vulnerable financial institutions to insurmountable stress, worsen lending conditions, and create a credit crunch. Lenders have self-tightened since the spring banking crisis, though not much more than expected. If banks continue to tighten, business investment and consumer spending will turn sharply downward, weighing heavily on the U.S. economy.

If the Fed mistakenly eases policy too quickly, inflation could come roaring back. This would entrench higher inflation expectations from consumers and businesses because the central bank would have sacrificed credibility. This would make ridding the U.S. economy of elevated inflation even more difficult and lead to a prolonged and painful economic downturn.

Financial conditions

Moody's Analytics assumed that the factors that drove Silicon Valley Bank and First Republic Bank to collapse were idiosyncratic and not indicative of larger financial system vulnerabilities. That has so far proven accurate, and the damage caused in the first half of the year appears relatively isolated. The banking sector is on solid ground; this is particularly true for larger banks. Strong reforms in the aftermath of the global financial crisis are proving prescient. However, banks' self-tightening, on top of the Fed's restrictive policy, makes it difficult to gauge in real time the economy's reaction, and fault lines could emerge quickly.

The banking crisis also initiated an outflow of money from bank deposits into money market mutual funds, which are commonly directed to the Fed's reverse-repo facility. These show up on the central bank's balance sheet as bank reserves. Now, with the debt ceiling impasse resolved, the U.S. Treasury is issuing bonds to replenish the Treasury General Account, and reverse-repo balances are being used to purchase the debt. Alongside the Fed's quantitative tightening operations, its balance sheet is shrinking as bank reserves are drained. This could threaten liquidity and increase financial system volatility.

Outside of the banking sector, overleveraged firms, also accustomed to lower-for-longer borrowing, are set to come under increasing pressure as rates rise. A string of corporate defaults or a significant widening of corporate bond spreads could dampen sentiment and soften investment.

Geopolitics

Further deterioration in diplomatic relations between the U.S. and China, particularly over Taiwan, could generate substantial economic turmoil. Disruptions to shipping in the Taiwan Strait represent a considerable downside risk for global trade and growth and an upside risk for inflation. The spat over a Chinese surveillance balloon flying over the U.S. is emblematic of the frictions that can get in the way of cooperation between the world's two largest economies. Rows like the balloon episode heighten the risk of confrontational military exercises, threaten to limit diplomacy, and narrow economic activity between China and the West.

Should China assist Russia on the Ukrainian battlefield with lethal aid, a U.S.-led Western coalition would impose severe economic sanctions on the world's second-largest economy. These sanctions would limit trade and cause dramatic economic disruption.

Ukraine's success on the battlefield has increased the possibility of escalation by Russia. The destruction of a Ukrainian dam has put upward pressure on agricultural prices and is a prime example of the global economic impacts the war can generate. Subsequent self-defeating but widely destructive maneuvers may be on the table if Russia's militaristic aims continue failing.

Consumer spending

Consumer spending could exceed expectations and drive faster growth. The labor market is loosening but remains tight, keeping job and income growth elevated. Businesses, correctly, are calculating that the labor-supply issues in the aftermath of the pandemic are here to stay. This is leading them to retain staff despite slowing demand. This dynamic could push household income up faster than expected. As much of the income is spent, the economy would grow above expectations.

Uncertainty about the spending outlook has been elevated given the persistence of elevated inflation and the downbeat mood of consumers and businesses. Sentiment measures have consistently shown people pessimistic about the U.S. economy's near-term trajectory. Pervasive recession fears since early 2022 have primed people to believe a severe downturn is imminent. It may not take much loosening in the labor market for consumers to quickly hunker down and spend less.

Supply-chain disruptions

Improvement in global supply chains is critical to the outlook for a sustained moderation in inflation. The contribution of supply-chain-constrained components to overall inflation is declining with each month. Backtracking could occur through broadening of economic sanctions to parts of the world that produce critical commodities and intermediate inputs. This would limit production and drive up prices of items in short supply.

Are We Out of the Woods: An Economic Outlook for Sonoma County

Regional Economic Outlook Sonoma County CA

Summary

Sonoma County's economy is in good shape, though job growth is slowing. Payrolls have moved sideways over the past two quarters, and year-ago job growth now trails that of California and the West by a small margin, though at 2.2% on a year-ago basis, it is still advancing at a healthy clip. The rebound from the pandemic was slower in the earlier stages of recovery; total nonfarm payrolls are just a touch off their early-2020 levels, while the state and region both eclipsed those marks last year.

Although the near-term outlook has grown more uncertain in recent months, the baseline forecast assumes that the U.S. economy will skirt recession on the back of strength in the labor market and the lack of glaring imbalances in the economy. While consumers are glum, a still-elevated level of excess savings, low unemployment, and strong credit quality will help keep the recovery ticking even with interest rates far higher than they have been at any point since the Great Recession.

The near-term outlook for tourism in Sonoma is one of guarded optimism. Though risks of recession are uncomfortably high, they have eased somewhat in recent months and the baseline forecast calls for the Federal Reserve to navigate a reasonably soft landing for the economy, slowing growth but skirting a full-fledged downturn. This outlook suggests that inflation will be tamed without a corresponding spike in joblessness, keeping Sonoma County's tourism industry on stable footing, though visitor spending will advance at a much more modest pace than in the past two years. Travel spending may backtrack slightly compared with last year given spent-up demand CAusing consumers to burn through a significant portion of their excess savings. There are some indications that this is already occurring; according to the Conference Board, the share of Americans with a vacation planned in the next six months is nearly level with last year's reading and more than 10 percentage points lower than in 2019.

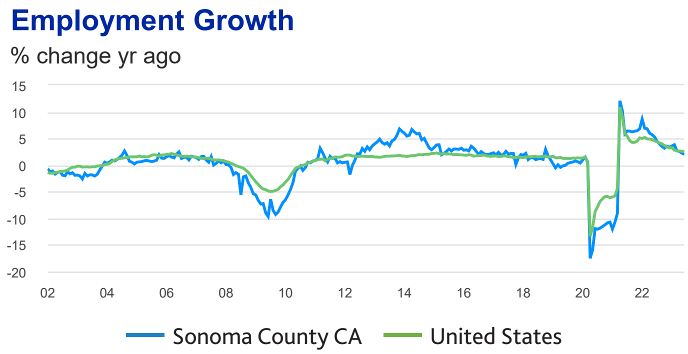
Sonoma has shed residents for six consecutive years, though the pace of departures halved in 2022 and timely Equifax data show reduced out-migration during the past year. Nonetheless, housing affordability ranks among the worst nationally, which is pricing residents out and pushing some to relocate to lower-cost areas in the region. Cooling house price appreciation will help alleviate some affordability concerns, keeping the Moody's Analytics affordability index moving off its bottom from late 2022. Furthermore, while affordability remains a chief worry, the county does rank favorably compared with the state and nearby Bay Area economies, which could help swing migration patterns in its favor.

