TOURISM ECONOMICS

San Diego Travel Forecast

January 2023

Report Prepared For:
San Diego Tourism Authority

TOURISM ECONOMICS
AN OXFORD ECONOMICS COMPANY

Contents

1 Executive Summary

- San Diego travel recovery continued in 2022. The January 2023 forecast, which includes historical data through October 2022, anticipated that total visits grew 19.7% recovering to 81% of the 2019 pre-pandemic levels, while total expenditures increased 84.2% from the prior year reaching $13.7 billion and surpassing 2019 pre-pandemic levels by 18%. The overnight segment led the recovery in 2022 tallying 16.81 million overnight visits that generated more than $12.6 billion in visitor expenditures. Strongest increase in day visitation came from a projected 2.8 million visits from Mexico, which almost doubled from the prior year as Covid-19 restrictions were fully lifted and international travel resumed.
- In the hotel sector, room demand recovered to 94% of its 2019 level. The return of hotel room demand had positive effect on hotel occupancy which increased more than 10ppts from the prior year and averaged 72.6% in 2022. Revenue per available room (RevPAR) increased 45.2% in 2022, benefiting from a 23.3% increase in the average daily room rate (ADR) from the prior year reaching $203.50.
- San Diego's travel sector is expected to show resilience in the face of the approaching economic downturn as business travel continues to recover and the leisure segment continues to be supported by remaining built-up savings and pent-up demand. Nonetheless, staff shortages will continue to increase labor costs for the industry which will have to be, at least partially, passed on to consumers, and additional costs for travel will feed through from higher energy and jet fuel prices. Our San Diego visitor forecast (as of January 2023) has 2023 improving to 31.8 million visitors from 28.5 million in 2022 – still 9% shy of the 35.1 million visitors recorded in 2019. Both overnight (+10.9%) and day visitors (+12.5%) are expected to continue to make gains in 2023. Full recovery in overnight visitation is expected in 2023, while day visitation will trail the recovery – day visitation is expected to remain weakened through 2025. Nonetheless, expenditures will return to a more stable growth trend over the next few years and grow at an average annual rate of ~5%.
- As we enter 2023, it is clear that the economic tide has turned, and our macroeconomic forecasts expect a relatively mild global recession next year. Under normal circumstances, travel volumes would be negatively affected by even a mild recession, especially with the downturn across a range of advanced economies. However, we believe that the tide is still coming in for travel: growth will be slower than in 2022, but recovery will continue. There would appear to be plenty pent-up demand for travel in the United States, as the Travel Sentiment Wave 67 in December 2022 by Longwoods International & Miles Partnership reported that more than 9 out of 10 respondents are going to travel in the next six months.

San Diego Tourism Summary Outlook

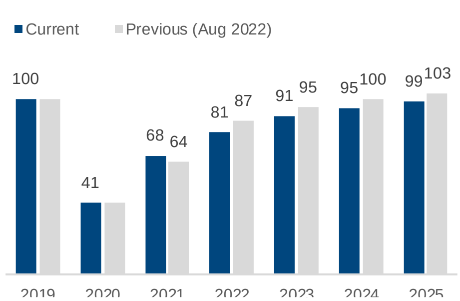
(annual % growth, unless stated)

	2019	2020	2021	2022	2023	2024	2025
Visits	-1.9%	-59.2%	66.1%	19.7%	11.5%	5.0%	3.8%
Day	-3.3%	-67.3%	77.3%	17.2%	12.5%	5.1%	5.0%
Overnight	-0.5%	-51.3%	58.8%	21.4%	10.9%	5.0%	2.9%
Expenditure	1.3%	-55.7%	44.3%	84.2%	9.8%	4.6%	2.5%
Day	-0.2%	-69.2%	81.2%	88.4%	11.1%	5.3%	3.9%
Overnight	1.5%	-54.3%	41.8%	83.8%	9.7%	4.5%	2.4%
Hotel sector							
Room supply	2.1%	-7.6%	7.1%	0.2%	0.9%	0.6%	2.3%
Room demand	-0.5%	-41.3%	35.9%	18.0%	2.9%	4.8%	2.7%
Occupancy (%)	76.5%	48.6%	61.7%	72.6%	74.1%	77.2%	77.5%
ADR ($)	$166.37	$130.50	$164.99	$203.50	$200.06	$207.95	$214.81

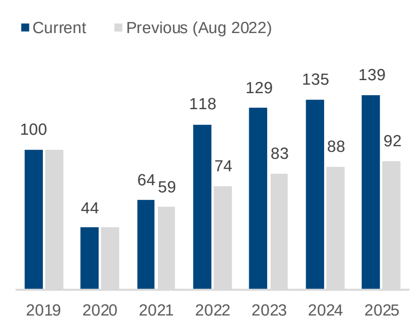
(Relative to 2019)

	2019	2020	2021	2022	2023	2024	2025
Visits	100	41	68	81	91	95	99
Day	100	33	58	68	76	80	84
Overnight	100	49	77	94	104	109	112
Expenditure	100	44	64	118	129	135	139
Day	100	31	56	105	117	123	128
Overnight	100	46	65	119	131	137	140
Hotel sector							
Room supply	100	92	99	99	100	101	103
Room demand	100	59	80	94	97	101	104
Occupancy	100	63	81	95	97	101	101
ADR	100	78	99	122	120	125	129

San Diego visits: Forecast comparison
(2019=100)



San Diego expenditure: Forecast compar
(2019=100)



2 San Diego Tourism Outlook

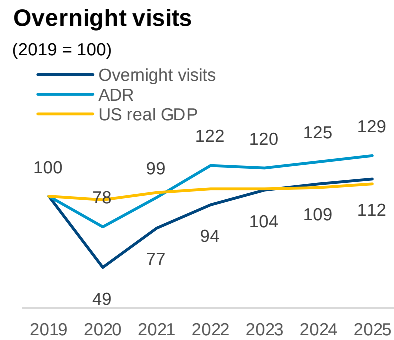
2.1 Visitor Trends

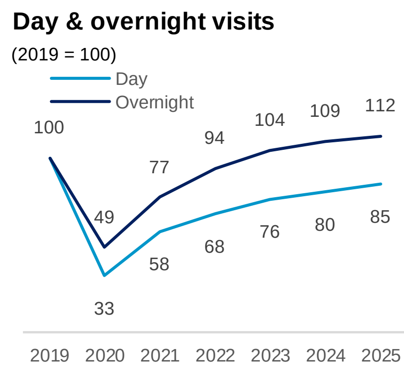
Based on Tourism Economics' forecast as of January 2023 (with historical data through October 2022), San Diego is expected to close 2022 with 28.5 million visitors, approximately 81% of 2019 visitation. Visitation registered 63% of its 2019 level in Q1 and increased to 89% in Q2, 96% in Q3, and it slowed to 77% in Q4. Overnight visitation was the strongest segment in 2022 at 94% of 2019 visitation, while both Mexican and non-Mexican day visitors are only expected to record 67% and 68% of 2019 levels, respectively.

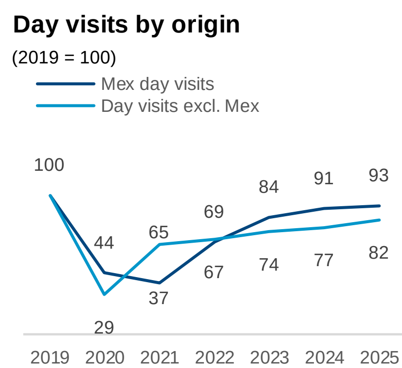
In 2023, total visitation to San Diego is expected to reach 91% of 2019 visitation with 31.8 million visitors. Although the US economy is set for a mild recession in 2023, the pent-up demand for leisure travel remains strong and US households still have accumulated savings concentrated among higher earners most likely to travel.

Overnight visitation is expected to continue to lead the recovery, surpassing its 2019 level in 2023. The total number of day visitors is forecast to increase in 2023 reaching 76% of its 2019 level from 68% in 2022. Mexican day visitation is expected to grow faster than non-Mexican, but overall day visitation recovery will trail the overnight segment reaching 93% of its 2019 level by 2025.

Macroeconomic risks represent headwinds for the travel recovery. The US economy is set for a mild recession in 2023 but this will be countered by the strong dollar and accumulated savings. This temporary fall in economic growth should only delay and not derail the recovery in the US travel demand in 2023. US households still have some $1.7 trillion in accumulated savings, concentrated among higher earners who are most likely to travel. But disposable incomes will be constrained, which will slow the pace of recovery.





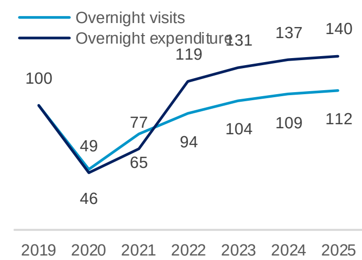


2.2 Expenditures

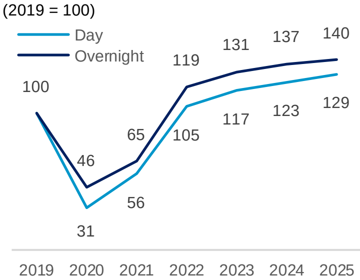
Visitor expenditures rebounded sharply in 2022 surpassing the 2019 pre-pandemic benchmark by 18%. Much of the increase in expenditures can be attributed to a continued recovery in overnight visitors who saw a 23% increase in ADR from a prior year. The very high inflation rate driven in part by hikes in energy prices also resulted in a 88% increase in day expenditures from a prior year. The multifactor effect of the continued recovery in visits, a spike in ADR, and a very high inflation resulted in total expenditure tallying $13.7 billion in 2022 from $7.5 billion in 2021.

In 2023, as the underlying dynamics of high inflation fall away, growth in visitor expenditures is expected to tame to 9.8% reaching $15 billion. Longer term, notwithstanding a slowdown in expenditures growth, the reverbarating effects of the high inflation will carry through the forecast horizon putting total visitor expenditure 9ppts higher than room revenue relative to 2019.

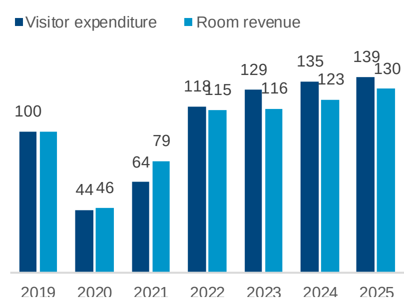
Overnight visits & expenditures
(2019 = 100)



Day & overnight expenditures
(2019 = 100)



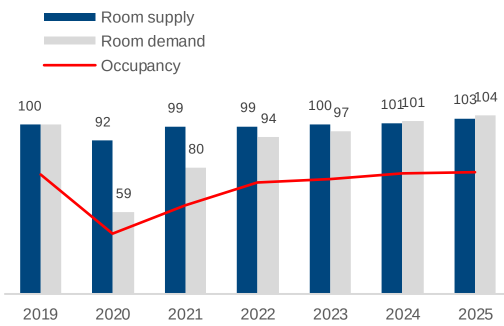
Visitor expenditure & room revenue
(2019=100)



2.3 Hotel Performance

The COVID-19 pandemic saw San Diego room demand contract 41.2% in 2020, and room demand rebounded well in 2021 and 2022. Growth in total demand during 2022 has been slowing from quarter to quarter, and 2022 Q4 looks to be weaker than expected. Room demand grew 5.8% in 2022 Q4 and 18.0% for the year. While room supply is expected to entirely recover in 2023, San Diego room demand recovery will trail that of the US and is not expected to fully recover until 2025. Occupancy will continue to improve but is still expected in 2023 to remain 2.5ppts below 2019 occupancy of 76.5%.

Hotel room supply & demand
(2019 = 100), occupancy as rate



San Diego's average daily room rate (ADR) recovered to $203.50 in 2022, which surpassed its 2019 level of $166.37. We expect ADR to remain strong, but to not quite match the levels achieved during parts of 2022, resulting in an ADR decline of 1.7% in 2023. Adjusted for inflation, this indicates 2023 real ADR at 3.7% above its 2019 levels, and real RevPAR at 0.3% above its 2019 levels. Overall, with a weaker demand outlook and a stronger ADR outlook, the forecast anticipates room revenue growth of 1.2% in 2023, compared to 0.3% in the prior forecast.