Sonoma County faces challenges to long-term growth. Over the next decade, baby boomers will retire in greater numbers, and the county will need to ensure that a new generation of workers is equipped with the skills and training necessary to succeed in the county's leading industries. Labor force growth will rest on the ability to attract new residents. An increasing supply of housing will prove critical to attracting younger households and new migrants. While pressing, these challenges are not insurmountable and hold the keys to unlocking Sonoma County's potential.

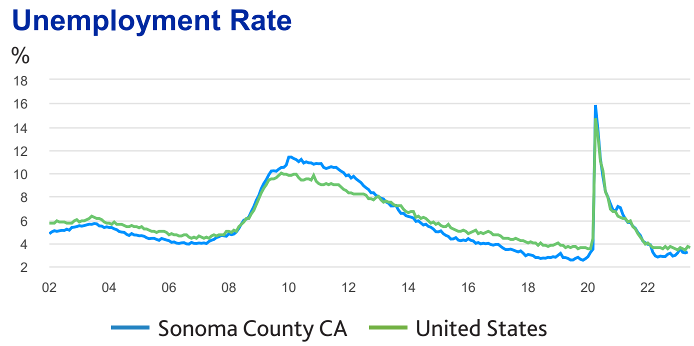
Recent Performance

Sonoma County's economy is in good shape, though job growth is slowing. Payrolls have moved sideways over the past two quarters, and year-ago job growth now trails that of California and the West by a small margin, though at 2.2%, it is still advancing at a healthy clip. The rebound from the pandemic was slower in the earlier stages of recovery; total nonfarm payrolls are just a touch off early-2020 levels, while the state and region both eclipsed those marks last year.

Although the overall labor market recovery is a laggard, there is some good news in that the crucial hospitality industry recovery has proven modestly more impressive than that of the region and state. Industry job growth has throttled back this year but remains in positive territory, and payrolls have fully recouped their pandemic-induced losses. This compares favorably with a slight deficit for the state. Despite still-elevated inflation and heightened recession fears, consumers were determined to travel and dine out, pushing leisure/hospitality payrolls



Sources: BLS, Moody's Analytics



Sources: BLS, Moody's Analytics

up a whopping 7% year over year in April, though growth later slowed to around 3%. Visitor spending is beginning to recede, however, as many Americans supplemented their spending by using up their excess savings, and the pent-up demand for travel is largely unwound.

Air passenger traffic both nationally and at Charles M. Schulz-Sonoma County Airport is following a similar path. Data through April show total air passenger traffic year to date at Sonoma's airport around 7% higher than in the same period last year, though April's monthly total trailed last year's level, indicating some softening demand for air travel to the county. On the other hand, nationwide air travel statistics that are more timely point to a more resilient tourism industry. Total passenger throughput since May is advancing more strongly than it did a year ago, and this bodes well for the county. Furthermore, Sonoma County relies heavily on local visitors who arrive by car, and cooling gasoline prices helped sustain demand from those visitors and buoyed overall spending.

Transient occupancy tax receipts through 2022 point to the strong recovery forged by the county throughout last year. According to data compiled by Dean Runyan Associates, total TOT taxes collected in 2022 were 50% higher than in 2021, exceeding any year over the past decade. Visitor spending tells a similar story about the progress made last year. Total visitor spending came in at $2.3 billion, 17% higher than 2021 and slightly ahead of its pre-pandemic level. Lodging operators are pressing ahead with nearly 30 new projects that will bring around 3,000 new rooms to the county upon completion.

Sonoma County's high-tech and specialty manufacturing cluster is likewise easing off the gas. Manufacturing job growth has consistently slowed, and payrolls are up just 0.5 percentage point over the past year. But they have recouped all of their pandemic-induced losses. Job growth is slowing, owing in part to the fallout from dramatically increased interest rates. Business investment is pulling back, and the overall labor market is increasingly tight, so the slowdown in job growth comes as no surprise.

Employment, Recent Performance

Jun 2023

	Annualized growth rate				
	3-mo	6-mo	12-mo	5 yr	10 yr
Total	0.4	1.7	2.0	0.0	1.5
Construction	5.5	1.0	1.7	1.8	5.4
Manufacturing	1.1	-0.2	-0.1	0.6	1.7
Wholesale Trade	0.4	-0.2	-2.8	-0.9	0.2
Retail Trade	-2.9	0.9	-2.2	-1.7	-0.5
Transportation and Utilities	-8.2	11.7	6.6	3.2	1.6
Information	-2.0	-1.8	-0.1	-0.8	-0.1
Financial Activities	8.1	2.7	6.3	-1.4	1.3
Professional and Business Services	9.2	2.5	3.5	2.2	2.8
Education and Health Services	3.1	3.3	5.1	1.0	2.5
Leisure and Hospitality	-19.6	-4.5	1.9	-0.1	1.0
Government	10.8	8.3	1.4	-2.7	-0.2
			%		
Unemployment rate	3.2	3.2	3.1	4.5	4.5

Sources: BLS, Moody's Analytics

Rising interest rates are beginning to apply the brakes to the labor market, but the more immediate impacts have been felt in housing. Nearly all demand-side indicators point to protracted weakness in the housing market. Home sales are down, it is taking longer to sell homes, and more are fetching less than the asking price than were last year. House prices, though improving slightly in recent months, are down on a year-ago basis and have contracted more than the national average since mortgage rates began to tick higher.

Even with some softening in the labor market and the surge in interest rates, credit quality remains strong by historical standards. There has been some weakening in recent months given the unwinding of fiscal stimulus and rising borrowing costs, but conditions compare favorably to previous business cycles. Consumer lending is ticking higher across more segments, and delinquency rates rank favorably relative to the national average. Total delinquency rates across the 30-, 60- and 90-day horizons are below the U.S. rate, and the emergency relief plans in the wake of COVID-19 have proved beneficial in preserving consumers' balance sheet quality. Sonoma will fare better than most given its favorable starting point and high per capita incomes should credit quality worsen amid deteriorating economic conditions.

Near-term outlook

The near-term outlook has grown slightly more upbeat in recent months, with inflation receding on script and consumer sentiment improving to its highest level this year in July. The baseline forecast still assumes that the U.S. economy will avoid a recession, but job growth will continue to slow as interest rates remain elevated and firms struggle to find workers amid a still-tight labor market. Unemployment will tick slowly higher as job growth falls below its break-even level, but income gains will remain solid, helping to sustain consumers who have largely spent through their excess savings. Real consumer spending growth will soften modestly through the summer and then slowly gather momentum. Sonoma County's key industry clusters will navigate through the economic turbulence, but the slowdown will be noticeable and payrolls will just barely eke out gains at the turn of the year before accelerating in late 2024 as interest rates begin to normalize.

Travel and tourism. The near-term outlook for Sonoma's tourism is one of guarded optimism. While the risk of a downturn is uncomfortably high, the baseline forecast calls for the Fed to navigate a soft landing for the economy, slowing growth but avoiding a recession. So long as this happens, Sonoma County's tourism industry remains on stable footing, albeit with visitor spending advancing at a much more modest pace than in the past two years. Travel spending may backtrack slightly compared with last year given spent-up demand for travel and consumers that have burned through a significant portion of their excess savings. There are some indications that this is already occurring; according to the Conference Board, the share of Americans with a vacation planned in the next six months is nearly level with last year's reading and more than 10 percentage points lower than in 2019.

Sonoma County's allure as a global destination for high-end wines, craft beer, outdoor recreation and cutting-edge cuisine will safeguard leisure/hospitality payrolls amid a weaker macroeconomic environment. Sonoma is blessed with some of the strongest tourism resources in the country, which will help it outcompete for tourist dollars throughout the next several years. However, the pool of dollars available to compete for will grow at a much slower rate than it has in recent years.

The outlook for Sonoma's tourism has improved since the beginning of the year as recession odds have backtracked slightly with inflation receding and the labor market holding strong. Avoiding recession will be crucial for tourism-centric metro areas, including Sonoma County, as these economies are more sensitive to macroeconomic tailwinds and swings in discretionary spending.

Wine and craft beverages. The importance of millennial consumers is increasing for Sonoma vintners, craft brewers and spirit makers. Sonoma vintners have experienced rapid growth and modest price increases across different types of wines. However, the sales of premium and fine wines may be limited by the aging of the baby boomer cohort, which accounts for about a third of total wine consumption. This cohort is declining in numbers and reducing their per capita consumption. In 2022, total wine consumption in the U.S. declined for the second consecutive year. However, the premium market continued to grow steadily. Millennials, who represent almost a third of the alcoholic beverage market, are increasingly turning to craft beer and spirits. Vintners will need to attract a new generation of wine enthusiasts to replace the aging boomer cohort. As millennials enter their prime earning years, they may start purchasing higher-priced bottles. However, factors such as large student loan burdens and the impact of two severe recessions may encourage thriftiness. This could make them less reliable sources of revenue for fine and luxury wines produced by small and midsize wineries in the county. Additionally, millennials tend to drink across categories, and wine consumption is facing competition from spending on craft beverages.

The shifting demographic landscape is a headwind for the wine industry, but it does provide opportunities for the county's craft beer and spirit makers. Overall beer sales fell for the seventh consecutive year in 2022, and craft beer sales held steady. This marks another year of craft beer commanding a growing market share. Sales volumes increased in the craft beverage market thanks to rising prices and the continued shift back in beer volume to bars and restaurants away from packaged sales that dominated in the pandemic years. The craft market will likely continue to outpace the overall beer market, and slight price increases will keep sales volumes ticking modestly higher given sustained strength in the labor market and resilient consumers, albeit at a slower pace than in previous years. Though the national market is growing increasingly saturated, Sonoma's early entry and repute will provide an avenue for modest growth.

More volatile climate conditions will be an ever-present challenge for Sonoma vintners and craft beverage makers. Rising ocean surface temperatures have coincided with less predictable climate events that could put county vineyards, wineries, breweries and distilleries in peril. Another year of deadly wildfires close to the county's wineries is another reminder that these risks are growing.

With the economy set for slower growth in the second half of the year, the outlook is less bright than a year ago, but for the most part, Sonoma County's wine and craft beverage industry showed its mettle since the pandemic to persevere through the difficult environment. The pain from the COVID-19 pandemic will linger, and it will take some time for small breweries and family-owned wineries to recover from the 2020 recession. Clos Du Bois and Sebastiani Vineyards have closed their Sonoma production facilities and moved elsewhere in the state, though this is relatively common in the industry as brands expand nationally and shift production to lower-cost areas in the state.

Information technology. The year ahead will be categorized by weaker growth given the confluence of macroeconomic headwinds. A slower-growth environment in the U.S. and globally, coupled with weakness in the equity market and tech more broadly, will lead to slower net hiring and weaker output gains compared with the pre-pandemic years. Firms will be more cautious in spending on both payrolls and research and development, leading to only modest job gains in the industry until interest rates normalize and the global economy ratchets up. Weaker credit growth will especially hamper small IT firms in the county. Still, there are long-term factors that augur a more optimistic outlook for the IT industry once the dust settles.

Among them are rising consumer demand as technology becomes more integrated into our daily lives. The need for connectivity and communication, convenience and efficiency, and the development of new technologies such as virtual and augmented reality were accelerated by the pandemic, as more people have shifted to remote work and online learning.

Rising smartphone penetration globally as well as the incorporation of additional computer and electronic components into automobiles, airplanes and other vehicles will amplify sales of top employer Keysight's next-generation signal analyzers and oscilloscopes. Yet automation will limit the need for new labor, holding back employment growth compared with the pre-pandemic years.

Cloud-computing remains a disruptive influence as enterprises shed their in-house hardware-based architecture in favor of cloud-based systems. As those new systems take hold, the software and hardware along with related services provided by information technology firms will grow. One of the key advantages of cloud-computing is the ability to tap into AI and machine learning. The modern digital economy generates vast quantities of data every day, and AI/ML can help businesses to organize and make sense of that data, a need that should only grow in the years ahead.

Sonoma County's technology firms are facing some near-term economic headwinds. While consumers are pessimistic, they are still spending at a solid pace, but the same cannot be said of tech firms nationwide. A significant equity market correction and rising interest rates have given rise to significant caution, and a slew of tech firms are implementing cost-cutting measures including layoffs as valuations decrease. Decreased business investment will also hold back hiring in the county's tech base. On a positive note, persistent remote work will benefit local electronic testing and broadband equipment makers, as will investment in fiber-optic infrastructure and demand for smart-home and other household devices that rely on mobile connectivity.

Spillover growth from the Bay Area in the near term will be muted. Layoffs across Silicon Valley and beyond have led to significant disruption and flipped the script following a multidecade boom. Cuts span both services and goods, although the former has borne the brunt. Most major firms have pared payrolls, with Google, Cisco, PayPal and Meta among the most aggressive in doing so. A diminished startup scene only adds to the woes, with PitchBook reporting that the Bay Area experienced the nation's sharpest decline in funding last year. With muted growth in tech in the Bay Area, Sonoma will benefit less from any spillover and agglomeration effects than it had in years past. On the other hand, remote work has made these layoffs more diffuse, and a more decentralized workforce may benefit Sonoma if tech workers choose to locate in the county.

Finance. The banking crisis that hit in March when Silicon Valley Bank and Signature Bank failed is likely to be the most significant, albeit most difficult to gauge, headwind to economic growth, especially for Sonoma's finance industry. These dramatic bank failures sparked a loss of confidence in the broader banking system and serious deposit outflows. Small and midsize banks with a significant number of uninsured depositors were hit hardest.

The government's muscular response quelled the worst of the immediate fallout, but the banking crisis will undermine growth this year, and the impacts on the financial services industry will be pronounced. The principal channel through which the banking crisis impacts the economy is through banks' lending standards and loan growth. If banks tighten their underwriting so aggressively that it impairs the credit needed to sustain operations, finance commercial estate development, and support big-ticket purchases, then the economy suffers. To date, the impact of the banking crisis on underwriting standards and loan growth has been muted. Outstanding commercial and industrial loans have effectively gone sideways, while CRE and consumer loans outstanding are still growing, albeit at a somewhat slower pace than before the crisis.