Aspects of the lodging sector and the broader economy have made strong recoveries in the context of the Covid-19 pandemic. The hotel sector nationally will see full ADR recovery in 2022, but room demand will need an additional year before returning to 2019 levels. However, even as uncertainty around the pandemic and the spread of Covid-19 variants have eased considerably, there remains uncertainty around inflation, rising borrowing costs, consumer finances, and the economic conditions more generally, which have implications for the timeline of a full return of business transient, group, and international travel. We see risks to our forecasts slightly skewed to the downside.

3 US Tourism & Lodging Outlook

Domestic Person Trips in the US
(Millions)

	2019	2020	2021	2022	2023	2024	2025	2026
Total	2318.0	1582.0	2021.0	2252.3	2325.0	2429.2	2481.8	2520.4
% change	1.8	-31.8	27.8	11.4	3.2	4.5	2.2	1.6
By purpose								
Business	463.9	181.3	249.5	370.9	417.3	463.9	471.0	479.0
% change	1.1	-60.9	37.6	48.6	12.5	11.1	1.5	1.7
Leisure	1854.1	1400.6	1771.4	1881.4	1907.6	1965.3	2010.8	2041.4
% change	1.9	-24.5	26.5	6.2	1.4	3.0	2.3	1.5
By mode of transport								
Auto/Other	2129.1	1503.3	1889.6	2077.0	2138.9	2227.6	2272.8	2307.9
% change	1.5	-29.4	25.7	9.9	3.0	4.1	2.0	1.5
Air	188.9	78.6	131.3	175.3	186.0	201.5	209.1	212.5
% change	4.3	-58.4	67.0	33.5	6.1	8.3	3.7	1.6
By duration								
Overnight	1217.1	801.5	1103.2	1221.5	1229.4	1275.1	1310.7	1338.1
% change	1.7	-34.1	37.6	10.7	0.6	3.7	2.8	2.1
Day-trips	1100.9	780.4	917.8	1030.8	1095.5	1154.1	1171.1	1182.3
% change	1.8	-29.1	17.6	12.3	6.3	5.3	1.5	1.0
Hotel room demand								
Roomnights	1298.8	831.4	1142.8	1272.5	1305.6	1361.6	1395.4	1420.1
% change	1.6	-36.0	37.5	11.4	2.6	4.3	2.5	1.8

Summary US Lodging Forecast
(Millions)

	2023				2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Room Supply	499.2	511.6	520.0	516.9	504.7	518.0	527.1	524.9	513.5	526.9	536.4	534.3
Room Demand	295.9	341.9	355.1	312.6	306.7	360.0	372.3	322.6	316.5	368.2	381.1	329.5
Occupancy (%)	59.3%	66.8%	68.3%	60.5%	60.8%	69.5%	70.6%	61.5%	61.6%	69.9%	71.0%	61.7%
ADR ($)	147.0	151.9	154.2	151.2	153.0	159.2	161.3	156.6	158.7	165.0	166.9	162.1
RevPAR ($)	87.2	101.5	105.3	91.4	93.0	110.7	113.9	96.3	97.8	115.3	118.6	100.0
year-to-year % growth												
	2023				2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Room Supply	0.9%	1.1%	1.2%	1.1%	1.1%	1.2%	1.4%	1.5%	1.7%	1.7%	1.8%	1.8%
Room Demand	6.5%	1.1%	2.3%	1.7%	3.6%	5.3%	4.8%	3.2%	3.2%	2.3%	2.3%	2.1%
Occupancy	5.6%	0.0%	1.0%	0.6%	2.5%	4.0%	3.5%	1.6%	1.5%	0.6%	0.6%	0.3%
ADR ($)	7.2%	0.1%	-0.6%	1.6%	4.1%	4.8%	4.6%	3.6%	3.7%	3.6%	3.5%	3.5%
RevPAR ($)	13.1%	0.1%	0.5%	2.2%	6.6%	9.0%	8.2%	5.3%	5.3%	4.2%	4.1%	3.8%

Forecast prepared November 2022

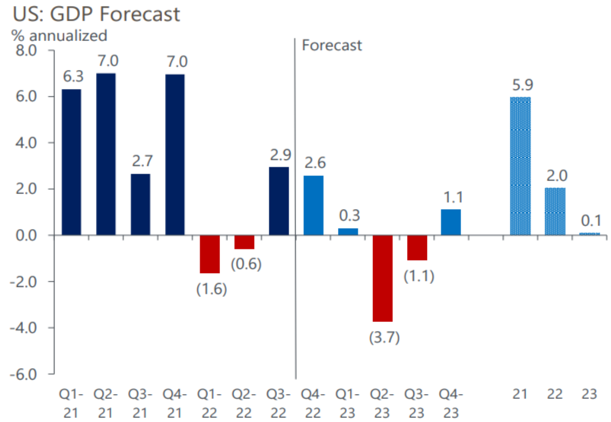
4 Key Origin Economies

4.1 US Market Summary

Recent developments

The economy is doing better than expected in Q4 as consumer spending is solid and the labor market remains tight. Real GDP grew 2.9% annualized in Q3, according to the second estimate, compared to 2.6% initially estimated (Chart 1). Upward revisions to consumer spending and non-residential fixed investment more than offset a downward revision to inventories. The smaller inventory build bodes well for Q4 GDP.

Chart 1: The economy will lose momentum



Source: Oxford Economics/Haver Analytics

The job market remains strong. The unemployment rate didn't budge in November, coming in at 3.7%. Initial claims for unemployment insurance benefits remain well below our estimate of the break-even level, or the level consistent with no monthly job growth, of 305k. Nominal wage growth is still running above 5%, higher than the 3.5% that the Fed would like, which is a combination of 2% inflation and 1.5% productivity growth.

There are parts of the economy that are struggling, including housing and technology. Home sales and residential investment have dropped recently in response to higher mortgage rates. Announced layoffs in technology have surged, but this industry only accounts for roughly 3% of total employment. Growth in manufacturing output remains modest and the ISM manufacturing index is below its neutral threshold of 50. Financial market conditions have loosened, the opposite of what the Fed wants. Monetary policy affects the economy through financial market conditions.

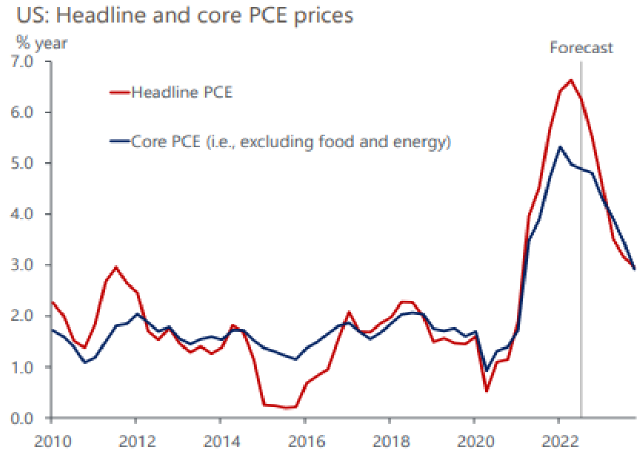
Short-term forecast

Considering the momentum in the economy, the December baseline forecast has pushed the start of the recession from Q1 to Q2 2023. We estimate the peak-to-trough decline in GDP will be 1.2%, compared with 1% in the prior baseline. The combination of persistently high inflation, aggressive Fed monetary policy tightening, negative spill-over effects from slower global activity, and weaker corporate earnings will weigh on consumers' and businesses' willingness to spend, which will push the economy into a mild recession.

Key drivers of our short-term forecast

Core inflation will remain elevated. Growth in US CPI moderated in October, but it's a little misleading due to changes regarding how health insurance prices are determined and won't deter the Fed from continuing to increase interest rates. Simply put, the Fed faces either a mild recession to tame inflation or stagflation next year.

Chart 2: Inflation will remain high next year



Source: Oxford Economics/Haver Analytics

The CPI rose 0.4% m/m in October, less than our below-consensus forecast of 0.5%. Core CPI inflation rose 0.3% m/m, half the pace recorded in September. Some of the easing of inflation was driven by a methodology change for estimating health insurance prices, largely based on profits of health insurance providers, which tend to be reported with a lengthy lag. The methodology adjustment posed a larger drag than we anticipated, and this will likely result in lower CPI in 2023.

Supply chain problems are easing but are still keeping US inflation elevated (Chart 2). To highlight this, we constructed a supply chain constraint CPI, which includes new/used vehicles, motor vehicles and parts, video and audio equipment, sporting goods, and furniture. This is adding around 1ppt to CPI inflation, even after accounting for the sizable decline in used car prices in October. Supply shocks – namely Russia's invasion of Ukraine and Covid's lingering impact on supply chains – account for the bulk of the US inflation problem in our view, and it's important to remember that the Fed cannot fix these issues.

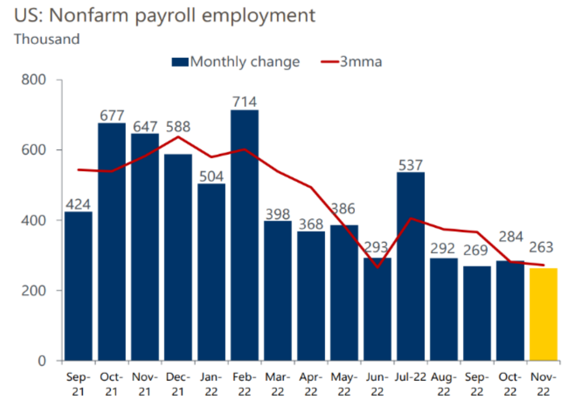
Our forecast assumes that goods disinflation is insufficient to completely offset services inflation, including rents. The CPI for housing, which is sticky, rose 0.8% in October following a 0.7% gain in September. Rental inflation is adding the most to year-on-year CPI growth since the early 1990s. We forecast rental inflation will start to ease next year, which is a key component of our inflation forecast.

Consumers will continue to spend. We raised our consumer spending growth forecast in the December baseline to around 2% SAAR, up from 0.5% previously. Retail sales and real consumer spending were better than anticipated in October. Anecdotes about holiday shopping suggest November should be another good month for spending. Consumer spending is poised to weaken as the labor market softens, wage growth slows, and excess savings are reduced. In fact, excess savings at the low end of the income distribution have been exhausted. High inflation is also contributing to declines seen in real disposable income over the past year. Real disposable income is what matters most for consumer spending, sending an ominous sign for 2023.

The labor market is challenging the Fed. We forecast job growth will eventually stall in 2023 and expect outright job losses starting in Q3 2023, a quarter after the start of a mild recession in Q2. We expect the unemployment rate to rise by about 1ppt next year. However, the labor market was strong in November as job growth remained solid and wage growth accelerated. This keeps the Fed on track to hike by

50bps later this month. The Fed needs the labor market to cool more quickly to engineer a soft landing. However, the path toward a soft landing is narrow. Nonfarm employment rose 263k in November, only slightly below the average job gain during the prior three months of 282k and much stronger than the 100k monthly pace of job growth the Fed wants to see as it continues its efforts to bring down inflation (Chart 3). Employment in retail trade and transportation fell as expected, but elsewhere job gains were broad-based and included a stronger-than-expected rise in government payrolls. The recent increase in continuing claims for unemployment insurance benefits is troubling, as it suggests that it has become more difficult for those who are unemployed to find work. This warrants close watch as the Fed needs labor demand to weaken further, which will coincide with an increase in the number of people unemployed. The path to a soft landing is via a reduction in job openings with a minimal, if any, increase in the unemployment rate – in other words, those that are laid off find new work quickly

Chart 3: Job growth remained buoyant in November

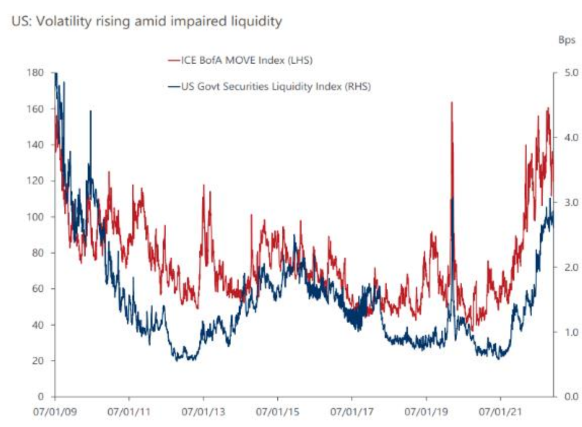


Source: Oxford Economics/Haver Analytics

Financial stability concerns. A downside risk to the forecast is a sudden tightening of financial market conditions. Liquidity conditions remain an issue and if they deteriorate further, the Fed may need to considering adjusting its QT program – something they would be reluctant to do unless necessary. The Fed would like QT to be on auto pilot. Other parts of financial markets are also not cooperating. US high-yield corporate bond spreads have widened since the beginning of the year but should be wider based on their historical relationship with the VIX (Chart 4).