However, the banking system has other serious challenges it will need to grapple with in coming months. Meaningfully higher delinquency and default rates are next. Credit quality has been extraordinarily good since the pandemic hit given the extraordinary government support, forbearance, and until recently, record-low interest rates. But this is no longer the case, and credit problems are on the rise. Even without a recession, the losses could overwhelm smaller and midsize banks with thinner capital bases, more skittish depositors and shareholders, and outsize commercial real estate portfolios. Loans secured by office buildings and retail space in hard-pressed large urban areas are especially vulnerable. Some $1.4 trillion in commercial real estate debt will need to be refinanced through mid-decade, and this could prove problematic.

Financial services firms will grapple with a more difficult pricing environment this year. Higher interest rates and tighter underwriting standards will limit demand for new loans, especially for mortgages. Financial market instability and modest equity market returns will also crimp demand for asset managers, though with the worst of the banking crisis over, these will fare relatively better.

A prolonged yield curve inversion will weigh on net interest margins in the banking industry. With short-term rates higher than long-term rates, banks' margins will be pressured lower, weighing on pricing and profitability.

The economic climate is proving a mixed bag for insurers. Higher interest rates are providing firms with lucrative opportunities to increase reinvestment income, and premium hikes have pushed surpluses to record levels. On the other hand, higher inflation in key sectors such as auto and healthcare has markedly increased claims costs as well. Further, insurers may be compelled to raise policy rates, though they will be constrained by a cooling economy and belt-tightening by U.S. consumers and businesses. As higher costs constrain margins, insurers will tread carefully and taper any near-term hiring plans, focusing on financial consolidation instead.

Creative professional services. Moody's Analytics defines creative professional services as those that play a primary role in the transformation of an idea into a commercial product. The first component includes a broad range of scientific researchers, software developers and engineers whose output is measured by patents. The second component of the cluster is composed of the creative arts, which corresponds to copyright-protected industries: journalism, advertising, media, arts and entertainment. Together, the two components make up 3.9% of the county's total payroll employment.

Creative industries in Sonoma County have stabilized, and their contribution to employment and income growth will be limited in the future. While high-paying sectors such as software publishing, computer systems design, and biomedical research have remained steady in recent years, they are not experiencing the same rapid growth as the traditional powerhouses in the Bay Area. These industries, which account for more than half of the total employment and wages in the creative cluster, are not expected to add many new jobs in the coming years. This is because top tech and medical device companies in Sonoma County are opting to expand in low-cost locations within the U.S. and overseas, rather than in Sonoma County itself. Companies such as Medtronic and Keysight Technologies, which are major technology employers in the county, have been gradually shifting their manufacturing jobs to lower-cost centers while increasing their research staff in other parts of the country. For instance, Medtronic announced a significant expansion in Memphis TN last year, indicating its preference for locations outside of Sonoma County.

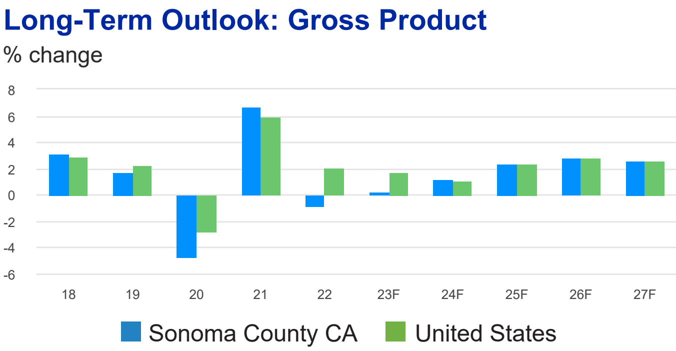
Sonoma County will still benefit from its relatively low business costs and access to venture capital, which will support its position as a global design hub, but the rising business costs compared with other tech centers will hinder its ability to retain and grow high-paying tech industries. As a result, the share of employment in the creative cluster in Sonoma County will fall behind that of the Bay Area economies and the broader U.S.

Long-term outlook: Positive factors

Sonoma County's prestige in winemaking, craft beverage production, artisanal food products, and high-tech research and design endow it with considerable long-run growth potential. These industries build on the comparative advantages that are inherent in the county's resources—its workforce, its natural resources, and its capital.

These resources are abundant. For example, educational attainment is relatively high among the county's workforce. According to the 2021 American Community Survey, 38% of the adult population has a college degree, which is above the U.S. rate of 35% and ahead of the California average of 36%, trailing only a handful of some of the most dynamic metro areas in the state. Its natural resources are bountiful, as evidenced by its rich soil, mild climate, extensive shoreline, and forests and parklands. The county has built up local capital through entrepreneurship over the last three decades, and its capacity for innovation, as measured by utility patents per capita, is among the highest of midsize U.S. counties.

The long-term outlook for Sonoma County's winemaking industry remains on solid footing, but another year of declining



Sources: BEA, Moody's Analytics

wine consumption and the specter of continued climate events in light of climate change is clouding the outlook. Sonoma vintners have established a deep-rooted legacy in the county, and the unique and sophisticated flavors and branding of Sonoma's wine ensure that the area will remain a premier destination for both seasoned and casual drinkers. Consumers' maturing taste buds will continue to tilt purchasing decisions toward more artisanal tastes, and Sonoma vintners stand to benefit as consumers slake a thirst for more sophisticated wines. Consumers across the income spectrum are trading up to more expensive wines, and a growing middle class developing a taste for wine in emerging markets will provide another avenue for growth as incomes rise.

Sonoma's diverse constellation of wine, beer and spirits makers has put the county on the map for a broader range of beverage enthusiasts. Sonoma will remain a top destination for these visitors as the county cements its status as a craft beverage hot spot along with its already-distinguished wine heritage. Though the craft beer scene is becoming increasingly saturated nationwide, several Sonoma brewers have already gained traction nationally and announced plans for expansion both within and outside the county. Expanding breweries will draw additional visitors, necessitate more hires in beverage manufacturing, and generate spillover growth in transportation and warehousing.

The region's burgeoning craft beverage presence, esteemed winemaking legacy, and abundant natural beauty augur a bright outlook for tourism. Outdoor recreation companies are thriving; visitors arriving to sample the county's wines, beers and artisan foods are increasingly looking for opportunities to enjoy Sonoma's luscious outdoor beauty through canopy tours, cycling events and kayak tours. Outdoor recreation companies are capitalizing on swaths of tourists already in the county, and nationwide spending on outdoor recreation will continue its ascent as disposable incomes rise and consumers become more willing to open up their wallets.

As consumers grow increasingly health-conscious, Sonoma's status as a haven for artisanal food and beverage products will be an additional source of strength. Though organic produce, dairy, meat and snack foods tend to be more expensive than conventional offerings, organic purchases are on the rise across income levels. The millennial cohort in particular has embraced the organic food movement wholeheartedly, signaling a big new wave of organic consumers on the horizon as they age into their prime-earning years. The mainstreaming of the organic food movement will create new opportunities for county producers, especially as consumers prioritize environmental and ethical practices in the production of the food and clothing they purchase.

Long-term outlook: Negative factors

Sonoma County's chief economic drivers are at the mercy of the ebbs and flows of the U.S. and global economies. With the county heavily reliant on discretionary spending to power tourism inflows and visitor spending, Sonoma is highly vulnerable to external shocks. Should the economy fall into a more protracted recession, Sonoma's sensitivity to swings in the business cycle creates the potential for more volatile swings in employment and output over the long run.

The high degree of specialization of Sonoma's economy is another source of weakness. The county's industrial base is highly concentrated, as evidenced by its low industrial diversity index score of 0.45, which ranks in the bottom half of metro areas nationwide. Despite recent growth in food and beverage manufacturing, Sonoma County has made only modest progress in diversifying its economy over the past decade. Should the U.S. or global economy falter on its path toward recovery, Sonoma's reliance on consumer-driven industries and volatile tech services could result in another sharp downturn.

Tepid population growth will put a speed limit on the county's long-term growth. Rapidly eroding housing affordability has priced out some potential residents, who are opting for lower-cost inland metro areas with similar job opportunities. The proliferation of remote work and the effects on population growth thus far suggest that Sonoma's high costs are outweighing the benefits of its high quality of life and natural amenities in drawing remote workers, but the slowdown in out-migration over the past year is an encouraging sign. Fewer prime-age workers will step in to take the reins from retiring baby boomers, and lackluster labor force gains will hamstring job growth in the medium term.

Despite a highly educated population, Sonoma exhibits a notable shortage of high-wage jobs. According to the Moody's Analytics Skills Mismatch Index, Sonoma County ranks in the top third of California metro areas in over-education. Sonoma's job mix demands fewer college-educated workers than are currently supplied. The county has the necessary human capital to expand its base of high-wage jobs. The share of high-wage jobs has steadily contracted over the past two business cycles, and a lack of high-wage jobs will put further pressure on in-migration and population growth.

Index of Relative Business Costs

	Labor cost		Tax burden		Energy cost		Office Space		Overall	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
Sonoma County CA	91	294	106	59	247	3	96	27	133	18
San Francisco-Redwood City-South San Francisco CA	135	1	106	59	247	3	313	1	200	1
San Jose-Sunnyvale-Santa Clara CA	115	11	106	59	247	3	206	3	167	2
Oakland-Hayward-Berkeley CA	99	156	106	59	247	3	125	12	125	29
Santa Maria-Santa Barbara CA	98	187	106	59	247	3	103	22	137	10
Santa Cruz-Watsonville CA	94	243	106	59	247	3	157	5	147	6
Portland-Vancouver-Hillsboro OR-WA	109	39	108	55	93	253	116	16	106	56
Sacramento--Roseville--Arden-Arcade CA	95	241	106	59	247	3	81	71	131	19
Salinas CA	86	351	106	59	247	3	91	36	129	22
Boulder CO	124	3	97	186	95	241	120	15	114	43
Provo-Orem UT	102	119	101	131	78	362	86	55	92	177
Atlanta-Sandy Springs-Roswell GA	100	140	80	363	90	276	86	53	93	152

Notes:

1. Rank is out of 403 metro areas.

2. U.S. average=100.

3. Labor costs are measured by total earnings per employee at the 3-digit NAICS level.

4. Tax burdens are measured by all taxes excluding severance, education, and hospital taxes relative to personal income.

5. Energy costs are measured by cents per kWh for industrial and commercial users.

6. Office costs are measured by rent per square foot.

7. In the overall index, labor costs have 65% weight, energy costs have 15% weight, and office costs and taxes have 10% weight.

Source: Moody's Analytics

Employment Diversity and Volatility

	Diversity[1] 2022	Volatility 2022 Total[2]	Systematic[3]	Nonsystematic[3]	Beta[4]
Santa Rosa CA	0.48	155	95	5	1.47
San Francisco-Redwood City-South San Francisco CA	0.23	161	92	8	1.49
Oakland-Hayward-Berkeley CA	0.66	131	98	2	1.28
Vallejo-Fairfield CA	0.53	124	97	3	1.20
Portland-Vancouver-Hillsboro OR-WA	0.71	117	98	2	1.15
United States	1.00	100	100	0	1.00
Median	0.49	97	94	6	0.90

Notes:

1) Diversity is defined as the extent to which a state's industrial structure approximates that of the nation. The more closely the state's economy resembles the national economy, the higher the value. The diversity measure is bounded between 0 and 1. 1 means the state has the same industrial structure as the U.S., 0 means it has a totally different industrial structure than the U.S. Diversity is estimated.

2) Total volatility is the standard deviation of a state's employment growth. This relative deviation has been indexed to the United States = 100. Volatility is estimated.

3) Systematic fluctuation is that portion of an area's economy that is associated with national economic fluctuations. Nonsystematic volatility is that portion of an area's volatility not associated with national economic fluctuations.

4) Beta measures the magnitude of an area's sensitivity to national economic conditions. The U.S. average, by definition, is 1. A one percentage point increase in national employment will cause that portion of a metro area's employment base to rise by the percentage value of beta.

Housing affordability poses another significant obstacle to long-term growth, contributing to a slower pace of population gains in the medium term. The baseline outlook calls for residential construction to accelerate this year and next, but the leveling of a significant share of the county's housing stock will require a sustained increase in construction at above-trend rates to bring supply back in line with demand.

Sonoma County's tech producers have benefited less from the broader Bay Area tech boom than those in nearby Oakland and neighboring Marin County, and additional growth in high-tech manufacturing and services will be negligible. An aging population globally and the increasing affordability of smart technologies will sustain existing firms, but high business will curtail growth in high-tech manufacturing and R&D. These jobs are increasingly shifting to lower-cost metro areas, with Provo UT, Boulder CO and Atlanta specifically siphoning growth from costly California metro areas.

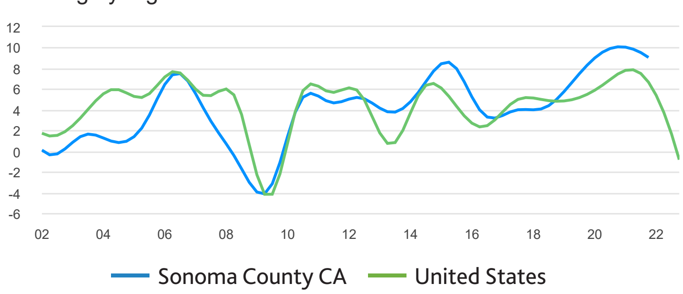
Income

The effects of the pandemic on income growth were much more muted than initially forecast. Massive fiscal support buoyed income growth even as widespread layoffs and furloughs sapped wage and salary growth. Furthermore, layoffs and support were concentrated on low-income individuals, ensuring that top-line income growth at both the state and county level never retreated. This stands in stark contrast to the Global Financial Crisis, which resulted in incomes falling about 4% from 2007 to 2009.