The Fed will keep hiking. The smaller-than-anticipated gain in the headline and core PCE deflators in October won't deter the Fed from continuing to raise the target range for the federal funds rate. Recently, Fed Chair Jerome Powell noted there hasn't been clear progress toward returning inflation to the 2% target. Risks remain tilted toward hiking rates more aggressively than we anticipate. The December baseline forecast has a terminal federal funds rate of 4.75%, compared with 4.5% previously (Chart 5). Federal funds futures have a terminal rate of 4.9%. Our forecast assumes the Fed will pause after hiking rates by 25bps in February. This is needed to keep inflation on the path toward the central bank's 2% objective. We believe the Fed will start cutting interest rates to return them to their neutral rate of 2.5% in 2024

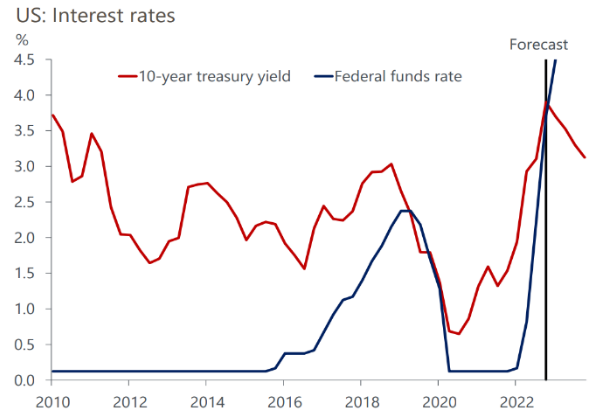
Chart 4: Financial markets are anxious



Source: Oxford Economics/Bloomberg

Spend now, save later. Revisions to personal income and spending data suggest US households accumulated a smaller stock of excess savings and have depleted that faster than assumed by spending $553bn, or twice as much as previously estimated. Our baseline forecast assumes households will draw down $425bn in H2 2022, supporting 5% of consumer spending, but then move to a slower pace in 2023, albeit still financing 4% of household spending. Excess savings can't be relied on to avert a downturn since those funds are concentrated among high-income households, whose propensity to spend is low. Credit lines may fuel spending in the near term, but consumers will likely retrench as the labor market cools next year. Goods spending – namely on big-ticket durable goods – will likely suffer a more serious blow than services. There remains a significant amount of pent-up demand for services while the opposite is true for goods, expect for autos. Because of lean inventories, demand for autos should hold up fairly well next year even if the economy falls into a mild recession. The personal savings rate dipped 0.1ppt in October to 2.3% – the lowest since July 2005. The decline in the savings rate further depleted households' excess savings, which we estimate now total $1.6tn, down from its peak of $2.4tn. Some of the reduction in excess savings was attributed to the past jump in gasoline prices.

Chart 5: Monetary policy will become more restrictive



Source: Oxford Economics/Haver Analytics

Housing will correct, not crash. Our Housing Affordability Indices show that affordability continues to deteriorate. The forecast FHFA house price index indicates a peak-to-trough decline of 5.2%. The lack of inventory, particularly for existing homes, will put a floor under house prices. The inventory situation for the existing home market is unlikely to improve soon. Many homeowners locked in a sub-4% mortgage rate, creating a strong incentive to remain in their current home for longer. The inventory of new homes is less problematic and the pipeline is full, though some of these homes will be cancelled because of higher mortgage rates.

What to watch out for

Financial conditions. With the Federal Reserve rapidly tightening monetary policy to tame inflation, there is a risk that financial conditions tighten in a disorderly manner. This would risk abruptly slowing the flow of credit and weigh on corporate and business confidence, which would further restrain economic growth.

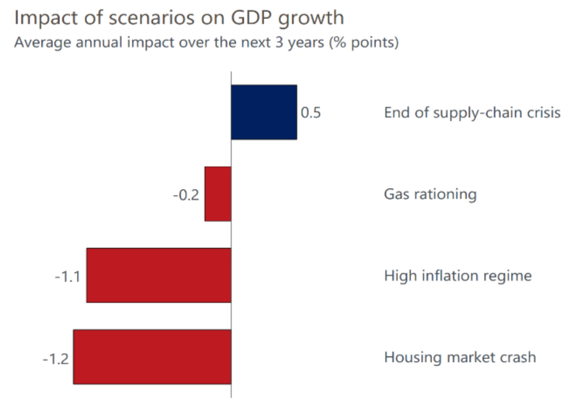
Household savings and consumer spending. US households accumulated excess savings worth around $2.4tn during the coronavirus pandemic and have started to draw down these funds. The rate at which excess savings are drawn down in the coming months has important implications for consumer spending and GDP growth.

Weak overseas demand. We now expect the global economy to fall into a recession, growing only 1.3% in 2023, well below this year's 3% forecast gain. For reference, we define a global recession as two quarters of falling per capita GDP.

Weak foreign demand and the strong US dollar will weigh on US export growth and pose a key drag on certain industries, namely manufacturing.

Fiscal policy. The budget deficit is on track to shrink to around $1tn in fiscal year 2022, down sharply from about $2.7tn in 2021. The deficit is narrowing due to lower spending as pandemic-related emergency fiscal measures have expired. Congress passed the Inflation Reduction Act (IRA) in early August that would spend $430bn, primarily on climate initiatives, and raise $750bn through tax increases and spending cuts. The legislation should reduce the deficit by around $320bn over 10 years. Our analysis of the IRA shows it will boost the level of GDP by about 0.2%-0.3% by the end of 2031.

Chart 9: A housing market crash would be the most damaging scenario

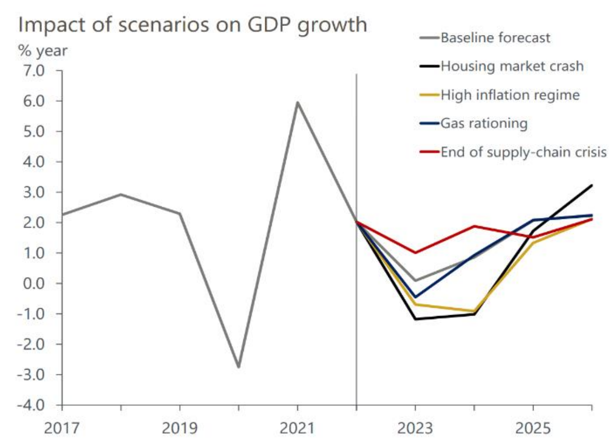


Source: Oxford Economics

Exposure to key global risks

Housing market crash. In this scenario, increases in interest rates and unemployment lead to sharp falls in house prices. Consumers retrench and residential investment declines. The economic recovery is sluggish, despite Fed policy rate cuts. US GDP growth is 1.2ppts lower over the next three years than our baseline forecast (Charts 9, 10).

Chart 10: Risks are skewed to the downside



Source: Oxford Economics

High inflation regime. This scenario sees inflation become de-anchored for a prolonged period, interest rate increases globally, demand slowing, and world GDP significantly weaker. US GDP growth is 1.1ppts lower than our baseline forecast over the next three years.

Gas rationing. Tensions between Russia and Western Europe increase further. With higher energy prices pushing up inflation and inflation expectations, central banks tighten policy further in the near term. The global economy stagnates in the very near term. US GDP growth is 0.2ppts lower over the next three years than our baseline forecast.

End of supply chain crisis. The global economy falls into recession and growth is weaker than consensus. Constraints on production slowly ease, supporting economic activity and pushing inflation down. Pressure on the Fed to tighten policy eases around mid-2023. US GDP growth is 0.5ppts higher than our baseline forecast over the next three years.

Long-term prospects

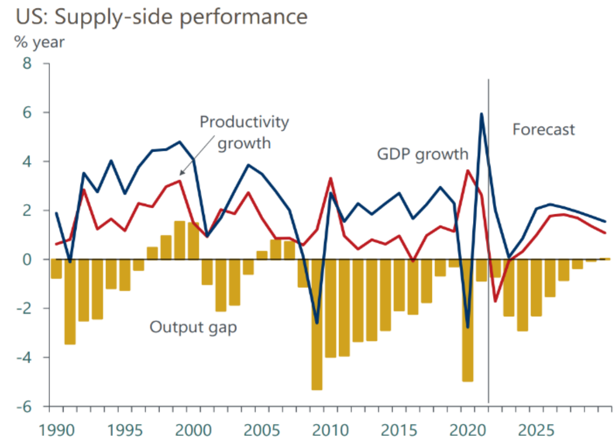
We estimate long-term potential output growth for the US economy will settle around 1.5% in 2030, based on supportive fundamentals. These factors include steady growth in labor supply in the near term before participation moderates steadily in the medium to long term. Competitive wage costs will also underpin stable growth and relative unit labor costs once the current bout of high inflation and strong wage gains pass.

At the same time, household balance sheets look healthy as the debt-to-income ratio for US households has fallen back close to its long-term average. A generally supportive fiscal outlook over the long term should be conducive to economic growth.

On the production front, we see domestic energy output remaining well supported over the next decade as oil prices are expected to remain below $110pb in the long term.

Conversely, climate change will result in higher, but still moderate, average temperatures that are expected to weigh slightly on long-term growth.

Chart 11: Both productivity and GDP growth will moderate in the long term



Source: Oxford Economics

We recently downgraded our US productivity forecast and now see it maintaining a moderate pace in line with its historical average (Chart 11). Among the reasons, declining dynamism, a weaker rate of capital accumulation, and a slower growth in the education differential between generations suggest productivity growth will be fairly downbeat.

Table 3: Potential GDP and its components

Average Percentage Growth		
	2011-2020	2021-2030
Potential GDP*	1.8	1.5
Employment at NAIRU	0.7	0.6
Capital Stock	1.9	1.3
Total Factor Productivity	0.7	0.7
*ln(Potential GDP)=0.65*ln(Employment at NAIRU) +0.35*ln(Capital Stock)+ln(Total Factor Productivity)		

Source: Oxford Economics

4.2 Mexico

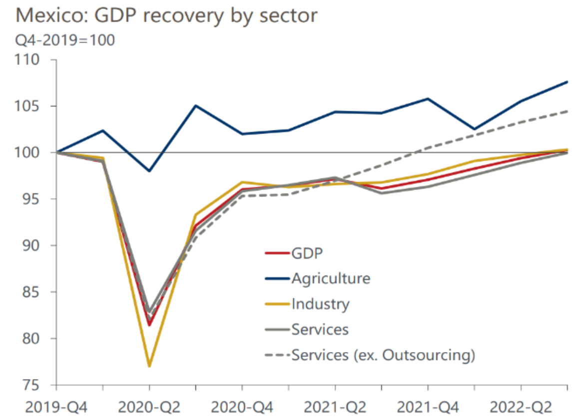
Upside revisions to GDP data pushed Mexico back to its pre-pandemic output level (Chart 1). Industrial production showed signs of a slowdown as construction activity and auto production remain subdued. However, the recovery of the services sector maintained the strong momentum seen in H1.