Personal income growth at both the state and county level advanced at a modest pace in 2022, thanks to a labor market that held strong in the wake of stubbornly high inflation and heightened recession fears. Personal income growth slightly outpaced the state average last year, but it is still far off its pre-pandemic pace. Nonetheless, personal income is still up around 20% compared with its early-2020 level, which compares favorably to both the state and nation.

Personal Income

% change yr ago



Sources: BEA, Moody's Analytics

While hiring has cooled, the U.S. labor market remains extraordinarily tight. This has propelled wage growth through the last year to near record highs. There have been signs of moderation, but nearly all measures are still strong. According to the Employment Cost Index, the year-over-year wage gains for private workers remain above 5%. The ECI provides the most accurate picture of compensation and wages and clearly shows that firms are still using elevated pay increases as a tool to retain a scarce pool of workers. Hiring has started to cool, and employers are pulling open job postings, which will start to alleviate wage pressures. The Moody's Analytics forecast assumes that Sonoma's wage growth peaked early this year and will continue to moderate as the Fed works to slow the economy, clocking in around 5% in 2024 before slowing to 4% in 2025.

As intended by the Fed, hiring will slow through the rest of the year, and the recent, steady rise in initial jobless claims from the record low in April points to mildly higher unemployment in coming months. This, in turn, will cap growth in wages and salaries. Moreover, the baseline forecast calls for the Standard & Poor's 500 to go more or less flat over the next year, having declined by 15% to 20% from its peak. The resulting negative wealth effect may dampen the willingness of households to spend as freely as they had prior to the correction in the stock market. In particular, the erosion in equity prices would hit the wealthiest households, which contribute disproportionately to total spending and whose spending is key to Sonoma's economy.

Balance sheets

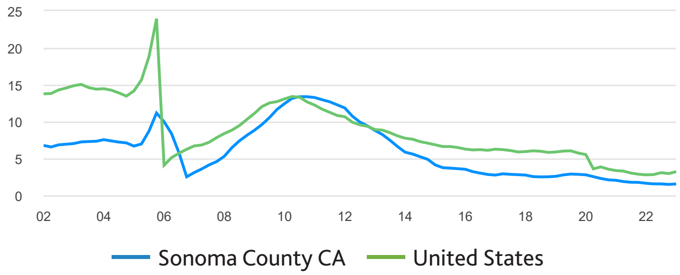
One critical difference between the Great Recession and the COVID-19 recession has been the performance of consumer balance sheets. By all measures, consumer credit quality in Sonoma County remains on solid footing. The rise in interest rates over the past year, coupled with the end of some forbearance programs, has started to weigh on credit quality slightly. Still, delinquency rates across nearly all consumer loan categories are at or near their prerecession rates, according to Equifax. Delinquency rates for auto have climbed higher and are slightly above their 2019 levels, but they remain low by historical standards. Even with the surge in mortgage rates, credit quality in the residential category remains pristine, with delinquency rates 0.5 percentage point below their prerecession level. The rapid runup in interest rates is still being digested by the market; housing activity has cooled, but the impact on credit card and personal loan lending is just starting to materialize. Balance growth across all products will decelerate further as the calendar moves to the second half of 2023. Performance will wane, bringing late-payment rates in line with pre-pandemic levels. This normalization will be uneven across products. There is little stress in residential lending, but an eye should be kept on the auto and personal loan segments.

Demographic trends

In 2022, the county's population fell by 0.3%, marking the sixth consecutive year of population declines, albeit a solid im-

Personal Bankruptcy Filings

Filings per 1,000 households

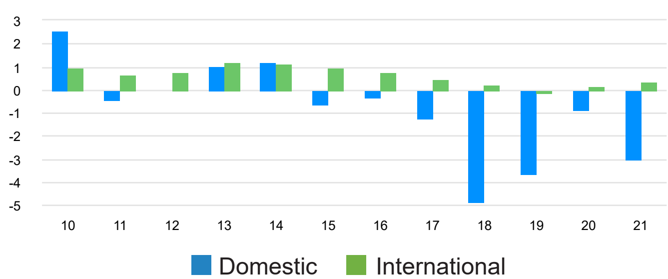


Sources: Administrative Office of U.S. District Courts, Moody's Analytics

provement over the preceding four years. Previous research by Moody's Analytics decoupled the effects of natural disasters and affordability in determining net migration and found no statistically significant impact of wildfires on net migration in California. Although it is naïve to assert that two significant wildfires in three years will have no impact on Sonoma's population growth, there is little empirical evidence to suggest that they will prove meaningful drivers of demographic trends. Instead, such factors as costs, availability of jobs, and more qualitative considerations including weather and quality of life are more predictive of population growth—and, consequently, economic potential—in the long run.

Net Migration

Ths



Sources: Census Bureau, Moody's Analytics

Sonoma has now shed residents in six consecutive years, though the pace of departures halved in 2022 and timely Equifax data show less out-migration during the past year. Nonetheless, housing affordability ranks among the worst nationally, which is pricing residents out and pushing some to relocate in lower-cost areas in the state. Cooling house price appreciation will help alleviate some of the affordability concerns, moving the Moody's Analytics affordability index off its bottom from late 2022. Furthermore, while affordability remains a chief concern, the county does rank favorably relative to the state and nearby metro areas, which could help swing migration patterns in its favor.

Barring a significant increase in net migration, Sonoma County will struggle to maintain adequate labor force growth into the next decade. Over the next few years, much of the baby boom cohort, currently ages 58 to 76, will have retired and exited the labor force. However, in contrast to previous generations, there are fewer prime-age workers available to step in and take their place. The county's prime-age cohort (ages 25 to 54) has stabilized after an outright decline in the wake of the tech bust. The ranks of prime-age workers have not noticeably increased in the past 15 years, and the forecast calls for a steady decline in the coming years.

If unchecked, the shortage of prime-age workers will limit labor force growth and, ultimately, the county's long-run potential. Slower growth in the prime-age cohort could also curb productivity gains. On average, prime-age workers are more likely to start a business, to switch jobs in search of better job opportunities,

Migration Flows

INTO SONOMA COUNTY CA	NUMBER OF MIGRANTS
San Francisco CA	2,386
San Rafael CA	2,150
Oakland CA	1,620
Sacramento CA	737
Los Angeles CA	636
Napa CA	578
San Jose CA	550
Vallejo CA	478
San Diego CA	319
Riverside CA	245
Total in-migration	*16,392*
FROM SONOMA COUNTY CA	
Sacramento CA	1,330
Oakland CA	938
San Rafael CA	924
San Francisco CA	623
Vallejo CA	472
Napa CA	457
Boise City ID	422
San Diego CA	413
Phoenix AZ	412
Los Angeles CA	390
Total out-migration	*17,148*
Net migration	**-756**

Source: IRS, 2018

Population Profile

	% of total population, 2021	
	Sonoma County CA	U.S.
Age 5-19	17.0	19.1
Age 25-44	25.6	26.8
Age 45-64	26.4	25.2
Over age 65	21.1	16.8
Birthrate, (# of births per 1000)	8.6	10.8
Death rate, (# of deaths per 1000)	10.5	10.4

Source: Moody's Analytics

and to work longer hours than other cohorts. To bolster population gains and long-run growth prospects, the county will have to build more affordable housing, attract new migrants, and ensure that younger workers receive the proper training to fully participate in the county's workforce.