Mexico's Congress rejected President Obrador's (AMLO) initial bid for a highly controversial electoral reform that required constitutional amendments. However, AMLO has already started the fast-track approval of a leaner version of the bill that does not require constitutional changes and it could be approved with simple majority. If approved by the Senate, the simplified version would still cut the National Electoral Institute's (INE, in Spanish) budget and dimmish its power to carry our transparent elections.

Our 2023 growth outlook is unchanged at 0.6%, as the upside revision to our Q4 2022 outlook provided a stronger carry over that will compensated for slightly larger contraction in H1 (Chart 2). The baseline still includes a modest recession, but the timing is not certain. In fact, we recently pushed our recession expectations in the US forward to Q2 from Q1 due to the strong momentum seen in the labour market.

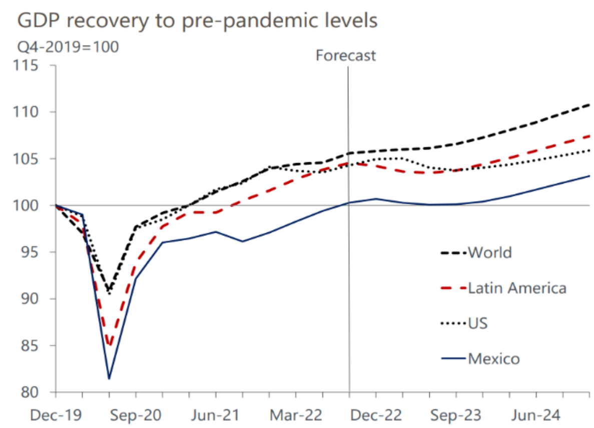
Consumption fundamentals remained strong in later part of 2022, supporting our forecast of 6.8% growth. However, we expect consumption to stall next year with a mild 0.1% contraction. The lagged effects of the highly restrictive monetary cycle implemented by Banxico will start to weigh on credit and the slowdown of the external sector will halt job creation and real wage gains (Chart 4). Moreover, consumers' purchasing power will be eroded by the protracted period of high inflation. Moreover, as the US labour market cools, we expect a slowdown in remittances and tourism expenditure.

Chart 1: Output in high-contact sectors remains well below pre-pandemic levels



Source : Oxford Economics/Haver Analytics

Chart 2: Mexico's economic underperformance will continue



Source: Oxford Economics/Haver Analytics

We believe that Banxico's tightening cycle will end this month at 10.5% and the central bank will start reducing its restrictive stance in H2 2023 by 150bps to 9%. However, the likelihood of a more aggressive cycle in the US could force additional hikes in Q1 next year.

4.3 Canada

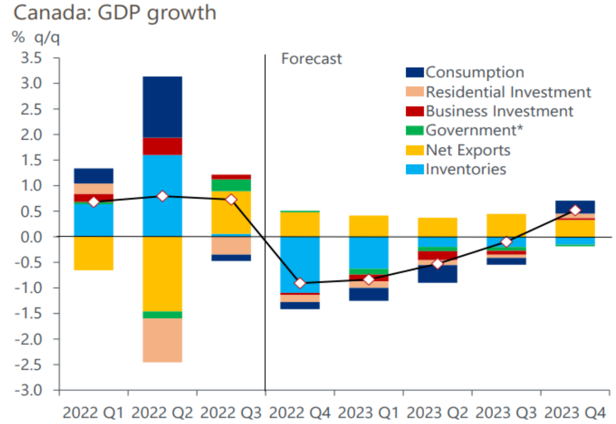
Although recent GDP and labour market data have been stronger than expected, we continue to believe the economy has contracted in Q4, and we are now even more confident in our call that a moderate recession is underway.

The global economy is headed for recession in early 2023, and Canada is expected to be harder hit than peers primarily due to key vulnerabilities in the household and housing sectors.

Higher interest rates, falling asset prices, declining real incomes due to elevated inflation, and deteriorating confidence are prompting highly indebted households to cut spending. The housing correction that got underway early this year is deepening, leading to fewer starts and lower construction. Businesses are also being squeezed by higher material and labour costs and elevated borrowing costs, which will constrain capital expenditures in the near term. Unlike past downturns, we expect firms will maintain higher inventories to enhance supply resiliency rather than draw them down. Still, the record pace of inventory accumulation the past two quarters will not likely be sustained – meaning stock building will represent a sizeable drag on growth in the coming quarters.

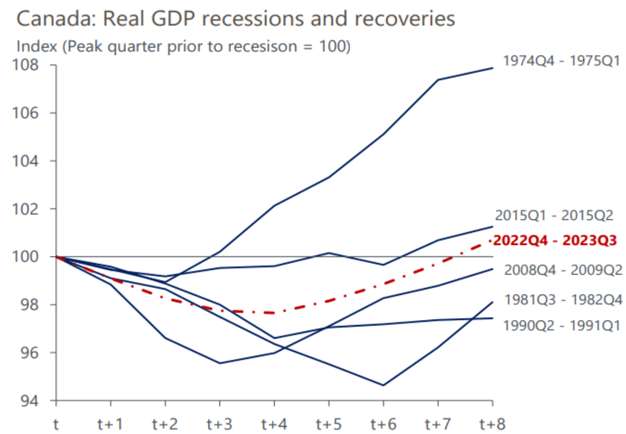
We now forecast a 2.3% peak-to-trough decline in GDP from Q4 2022 to Q3 2023 (Chart 2). Aside the 2020 pandemic-driven downturn, this is slightly longer but similar in depth to the average recession of the past 50 years, where GDP fell 2.5% peak-to-trough over three quarters.

Chart 1: Canada likely entered recession in Q4



*Source: Oxford Economics *Includes consumption and capital spending*

Chart 2: GDP now forecast to decline 2.3% peak-to-trough over four quarters



Source: Oxford Economics/Haver Analytics

4.4 Japan

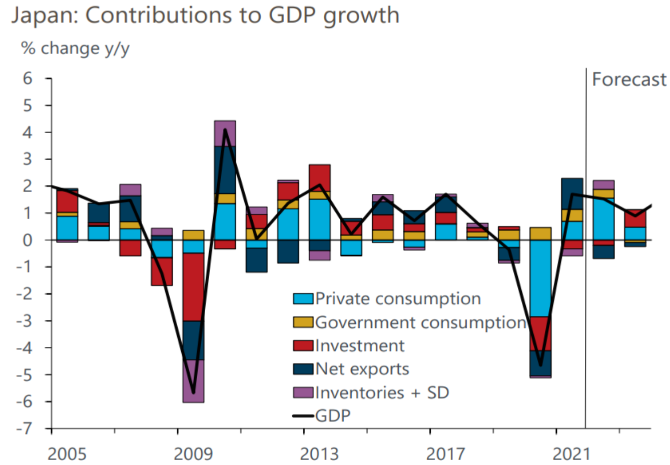
We've maintained our GDP growth forecasts at 1.5% in 2022 and 0.9% in 2023 (Chart 1). We believe that pent-up demand and easing supply chain disruptions will continue to support the economy. However, the recovery will pause in H1 2023, when most advanced economies are forecast to fall into recession.

The consumption activity index improved by 2.2% m/m in October after gaining 2.1% in September (Chart 2). The improvement was led by service expenditures, while mobility improved amid support from domestic travel subsidies. Looking ahead, we expect the consumption recovery to continue despite the recent surge in Covid cases, supported by pent-up demand and savings. However, the pace of recovery will gradually moderate, with inflation squeezing real incomes. Indeed, consumer confidence dipped to the lowest level in two years in November.

Industrial production dipped by 2.6% m/m in October, after a 1.7% drop in September. October's production was dragged lower by chipmaking equipment (- 13.6% m/m) and IT devices (-4.1%), possibly reflecting a turn in the chip cycle. Passenger car production (-6.4%) also dipped in October, in line with trade data. Looking ahead, we expect production to be dragged down by sluggish external demand in H1 2023, after the temporary boost from easing supply chain disruptions.

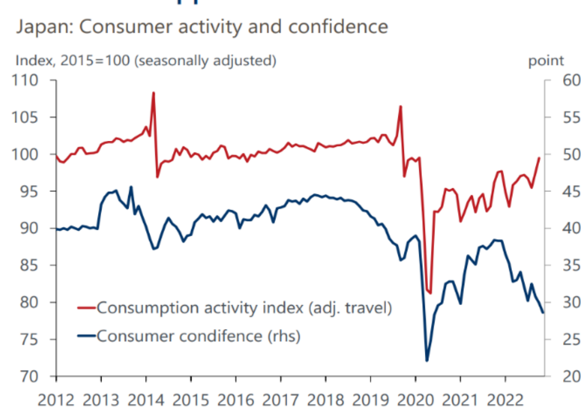
CPI rose 3.7% y/y in October, after the 3% reading in September. Mid-November CPI in Tokyo (3.8%, from 3.5% in October) suggests that the headline CPI will remain elevated. Reflecting increased price passthrough in goods, we have raised our 2023 CPI (excluding fuel) outlook again by 0.4ppts to 2% y/y, resulting a higher projection for overall CPI in 2023 at 1.4% y/y, up from 1% previously. However, given that a wage-price spiral is still unlikely, we project CPI will return to lower levels from 2024 onwards.

Chart 1: We expect 0.9% GDP growth in 2023



Source: Oxford Economics

Chart 2: Consumption recovered while confidence slipped



Source: Oxford Economics/BoJ/CAO/Haver Analytics

4.5 United Kingdom

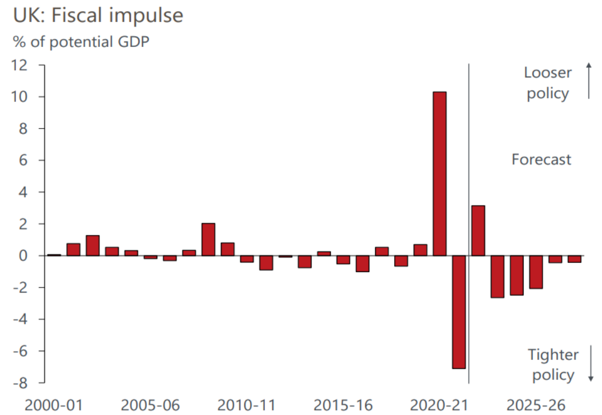
We expect GDP to fall by 0.9% in 2023 then recover to grow by 1.5% in 2024, with both forecasts unchanged since last month. We expect the economy to endure a relatively shallow recession, as high inflation eats into household spending power and tighter policy settings weigh on activity. With policy settings likely to remain much tighter than would typically be the case at this stage of the economic cycle, the subsequent recovery is likely to be slow

The preliminary estimate for Q3 indicated that GDP fell by 0.2% q/q. The data showed that a large difference has opened between the estimates derived from the expenditure and output approaches. With initial quarterly estimates of GDP based on the (higher) output estimate, the ONS included an alignment adjustment in the Q3 expenditure breakdown of 2.3% of GDP, more than four times the level that the ONS targets. This suggests we should be very wary of this data, and that both GDP and the expenditure breakdown could be heavily revised in future.

Much of the Q3 weakness was due to a 0.6% m/m drop in GDP in September, when there was an extra bank holiday for the state funeral of Queen Elizabeth II. Output subsequently rebounded by 0.5% in October. But retail sales fell again in November, the PMIs have reported falling activity throughout the quarter, and widespread industrial action has disrupted activity in December. So, we think GDP will have been flat or fallen modestly in Q4 as a whole.