Workforce readiness

The cautious outlook for population growth underscores the importance of training a new generation of workers. According to the Census Bureau, the educational attainment of Sonoma County's workforce aligns with the education requirements of the county's major industries. For instance, approximately one-third of county jobs necessitate a bachelor's degree or higher, which is similar to the proportion of Sonoma's adult population holding a bachelor's or graduate degree. This includes a growing number of white-collar positions such as engineering, consulting and software jobs. However, given the changing demographics and increasing diversity of Sonoma County's workforce, it becomes crucial to enhance the educational attainment, vocational skills and work experience of job seekers across the county.

Although the Hispanic community in the county has made significant strides in raising secondary educational attainment over the past decade, still relatively lower rates of post-secondary educational attainment highlight the role of training and workforce development in accessing higher-paying opportunities. The Census Bureau reveals that while 40% of Sonoma County jobs require an associate's degree or higher, only 20% of Hispanic adults have achieved this milestone. To address these challenges, it will be essential to build upon the success of existing workforce development programs and expand their reach. As more employers in the county prioritize post-secondary degrees and workplace experience, and as the labor market becomes increasingly competitive, efforts to enhance human capital through internships, vocational training, adult education and other opportunities will yield positive outcomes. In the long run, improving the readiness, skills and educational attainment of Sonoma's labor force will be crucial for boosting labor productivity. Since the prime-age workforce is expected to remain relatively stable in the next decade, initiatives that connect workers with Sonoma's leading industries will be vital. Additionally, county-level programs supporting young entrepreneurs will contribute to job growth as new businesses expand locally and nationally.

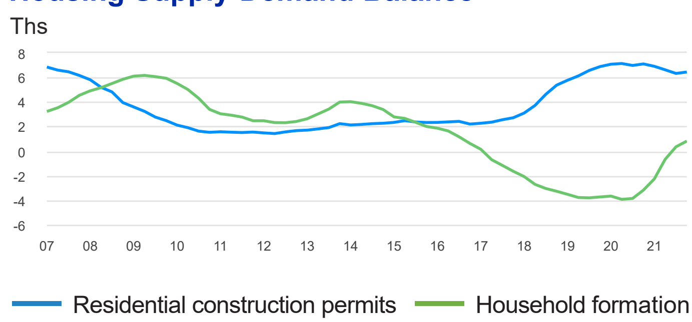
Residential real estate

The residential real estate market is struggling, but it looks like the worst is in the rearview mirror. The Case-Shiller single-family house price index had declined on a monthly basis for nine consecutive months through February, but it has improved since early spring. Rising mortgage rates coupled with a lack of affordability sapped demand for Sonoma homes, sending prices tumbling for the better part of a year. Even with the retreat in house prices, the sizable runup during the initial post-pandemic years still has prices up more than 25% from their pre-pandemic levels, and they are inching higher again. Housing demand indicators also illustrate the massive slowdown in the housing market. According to the California Association of Realtors, home sales are down 20% through May compared with a year earlier, and active listings have likewise fallen to a multiyear low. Those homes that do sell are both taking longer to sell and selling for above listing price less frequently than they did a year ago.

The outlook for home sales is downbeat but will improve modestly in the next year. Many would-be sellers are hesitant to list because they are locked into ultra-low mortgage rates, which will put a limit on sales and new listings while mortgage rates remain elevated. The recent decline in prices has helped chip away at affordability concerns, and more buyers are comfortable buying at the current prices. The near year-long decline in house prices has put them at a level more consistent with underlying economic fundamentals, including household formation and income growth. In fact, house prices in the county are no longer overvalued, which signals a more balanced housing market. Despite some slowing, the resilience of the labor market will translate into healthy wage growth, keeping a floor under house prices even as mortgage rates remains elevated.

Persistent weakness in existing-home sales will be a tailwind to homebuilders. After falling throughout 2022, applications for single-family permits are inching higher in the first half of 2023 as home-buyers returned to builders' developments. Faced with the prospect of rising inventories, builders have been more willing to negotiate with buyers. Falling prices for lumber and other building materials as supply chains improve have provided some wiggle room, allowing for some concessions to be made without surrendering the ability to turn a profit. Permits for new multifamily developments are off their 2021 peak but are strong relative to their 2019 level. Strong underlying demand for apartments from millennials and Gen Z should keep the pipeline healthy, but near-term weakness in price growth is likely given the record number of projects under construction.

Housing Supply-Demand Balance



Sources: Census Bureau, Moody's Analytics

Construction activity will continue chipping away at the long-run housing deficit. Nearly a third of all homes available for sale today nationally are new construction, reflecting the rapid pace of homebuilding and a lack of existing-home listings. The increased supply of homes and apartments will push vacancy rates higher across markets CAusing asking rents to stabilize, if not fall.

The long-run outlook for Sonoma County's residential real estate market will rely in part on the county's demographic fortunes, but the county is already facing a housing shortage as is. Even with slower population growth, homebuilders will have to build at substantially higher rates to replenish housing units lost to the fires and to keep up with household formation. Given constraints on the availability of developable land, there will be greater demand for high-density units. Onerous zoning laws statewide have restricted the supply of available houses. Up-zoning to allow for high-density units would create a larger pool of lots for affordable housing developments.

The changing of the demographic guard is at hand, and millennials are diving into homeownership as they aged into having families. Still-strong income gains will stir even more young households to plunge into homeownership, especially when mortgage rates begin to recede. This will boost home sales and new construction. The recent improvement in the national homeownership rate suggests that this is already happening. Household formation is expected to accelerate in the county after declining in recent years, but demographic headwinds, including an outsize senior cohort and weak population growth, mean it will take until 2024 to regain its previous highs.

Commercial real estate

The commercial real estate outlook is a mixed bag. The impacts of the COVID-19 pandemic were pronounced across all property types, although the degree to which they are recovering varies widely. Hotel construction, which was largely put on pause during the pandemic, is set to rev up as builders are playing catch-up to match demand for new rooms. Hotel space prior to the pandemic was insufficient, and commercial builders are confident that rising visitor traffic from the pre-pandemic era will return with gusto.

Retailers, on the other hand, were struggling prior to the pandemic and will see only a modest recovery as foot traffic in the county has normalized following the pandemic. Retailers have still not recouped all their pandemic-induced job losses; payrolls are down 5% compared with early-2020 levels despite making a full recovery nationally. The shift to e-commerce and less foot traffic with a smaller daytime population due to remote-work arrangements has left retailers in a bind, and some are opting to not renew their current leases. Vacancy rates for retailers in the first quarter jumped again to 8.1%, according to Keegan & Coppin, the highest reading in eight quarters and well above its prerecession level.