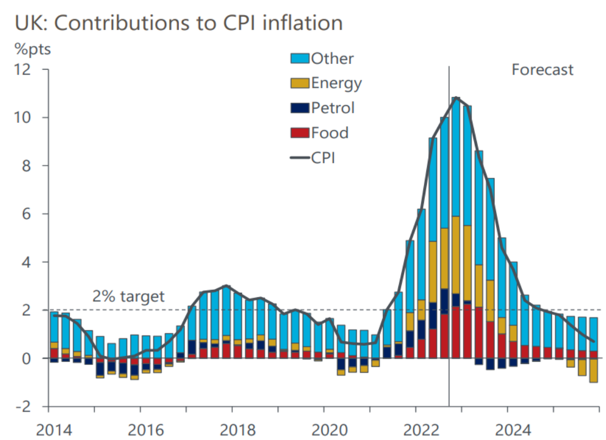
Apart from reducing the generosity of the energy price guarantee by £500 from April, the bulk of the new measures announced in the Autumn Statement were backloaded. But the combination of long-planned withdrawal of pandemic-related stimulus – such as the super-deduction – and tax-raising measures inherited from previous Chancellors – including the increase in corporation tax and ongoing freeze of most tax allowances – mean that a substantial tightening of fiscal policy was already in the pipeline. We calculate that policy changes will exert a large drag on the economy equivalent to 2.6% of GDP in fiscal year 2023- 2024 (Chart 1)

Chart 1: Fiscal policy will tighten substantially in the next three years



Sources: Oxford Economics/Haver Analytics

Chart 4: Inflation has likely peaked, but the descent will be slow

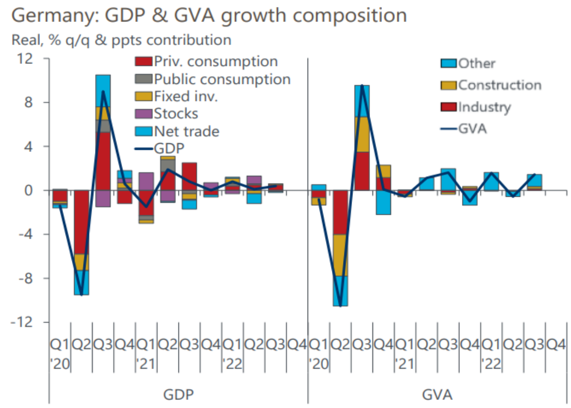


4.6 Germany

Despite the surprising resilience in Q3, the near-term outlook remains downbeat. Inflation is set to stay high for the next months before policy measures take full effect, so the decline in real income will weigh on spending with the slowing labour market adding downward pressure. And while industry shows some resilience, a marked contraction remains our base case.

Indeed, we see most advanced economies contracting in the coming quarters. Moreover, the uncertain outlook for energy prices and external demand will curb industrial investment, while construction activity will suffer under falling demand on the back of rising interest rates. Lastly, while hard gas rationing over the winter remains unlikely, the current cold spell has reduced gas savings and pushed up gas prices. This underscores that the energy crisis remains a key headwind with clear downside risks.

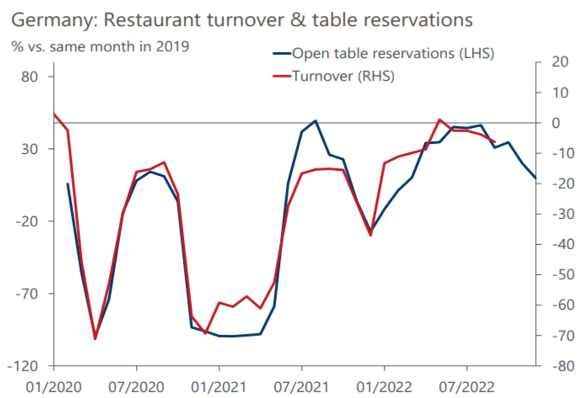
Chart 1: Private consumption and services drove the economy's resilience in Q3



Source: Oxford Economics/Haver Analytics

The economy's resilience in Q3 was mainly due to the stronger-than-expected rise in private consumption (Chart 1), which was supported by a post-Covid rebound in consumer services as well as an increase in durable goods spending. The latter was due to easing supply bottlenecks lifting car production, which shielded industrial activity and supported exports. But while the economy grew 0.3% q/q in Q3, we expect GDP to fall 1.3% q/q in Q4.

Chart 2: Surging restaurant prices are killing consumers' appetite



Source: Oxford Economics/Haver Analytics/OpenTable

Recent data signal upside risks to that view, with a shallower contraction in Q4 becoming likely. Car production rising to the highest level since early 2021 in November and trucking activity holding up suggest industrial resilience may continue in Q4. However, we still expect GDP to contract in Q4 as the consumer rebound yields to the inflation-induced drop in real incomes. Retail sales plunged in October and various indicators signal that services spending is also falling after the Q3 strength (Chart 2).

Gas prices are off their stratospheric autumn-highs but began rising again recently as a cold spell and high gas-based electricity production undermined gas savings. This will sustain severe downward pressure on activity in energy-intensive sectors. Moreover, new supply disruptions in downstream sectors are likely and will sustain price pressures despite import substitution and easing nonenergy commodity prices. Our forecast is for industrial output to fall 0.9% in 2023 after a 0.6% drop this year.

4.7 Switzerland

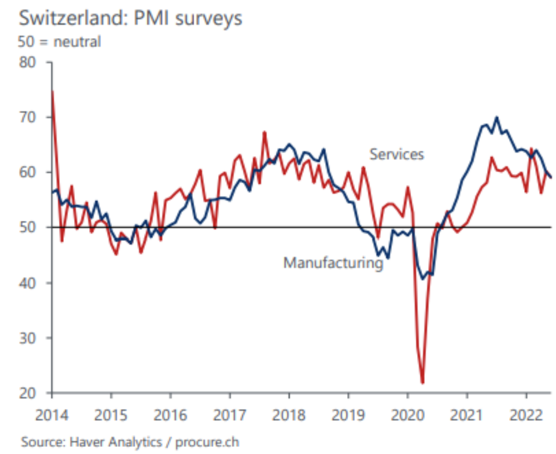
The Swiss economy looks now to be in slightly negative territory even if labour market and PMI surveys are looking more robust than in many other AEs (Chart 1). The impact of the Russia-Ukraine war and global inflation will especially be a significant drag on growth in the coming months. Our baseline forecast sees GDP growth of 0.2% in 2023 after 2% in 2022, leaving the Swiss economy around 2% below our call before Russia's invasion (accumulated over both years) and adjusted for national accounts revisions in between.

GDP growth has continued to slow since the start of 2022. While private consumption and services have continued to recover following the lifting of the pandemic-related restrictions, the industrial sector has lost momentum. That's especially true for construction.

There are Swiss-specific channels that affect the economy beyond global energy and commodity prices, slower global trade, and generally higher uncertainty. Switzerland is the most important trading place for Russian commodities. We assume a GDP impact of around -0.3% via this channel as parts of Russian commodity trade are sanctioned. In a scenario with tougher sanctions – especially if applied to Russian gas exports to Europe – up to 0.5% of GDP could be lost. Swiss financial services are also important for wealth management of Russian customers, although the negative effect on GDP is modest when compared to the potential effect from less commodity trading.

The situation will worsen for exporters of goods and services due to the serious slowdown during the winter (Chart 2), when main European trading partners will suffer from shortages of energy supplies.

Chart 1: Swiss PMIs



Source: Haver Analytics / procure.ch

Chart 2: Swiss export volumes and world trade

Source: Oxford Economics

4.8 Eurozone

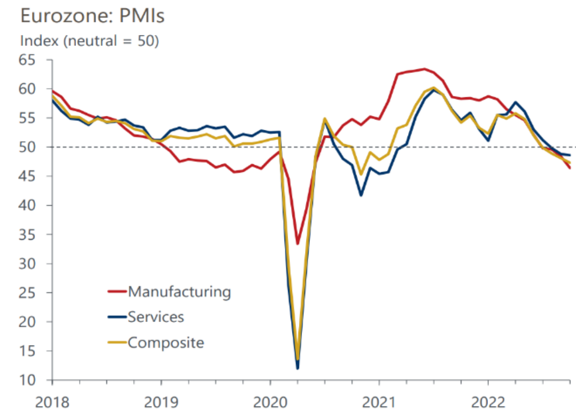
The eurozone economy has shown remarkable resilience so far, with Q3 GDP growth confirmed at 0.2%. National data show that strong consumption, which is projected to have grown by 1% for the second consecutive quarter, was behind the better-than-expected 0.2% increase in Q3 GDP. With the savings ratio broadly stable, it looks like that the increase in consumption did not come from excess savings being spent in Q3, but from the strength in the labour market and support from fiscal policy.

Our call remains that a recession has begun in Q4. Admittedly, surveys released recently all showed marginal improvements in November. The PMI, for instance, had the composite index increasing by 0.5pts to 47.8. But that still points to a decline in activity, albeit at a slower pace (Chart 1). The PMI report revealed that energy market developments, alongside improvements in supply bottlenecks, reduced the pressure on the manufacturing sector, with the manufacturing PMI increasing to 47.1, up from 46.4 in November.

But the cracks are starting to appear in the data. French and German indicators for goods consumption in October started Q4 on a sour note, while the first monthly print for industrial production for October showed French industrial output fell considerably, albeit driven by the refinery strikes, confirming our fears that an industrial recession may be underway.

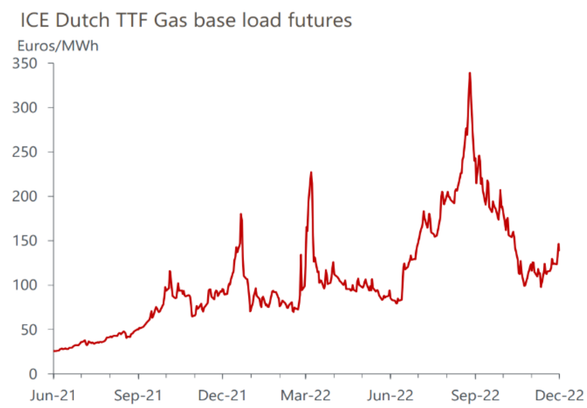
Eurozone inflation eased in November but still remains in double-digit territory. High inflation and the energy crisis are the main drivers of a mild recession this winter. We expect eurozone GDP to decline for two consecutive quarters starting in Q4, when we anticipate GDP to shrink by around 0.5%. Overall, we see the eurozone economy contracting by around 1% from peak to trough, with some countries, such as Germany, showing larger declines.

Chart 1: PMIs still point to a deterioration in activity, albeit at a slower rate



Source: Oxford Economics/S&P Global

Chart 2: Gas prices have started to rise again but are still well below August levels



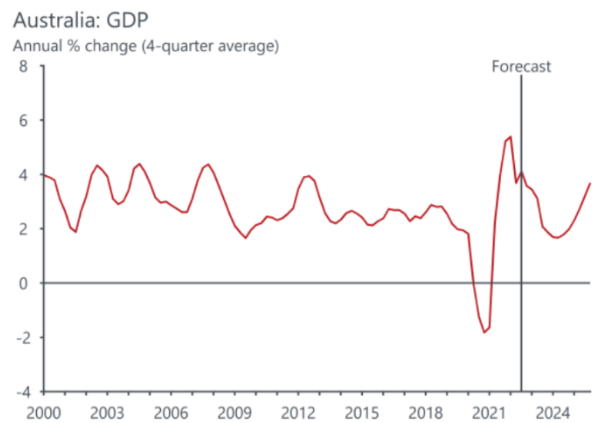
Source: Oxford Economics/Haver Analytics

4.9 Australia

Households' response to higher interest rates will dictate economic fortunes in 2023. Consumer spending made a strong contribution to growth in Q3. Spending on discretionary items grew at a healthy pace, although momentum has slowed as the sugar-hit from reopening the economy has faded. Moreover, higher interest rates and price inflation will curb spending growth further in the coming quarters. However, we do not anticipate a collapse in growth; the labour market remains extremely tight, which will support income growth and cushion the ongoing decline in the savings rate. And the ongoing recovery in net overseas migration will place a floor under growth prospects for 2023. Our forecast for growth in 2022 is lower at 3.6% (3.9% previously), although this is due to revisions to the data; the outlook for growth in Q4 is broadly unchanged (Chart 1). We see growth at 1.9% in 2023.

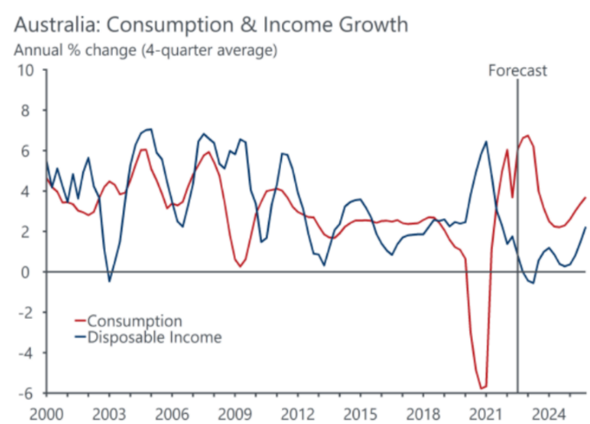
GDP growth was a touch stronger than our forecast in Q3, with the recovery in services consumption running a bit ahead of our anticipated trajectory. Construction-related investment components also grew steadily in Q3, with the sector working through the bottlenecks that have hampered activity over 2022. Elsewhere, business investment growth was sluggish, in line with the anticipated slowdown in domestic demand growth over the coming year. The RBA delivered another 25bps rate increase in December – in line with our expectations. The RBA is striking a relatively hawkish tone, and we continue to expect two more 25bps increases in Q1 2023, taking rates to a peak of 3.6%.

Chart 1: GDP growth of 1.9% forecast for 2023



Source: Oxford Economics

Chart 2: Consumption growth is facing stronger headwinds moving into 2023

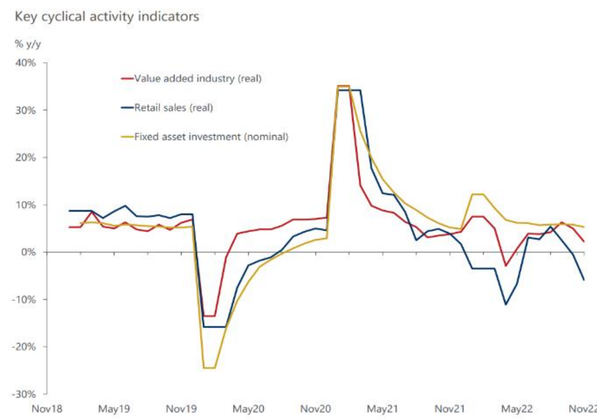


Source: Oxford Economics

4.10 China

In response to the marked slowdown in domestic activity, we downgraded our Q4 2022 growth forecast to 2% y/y, implying a seasonally-adjusted sequential contraction of 0.4% q/q and full year annual growth of 2.7% y/y. Our high frequency activity tracker for China suggests some downside risk to this forecast.

Chart 1: The Chinese consumer becomes the laggard



Source: Oxford Economics/Haver Analytics

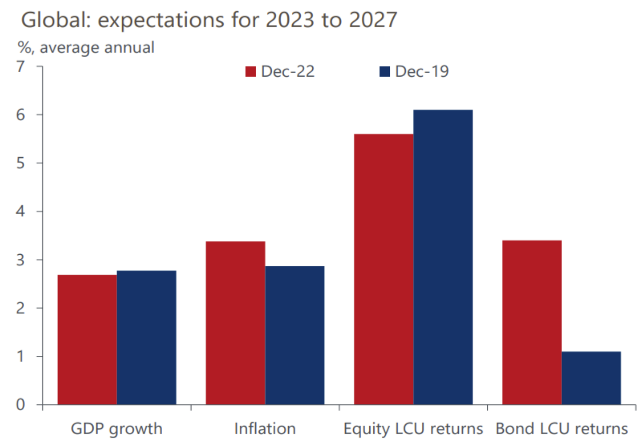
For Q1 2023, with reopening now proceeding faster than we view China is epidemiologically-prepared for, we cut our growth forecast by 1.5ppt to 2% y/y, implying sequential growth of just 0.5% q/q s.a. This sharply weaker outlook reflects the economic consequences of a surge in Covid cases and fatalities, with the uncertainty of policymakers' reaction in the face of rising cases limiting consumer confidence. High frequency indicators that we track suggest that activities appear to be around 35% below levels normally seen this time of the year, reaching the trough we'd seen during the Q2 2022 Hong Kong 'exit' wave (a close comparison for China given its level of elderly vaccine immunity prior to the 'exit wave' in Q2 2022). Indeed, Hong Kong's experience earlier this year suggests a health crisis peak in Q1 2023 for China.

As such, our 2023 quarterly growth profile now sees a deeper trough than previously anticipated, with low base effects from 2022 lockdowns defining key contours of the path ahead. We expect the economy to grow 4.2% y/y in 2023, or an average sequential quarterly pace of 1.4% q/q sa. Variant risk, including the spread of more transmissible and / or deadly variants, pose downside risk to this growth profile.

In terms of policy, Covid control measures will ease incrementally in H1, with authorities reverting to the old playbook of reimposing targeted and temporary restrictions should medical resources come under pressure, while signalling more broad-based reopening towards H2 2023. Data-dependent macro policy easing stabilises the economy, with targeted property sector support, relief measures for households, and a push into infrastructure spending as the preferred policy tools.

5 Three forces shaping growth, inflation, and markets in 2023

Chart 1: Expectations for 2023-2027 have changed since the pandemic



Source: Oxford Economics/Haver Analytics

Over the past six months we have written extensively about the three main forces shaping the three key regions of the global economy: US excess demand and the associated aggressive monetary tightening; the European energy crunch triggered by the Ukraine-Russia war; and China's broken growth model. Strikingly, the forces at work are very different in these broadly equal sized regions of the global economy. How they will combine adds uncertainty to our outlook.

In normal times, each shock would have been significant enough to dominate our global research. Now, we are analysing the implications of all three factors for growth, inflation, and markets as each shock works its way through the global economy over 2023 and beyond.

Our baseline encompasses the idea that, combined, these shocks will produce an era of low growth, elevated inflation in the short term, low medium-term inflation, and average returns in financial markets. Compared to our pre-Covid medium-term view, both inflation and bond market returns are set to surprise on the upside, while global growth is still likely to struggle (Chart 1).

This marks a significant shift in our outlook and in the level of conviction we can have about the medium-term outlook because it is facing large and sometimes opposing forces.

US: Excess demand will give way to tighter policy

It may seem odd to talk about excess demand when real GDP growth in the US and other advanced economies was so weak by historical standards in 2022. But such is the impact of bottlenecks in product and labour markets that it has been sufficient to keep inflation elevated in an environment of weak growth. Undoubtedly, some of these supply disruptions are temporary in nature but others, such as a worsening demographic situation, are key elements of our weak longer-term forecast.

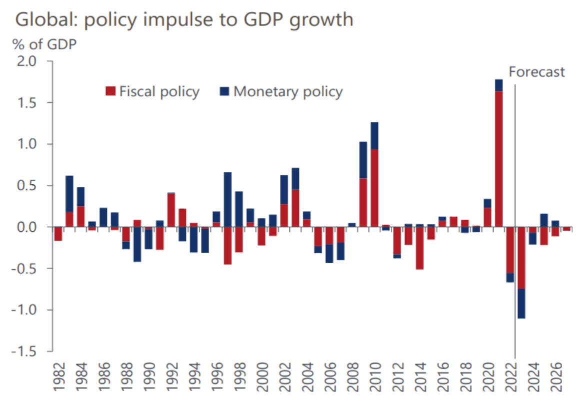
While we expect that inflation will start to fall back in 2023, the legacy of this high inflation episode is likely to be tighter macroeconomic policy in the US and, by extension, the rest of the world. The comparative resilience of the labour market and consumer spending in the US towards the end of 2022 further the case for tighter macroeconomic policy.

The Federal Reserve has declared war on inflation and, with its credibility riding on bringing down inflation, any return to an easing bias in monetary policy is unlikely until inflation is close to the target. Our baseline doesn't foresee this happening until 2024 at the earliest. If the resilience of activity and inflation continues, then the risk of further tightening or a delayed pivot will rise.

Although inflation in the rest of the world is broadly more of a supply than demand issue, the Fed is forcing other central banks into keeping monetary policy tight via the strength of the dollar. At one level, dollar strength (and currency weakness in the rest of the world) is an unhelpful inflationary impulse, but it is also limiting central banks' room to manoeuvre in case they make the problem worse. Until US inflation is tamed, dollar strength will remain a problem for the rest of the world.

Tighter monetary policy is nothing new, but 2023 will see it combined with a lack of active fiscal policy support resulting in the most restrictive stance for overall macroeconomic policy in years. For example, the stalemate resulting from the US midterm elections will likely focus the fiscal debate on the debt ceiling rather than making a meaningful contribution to the progress of the US economy. Meanwhile, the UK's brief and spectacular failure to adopt an expansive fiscal policy will provide a cautionary tale for other European economies.

Chart 2: Growth impulse from macro policy is set to turn sharply this year



Source: Oxford Economics/Haver Analytics

Chart 2 shows the impact on growth from higher interest rates and tighter monetary policy, taking into account standard growth multipliers and typical lags. While there is considerable uncertainty about both the amount of time it takes for monetary and fiscal policy to impact the economy and the appropriate multiplier, making almost any reasonable assumption shows that policy will likely hinder rather than help growth.

Europe: Supply will remain constrained and volatile

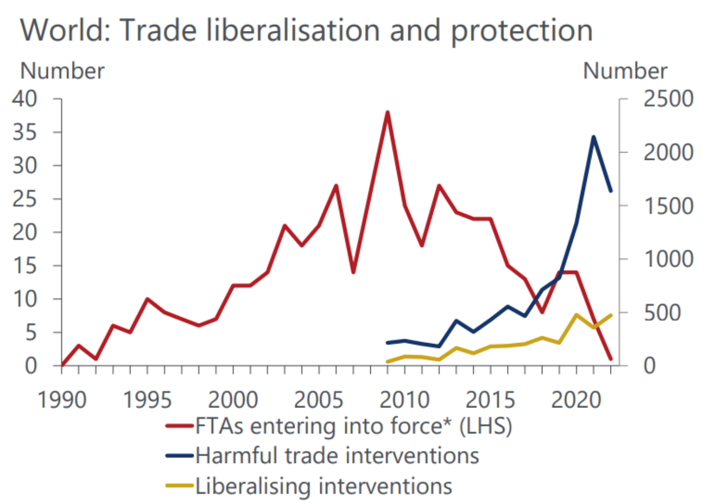
All else equal, a weak growth outlook might be considered the death knell for inflation. As Milton Friedman famously pointed out, it is only really governments (or economic policymakers more generally) that can generate inflation, not the private sector. This might be a bit extreme, but the idea that understanding the direction of policy is critical to the inflation outlook is certainly true.

While authorities are likely to bear down on inflation in one sense, the broader geopolitical landscape is keeping the inflation impulse alive. The Russia-Ukraine war and resulting European energy crunch is an obvious example. While it might be tempting to see this as a near-term issue only, there is a significant risk this will again be an issue in winter 2023/2024 and will continue until European energy infrastructure can be reoriented towards more secure energy sources.

The consequence for European consumers is dire. The hit to household real incomes in Europe is greater than in any other region of the world, ensuring the outlook for consumer spending is also the weakest.

More generally, there are good reasons to be sceptical of the idea that supply disruptions are a thing of the past. The gradual retrenchment of globalisation is likely to add to the vulnerability of supply chains (Chart 3). Geopolitical tensions between the US and China are already beginning to exert an influence on higher value add sectors such as semiconductors.

Chart 3: Global trade frictions continue to rise



*Source: Oxford Economics/WTO/Global Trade Alert * Ex UK rollovers*

Furthermore, it is easy to imagine ways that authorities' actions (either intentionally or unintentionally) might generate new supply shocks. For example, China's rapid reopening should improve the immediate growth outlook, but it also raises the prospect of disruptions from the reopening. In addition, hard rationing of gas supplies in Europe would likely lead to unintended consequences for industry and global supply chains, particularly given Germany's exposure to Russian gas. Finally, the EU's price cap on Russia oil exports could reduce global oil supplies even further and lead to unintended consequences for the supply side of the economy.