The office market will also be hurt by reduced short-term demand for workers as the economy slows. Office vacancy rates have inched lower from their peak in late 2022 but are still higher than they were in the pre-pandemic years. This will likely recede slightly as more companies return to hybrid work environments and planned additions to office space are minimal, which will put some downward pressure on vacancy rates. Importantly, Sonoma's office-using industries are a much smaller share of the economy than in other metro areas, so the hit from remote work has had a markedly smaller impact.

Other property types are a bit more mixed. The industrial market should hold steady as e-commerce demand slowly backtracks with more spending geared toward services. The industrial market was among the biggest winners during the pandemic as durable goods orders surged. Industrial vacancy rates are already below their pre-pandemic levels, and further declines are unlikely given a pullback in goods spending and slower economic growth through the rest of the year.

The value of nonresidential permitting has backtracked after blockbuster growth over the past year. Firms have, for the most part, already completed expansion plans that were delayed during the pandemic, and rising interest rates, cooling business sentiment, and surging labor costs have paused new expansion efforts.

Forecast risks

The most significant downside risk to Sonoma's economic outlook is that the Federal Reserve induces a recession as it attempts to quell inflation. The highest inflation in more than 40 years forced members of the Federal Open Market Committee to turn significantly more hawkish, but the Fed will need to tread cautiously to keep from derailing the economic recovery. If the Fed is too aggressive, it could ignite panic in financial markets CAusing asset prices to plummet further as higher interest rates cut off the flow of credit. Confidence would weaken and consumer spending would slacken. With Sonoma's tourism industry reliant on discretionary spending, any hit to the national economy would spell trouble for the county.

Labor shortages are another downside risk to the labor-intensive tourism and agriculture industries. The reopening and recovery led to a surge in job and income growth as the most affected industries competed for the same pool of labor. Worker shortages are already apparent in the agriculture industry, and a sustained slowdown in migration would exacerbate existing shortages.

More severe weather patterns brought about by climate change are an important risk. Uncertainty about agriculture conditions could depress investment, and a return of drought conditions would hamper the quality and quantity of harvests. Should grape quality and thus wine quality suffer given more volatile and extreme weather conditions, Sonoma County's distinct comparative advantage in quality could erode, with far-reaching consequences for its economic potential.

There are upside risks for the Sonoma economy as well. Growing recognition for the county's breweries, spas and organic eateries could draw more niche visitors. Already, the rising popularity of Sonoma's craft beers has led to rapid growth. The snowball effect may pick up speed, since craft beer customers value variety and will flock to areas with a high concentration of breweries. Since fans of craft brews are typically more likely to consume beer at the source, this could translate into more visitor arrivals and positive spillovers for nearby restaurants and accommodations.

Housing affordability in the county is set to modestly improve in the coming years as house price growth cools, and Sonoma compares favorably to neighboring Napa and Monterey counties. This introduces some upside risk should Bay Area residents opt to relocate to relatively more affordable locales in the broader area given the persistence of remote work. Early returns through 2023 suggest that Sonoma County is still too costly to benefit from this trend, with more central areas in the state helped by increased in-migration while the county continues to shed residents. Still, should house prices drop more than expected, this could make Sonoma an attractive option for those relocating from even more costly neighboring metro areas.

Consumer spending could exceed expectations and drive faster growth. The labor market is loosening but remains tight, keeping job and income growth elevated. Businesses are correctly calculating that the labor-supply issues in the aftermath of the pandemic are here to stay. This is leading them to retain staff despite slowing demand. That dynamic could push Sonoma's household income up faster than expected. As much of the income is spent, Sonoma's economy would grow above expectations.

Major Employers: Sonoma County CA Metropolitan Statistical Area

Rank			
1	Kaiser Permanente	Education or Health Service	2,640
2	Graton Resort & Casino	Leisure and Hospitality	2,000
3	St. Joseph Health System	Education or Health Service	1,578
4	Keysight Technologies	Manufacturing	1,300
5	Safeway Inc.	Retail Trade	1,200
6	Medtronic CardioVascular	Manufacturing	1,000
7	Amy's Kitchen	Manufacturing	987
8	Sutter Santa Rosa Regional Hospital	Education or Health Service	936
9	Wells Fargo	Financial Activities	916
10	Lagunitas Brewing Co.	Manufacturing	900
11	Jackson Family Wine	Retail Trade	800
12	Cyan	Information	700
13	Walmart Inc.	Retail Trade	650
14	Hansel Auto Group	Retail Trade	600
15	AT&T	Information	600
16	Lucky	Retail Trade	550
17	Santa Rosa Community Health Centers	Education or Health Service	523
18	PG&E	Trans./Warehouse/Utilities	500
19	Petaluma Acquisitions	Manufacturing	455
20	Ghilotti Construction Co.	Construction	425
21	Exchange Bank	Financial Activities	420
22	Sonic Restaurants Inc.	Leisure and Hospitality	410
23	The Home Depot U.S.A. Inc.	Retail Trade	390
24	Redwood Credit Union	Financial Activities	382
25	Petaluma Health Center	Education or Health Service	360

Sources: North Bay Business Journal Book of Lists, 2017; San Francisco Business Journal Book of Lists, 2017

Demographic profile

Indicator	Units	Sonoma County CA	U.S.	Rank	Year
Households					
Households, % change (2017-2022)	Ann % change	ND	ND	322	2022
Population w/ BA degree or higher	% of adult population	37.4	33.1	322	2019
Median household income	$	89,150	67,340	322	2020
% change yr ago		*4.3*	*2.5*	*322*	*2020*
Population					
Per capita income	$	73,526	59,763	322	2020
% change yr ago		*10.2*	*6.2*	*322*	*2020*
Population	ths	488	331,512	322	2020
% change yr ago		*-0.8*	*1.0*	*322*	*2020*
White	%	86.4	75.5	322	2020
Black or African American	%	2.1	13.4	322	2020
Hispanic	%	27.9	18.5	322	2020
Asian	%	4.7	6.0	322	2020
Net domestic migration, rate	Persons/ths pop	-10.3	0.0	322	2019
International migration, rate	Persons/ths pop	-0.2	1.7	322	2019
Poverty rate	%	6.8	12.3	322	2019
Median age	yrs	NC	NC	322	NC
Household Cost Indexes					
Median existing-home price	$ ths	695.1	294.5	322	2020
% change yr ago		*6.07*	*9.37*	*322*	*2020*

ACKNOWLEDGMENTS

PREPARED BY OUR RESEARCH PARTNERS MOODY'S ANALYTICS

Prepared by:

Colin Seitz

Colin.Seitz@moodys.com
Associate Economist

CONTACT US

Email

help@economy.com

U.S./Canada

+1.866.275.3266

EMEA

+44.20.7772.5454 (London)

+420.224.222.929 (Prague)

Asia/Pacific

+852.3551.3077

All Others

+1.610.235.5299

Web

www.economy.com

www.moodysanalytics.com

www.sonomaedb.org

SONOMAEDB.ORG

707 - 565 - 7170

141 STONY CIRLCE, STE. 110, SANTA ROSA, CA 95401