While we expect tight monetary and fiscal policy to eventually return inflation back to target or even below, lingering supply shocks may mean that the full disinflationary force of policy is not felt until 2024.

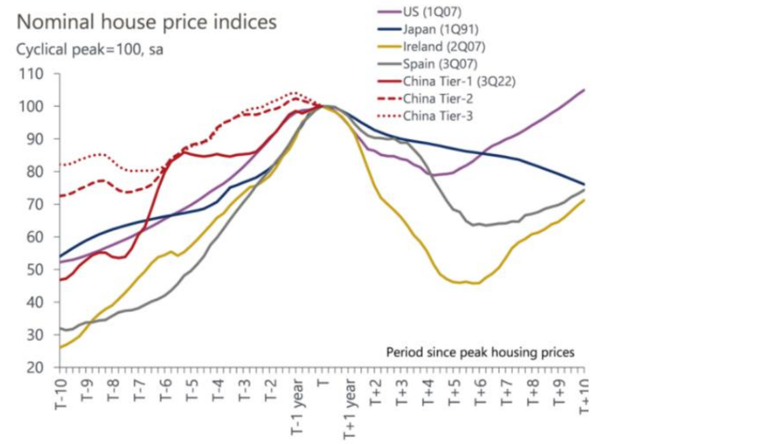
China: Demand of last resort lost, but will the world import inflation?

For the past couple of decades, the global economy has been able to rely on two key supports – the Fed "put" on markets and China as a last resort source of demand. Both are now gone.

Chinese stimulus has successfully offset weakness in advanced economies several times in the past, including in 2009, 2011, and 2016. But since those episodes the effectiveness of Chinese stimulus in financing new investment has declined markedly.

The natural alternative to investment-led growth is a bigger role for the consumer. But this is a long-term structural change that will take years (at a minimum) to deliver growth dividends, assuming it can work. After all, China has been pursuing a more balanced and sustainable way of growing for more than a decade without much success. That task will be made even more difficult while the housing market – an important source of wealth for households – continues to deflate (Chart 4), which was highlighted by the weakness in consumer spending at the end of 2022. We still think that a housing crash is unlikely thanks to government policy, but if past international evidence is anything to go by, it would be a stretch to think that China is going to raise global growth prospects while the housing market is correcting.

Chart 4: China's housing market resembles the great asset bubbles of history

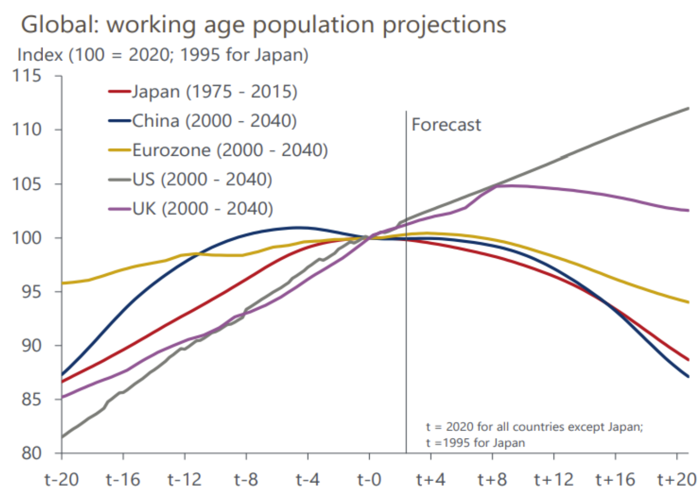


Source: Oxford Economics

Aside from growth, China has also had a significant influence on global inflation through the export of comparatively cheap goods. Many academic studies have found the spill-over effects on inflation in other economies to be significant, ranging from a 0.2%-0.8% reduction in annual inflation. But should we expect China to continue to export deflation over the medium term or turn into an inflationary impulse for the global economy?

Aside from growth, China has also had a significant influence on global inflation through the export of comparatively cheap goods. Many academic studies have found the spill-over effects on inflation in other economies to be significant, ranging from a 0.2%-0.8% reduction in annual inflation. But should we expect China to continue to export deflation over the medium term or turn into an inflationary impulse for the global economy?

Chart 5: China's demographic problem looms large



Source: Oxford Economics/Haver Analytics

In the near term, it seems likely that China will continue to be a deflationary force for the world economy. The near-term reliance on the "old" growth model of export competitiveness, weak currency, investment, and measures to support the housing market imply maintaining the status quo.

In the longer term, if China is to start adding to global inflation, then it will most likely be the result of a successful growth model transition. A greater role for private consumption would imply higher demand for more complex goods imports, thereby raising global input prices.

More generally, a successful growth transition would imply a very sharp increase in productivity to offset a very poor demographic outlook. Our projections for China's working age population show a comparable rate of decline to that of Japan in the lost decade and significantly worse than other key economies (Chart 5). This is a huge obstacle to Chinese growth and to offset it would require a productivity miracle.

If that rise in relative productivity were to occur, it would lead to rises in wages, price levels, and the real exchange rate vis-a-vis the rest of the world. Our baseline forecast sees China struggling to undertake this transformation, meaning that China will remain far from becoming a source of global inflation in the medium term.

Market returns to be met with economic reality

In the past decade, weak economic growth has not been a barrier to stellar market and, in particular, equity returns. But looking ahead, economic realities are likely to provide more of an obstacle over the medium term.

The key difference is the higher discount rate environment. In the past decade, falling rates enabled equity multiple expansion and capital gains for fixed income. But with rates set to remain high, returns should be more closely linked to economic fundamentals. Furthermore, valuations are still not compellingly cheap after adjusting for this new discount rate reality, particularly in the US.

Portfolio rebalancing over the next year is also likely to create a difficult environment for risk assets. Not only will quantitative tightening start to bite via lower levels of bank reserves and liquidity, but higher issuance by governments will raise the supply of safe assets and, at the margin, keep yields relatively high.

One positive for 2023 and beyond is that, although inflation will remain elevated in the near term, it will fall back as the economic cycle worsens. Given that re-emergence of weakly pro-cyclical inflation, we should expect that a negative stock-bond returns correlation will reassert itself further out in that investment horizon. This will prove a welcome respite for investors after one of the worst years in living memory for the traditional 60:40 portfolio.

6 San Diego Forecast Tables (as of January 2023)

Forecast summary: Annual visits

	Year	Day (excl. Mex.)	Mexico Day	Total Day Visitors	Hotel/Motel	Household	Other Overnight	Total Overnight Visitors	Total Visitors
Levels, millions									
	2019	13.0	4.2	17.18	10.19	6.67	1.06	17.91	35.1
	2020	3.8	1.9	5.61	5.02	3.09	0.61	8.72	14.3
	2021	8.4	1.5	9.96	7.67	5.09	1.08	13.84	23.8
	2022	8.9	2.8	11.66	9.39	6.15	1.28	16.81	28.5
	2023	9.6	3.5	13.12	10.23	6.96	1.46	18.64	31.8
	2024	10.0	3.8	13.79	10.65	7.39	1.54	19.57	33.4
	2025	10.7	3.9	14.57	10.86	7.71	1.57	20.13	34.7
Growth									
	2019	-4.1%	-0.9%	-3.3%	-0.5%	-0.6%	0.4%	-0.5%	-1.9%
	2020	-71.1%	-55.5%	-67.3%	-50.7%	-53.7%	-42.3%	-51.3%	-59.2%
	2021	124.2%	-17.1%	77.3%	52.9%	64.9%	77.2%	58.8%	66.1%
	2022	5.5%	80.4%	17.2%	22.3%	20.7%	18.7%	21.4%	19.7%
	2023	8.0%	26.8%	12.5%	9.0%	13.2%	13.7%	10.9%	11.5%
	2024	4.3%	7.4%	5.1%	4.1%	6.2%	5.5%	5.0%	5.0%
	2025	7.0%	2.3%	5.7%	2.0%	4.3%	1.9%	2.9%	4.0%

Source: STR; Tourism Economics

Forecast summary: Quarterly visits

	Quarter	Day (excl. Mex.)	Mexico Day	Total Day Visitors	Hotel/Motel	Household	Other Overnight	Total Overnight Visitors	Total Visitors
Levels									
	2022 Q1	1,304,897	559,727	1,864,624	2,116,139	1,307,390	271,913	3,695,442	5,560,066
	2022 Q2	2,535,949	827,565	3,363,514	2,562,503	1,516,576	334,562	4,413,641	7,777,155
	2022 Q3	3,011,549	801,703	3,813,252	2,506,747	1,744,544	361,475	4,612,766	8,426,018
	2022 Q4	2,025,159	596,759	2,621,918	2,199,974	1,577,161	312,575	4,089,709	6,711,627
	2023 Q1	2,150,305	683,845	2,834,151	2,522,449	1,541,976	348,472	4,412,898	7,247,048
	2023 Q2	2,439,613	859,241	3,298,853	2,523,346	1,733,876	341,015	4,598,237	7,897,091
	2023 Q3	2,796,188	963,538	3,759,726	2,738,930	1,789,402	394,241	4,922,573	8,682,299
	2023 Q4	2,199,483	1,025,604	3,225,087	2,441,621	1,894,179	372,413	4,708,213	7,933,299
Growth									
	2022 Q1	85.9%	56.3%	75.9%	73.5%	159.9%	130.4%	100.7%	91.7%
	2022 Q2	3.4%	111.7%	18.3%	32.0%	31.5%	16.2%	30.5%	24.9%
	2022 Q3	-5.0%	117.9%	7.7%	0.1%	8.0%	11.2%	3.8%	5.5%
	2022 Q4	-2.9%	39.8%	4.4%	9.7%	-13.4%	-10.2%	-2.0%	0.4%
	2023 Q1	64.8%	22.2%	52.0%	19.2%	17.9%	28.2%	19.4%	30.3%
	2023 Q2	-3.8%	3.8%	-1.9%	-1.5%	14.3%	1.9%	4.2%	1.5%
	2023 Q3	-7.2%	20.2%	-1.4%	9.3%	2.6%	9.1%	6.7%	3.0%
	2023 Q4	8.6%	71.9%	23.0%	11.0%	20.1%	19.1%	15.1%	18.2%

Source: STR; Tourism Economics

Forecast summary: Annual expenditures

	Year	Day (excl. Mex.)	Mexico Day	Total Day Spend	Hotel/Motel	Household	Other Overnight	Total Overnight Spend	Total Spend
Levels, millions									
	2019	$819	$252	$1,071	$7,952	$1,545	$1,075	$10,572	$11,643
	2020	$219	$111	$330	$3,454	$727	$652	$4,833	$5,163
	2021	$507	$91	$598	$4,777	$1,042	$1,035	$6,854	$7,452
	2022	$850	$277	$1,127	$9,416	$1,984	$1,199	$12,598	$13,725
	2023	$896	$356	$1,252	$10,224	$2,242	$1,355	$13,821	$15,073
	2024	$931	$388	$1,319	$10,634	$2,381	$1,430	$14,445	$15,763
	2025	$988	$392	$1,380	$10,842	$2,488	$1,456	$14,786	$16,166
Growth									
	2019								
	2020	-73.3%	-55.9%	-69.2%	-56.6%	-52.9%	-39.3%	-54.3%	-55.7%
	2021	131.9%	-18.3%	81.2%	38.3%	43.4%	58.7%	41.8%	44.3%
	2022	67.6%	204.9%	88.4%	97.1%	90.4%	15.9%	83.8%	84.2%
	2023	5.5%	28.5%	11.1%	8.6%	13.1%	13.0%	9.7%	9.8%
	2024	3.8%	9.1%	5.3%	4.0%	6.2%	5.6%	4.5%	4.6%
	2025	6.2%	1.1%	4.7%	2.0%	4.5%	1.8%	2.4%	2.6%

Source: STR; Tourism Economics

Forecast summary: Quarterly expenditures

	Quarter	Day (excl. Mex.)	Mexico Day	Total Day Spend	Hotel/Motel	Household	Other Overnight	Total Overnight Spend	Total Spend
Levels, millions									
	2022 Q1	$98	$24	$122	$1,793	$395	$252	$2,440	$2,562
	2022 Q2	$207	$82	$289	$2,510	$481	$322	$3,314	$3,603
	2022 Q3	$359	$103	$462	$2,815	$644	$384	$3,843	$4,305
	2022 Q4	$185	$68	$254	$2,297	$464	$240	$3,001	$3,255
	2023 Q1	$161	$29	$190	$2,132	$470	$323	$2,925	$3,115
	2023 Q2	$200	$85	$285	$2,472	$548	$329	$3,350	$3,634
	2023 Q3	$334	$124	$457	$3,071	$667	$417	$4,156	$4,613
	2023 Q4	$201	$118	$320	$2,548	$557	$285	$3,390	$3,710
Growth									
	2022 Q1	185.7%	38.5%	136.7%	159.6%	491.1%	146.5%	183.8%	181.2%
	2022 Q2	58.1%	250.9%	87.2%	117.2%	123.1%	37.3%	106.3%	104.6%
	2022 Q3	63.3%	341.8%	89.9%	100.9%	69.7%	16.7%	82.2%	83.0%
	2022 Q4	52.3%	152.7%	70.6%	50.1%	22.0%	-34.8%	31.7%	34.1%
	2023 Q1	64.8%	22.2%	56.5%	18.9%	18.9%	28.0%	19.9%	21.6%
	2023 Q2	-3.6%	3.6%	-1.5%	-1.5%	14.0%	2.1%	1.1%	0.9%
	2023 Q3	-7.2%	20.2%	-1.1%	9.1%	3.7%	8.7%	8.1%	7.2%
	2023 Q4	8.8%	72.9%	26.1%	10.9%	20.0%	18.7%	13.0%	14.0%

Source: STR; Tourism Economics

Forecast summary: Annual hotel sector

		Hotel supply	Hotel room demand	Occupancy	ADR	RevPAR	Room revenue	Total supply
Levels								
	2019	23,639,525	18,093,775	76.5%	166.37	127.34	3,010,291,985	23,651,436
	2020	21,835,091	10,612,329	48.6%	130.50	63.42	1,384,876,799	23,808,154
	2021	23,391,454	14,427,154	61.7%	164.99	101.76	2,380,327,654	23,822,490
	2022	23,446,083	17,022,295	72.6%	203.50	147.75	3,464,083,434	23,709,121
	2023	23,651,676	17,519,745	74.1%	200.06	148.19	3,505,016,161	23,758,405
	2024	23,784,777	18,362,822	77.2%	207.95	160.55	3,818,581,698	23,880,298
	2025	24,336,563	18,860,558	77.5%	214.81	166.48	4,051,496,334	24,434,300
Growth								
	2019	2.1%	-0.5%	-2.5%	0.3%	-2.2%	-0.2%	1.9%
	2020	-7.6%	-41.3%	-36.5%	-21.6%	-50.2%	-54.0%	0.7%
	2021	7.1%	35.9%	26.9%	26.4%	60.4%	71.9%	0.1%
	2022	0.2%	18.0%	17.7%	23.3%	45.2%	45.5%	-0.5%
	2023	0.9%	2.9%	2.0%	-1.7%	0.3%	1.2%	0.2%
	2024	0.6%	4.8%	4.2%	3.9%	8.3%	8.9%	0.5%
	2024	2.3%	2.7%	0.4%	3.3%	3.7%	6.1%	2.3%

Source: STR; Tourism Economics

Forecast summary: Quarterly hotel sector

	Quarter	Hotel supply	Hotel room demand	Occupancy	ADR	RevPAR	Room revenue	Total supply
Levels								
	2022 Q1	5,778,665	3,767,359	65.2%	169.64	110.59	639,077,477	5,856,122
	2022 Q2	5,845,693	4,563,907	78.1%	208.41	162.71	951,144,094	5,907,301
	2022 Q3	5,911,203	4,714,834	79.8%	235.69	187.99	1,111,218,456	5,968,139
	2022 Q4	5,910,522	3,976,195	67.3%	191.80	129.03	762,643,407	5,977,559
	2023 Q1	5,813,899	4,082,385	70.2%	188.59	132.42	769,891,101	5,848,990
	2023 Q2	5,899,950	4,502,178	76.3%	205.59	156.88	925,592,049	5,923,645
	2023 Q3	5,968,450	4,832,737	81.0%	223.24	180.76	1,078,872,731	5,992,420
	2023 Q4	5,969,377	4,102,444	68.7%	178.10	122.40	730,660,279	5,993,350
Growth								
	2022 Q1	1.5%	50.4%	48.2%	51.9%	125.1%	128.4%	0.0%
	2022 Q2	-0.3%	19.1%	19.4%	32.5%	58.1%	57.7%	-0.7%
	2022 Q3	-0.4%	8.9%	9.3%	16.7%	27.6%	27.0%	-0.9%
	2022 Q4	0.2%	5.8%	5.6%	15.7%	22.2%	22.5%	-0.4%
	2023 Q1	0.6%	8.4%	7.7%	11.2%	19.7%	20.5%	-0.1%
	2023 Q2	0.9%	-1.4%	-2.3%	-1.4%	-3.6%	-2.7%	0.3%
	2023 Q3	1.0%	2.5%	1.5%	-5.3%	-3.8%	-2.9%	0.4%
	2023 Q4	1.0%	3.2%	2.2%	-7.1%	-5.1%	-4.2%	0.3%

Source: STR; Tourism Economics

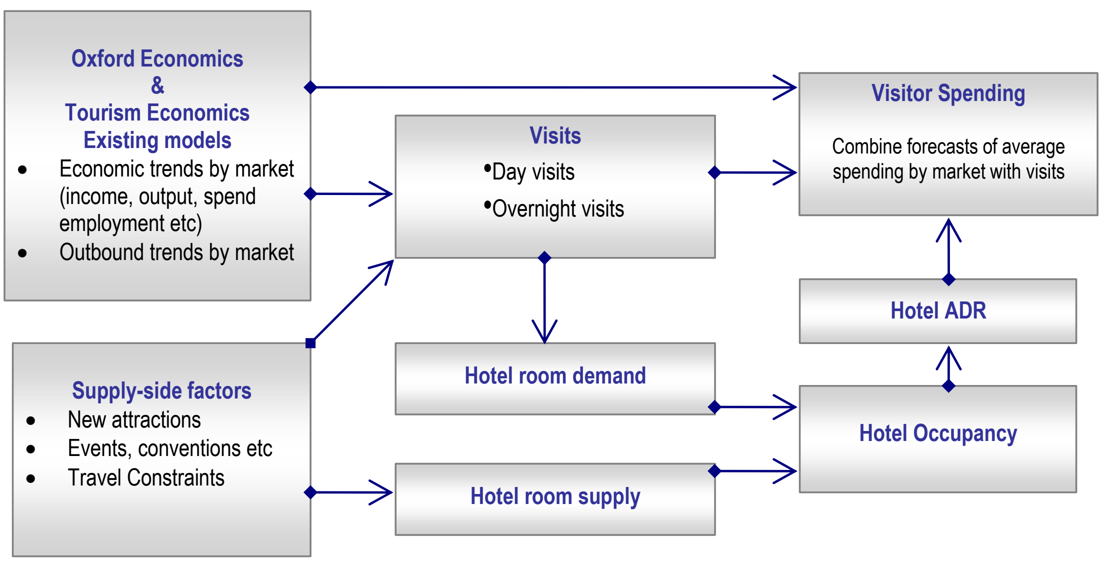
7 Forecast Methodology Overview

Forecasts reported in this document represent the baseline outlook with a business as usual marketing effort. This does not take any specific marketing programs directed at key markets into account.

The forecasts are primarily based upon expected economic developments in key origin markets as well as anticipated costs. Previous tourism trends relative to economic demand and travel conditions have been tracked and relationships have been quantified. Estimated relationships are applied to the economic and broader tourism forecasts.

Forecasts do account for the impact of important events which would influence visits and/or spend, such as air service restrictions and special events in San Diego such as hosting the Superbowl or US Open.

Summary of Main Model Relationships



- **Overnight Visitors**. Trends in overnight visits have been identified and are forecast separately for stays in hotels and in private households. Forecasts account for different trends according to purpose of visit (business and leisure) as well as by origin market. Economic developments in key origin markets at the city, state, national and international level are included.
- **Day Visitors**. Travel patterns from nearby drive markets tend to differ from those from longer-haul markets. For day visitors the impact of economic developments in key origin markets and tourism costs (such as hotel room rates) differs from the impact on overnight visits. Mexican visitors represent a significant proportion of day visitors to San Diego and trends have been separately identified. For non-Mexican day visitors, business and leisure trends

have again been separately identified taking developments in origin markets into account.

- **Visitor Days**. Visitor days spent in San Diego are calculated from the number of overnight visits multiplied by average length of stay, plus day visits. Differences in the average length of visit according to origin markets are taken into consideration as well as any impact of economic developments.
- **Visitor Spending**. Average spending per day is calculated for different market segments and applied to visitor days. This takes tourism-related price inflation in both San Diego into account (such as hotel room rates), as well as spending patterns according to origin market and the impact of more general tourism costs (such as airfares and fuel costs).
- **Hotel Rooms sold**. Hotel room demand largely follows the trend in overnight visitor days. The impact of local demand on rooms is also accounted for as locals tend to use more rooms in economic downturns as a replacement for longer-haul travel.
- **Hotel Rooms supply**. Supply is calculated as the current stock of hotel rooms plus planned and current hotel construction. Probabilities are applied to the current timetable of projects underway to determine when new capacity will be available. It is assumed that almost all hotels under construction are completed, while a smaller proportion of those in the planning stage are completed according to plan.
- **Hotel Occupancy**. Occupancy is simply determined as the ratio of room demand to supply in terms of room nights.
- **Hotel Average Daily Rate (ADR)**. The cycle in daily rates follows occupancy closely, with a slight lag. Over time, more general price inflation also needs to be taken into consideration and price developments in San Diego as well as in origin markets are important factors.

8 San Diego Hotel Project Pipeline

San Diego County Potential New Supply Developments

Updated December 2022

Source: STR, Inc.

Property Name	Street Address	City	Zipcode	Potential Open Date	Number of Rooms	Potentiality Rating*
AC Hotel (Autograph Collection by Marriott)	743 Fifth Avenue	San Diego	92101	Jan-23	147	5
				2023 Total	**147**	
SpringHill Suites Chula Vista	870 Showroom Place	Chula Vista	91914	Mar-24	179	5
Tempo by Hilton San Diego Del Mar	3510 Valley Centre Drive	San Diego	92130	Apr-24	127	4
Home2 Suites Oceanside	NWC of Rancho Del Oro & El Corazon Blvd	Oceanside	92056	May-24	136	4
Hilton Garden Inn Vista Carlsbad East	SWQ Melrose Dr & Faraday Ave	Vista	92081	Sep-24	128	3
Homewood Suites by Hilton San Diego Downtown	801 Broadway	San Diego	92101	Oct-24	126	3
Tempo by Hilton San Diego Downtown City Center	801 Broadway	San Diego	92101	Oct-24	166	4
element San Diego Mission Valley	8757 Rio San Diego Drive	San Diego	92108	Dec-24	150	4
WoodSpring Suites Santee	8667 Mission Gorge Road	Santee	92071	Dec-24	122	3
La Quinta Inn & Suites San Diego Gaslamp	923 Island Avenue	San Diego	92101	Dec-24	91	3
Fairfield Inn & Suites Oceanside/Downtown	SWQ Oceanside Boulevard and Vine Street	Oceanside	92054	Dec-24	99	4
				2024 Total	**2,359**	
element San Diego Rancho Bernardo	SEQ I-15 & Scripps Highland Drive	San Diego	92131	Jan-25	135	4
SpringHill Suites San Diego Del Mar	3501 Valley Centre Dr	San Diego	92130	Mar-25	112	4
element Chula Vista	1445 Suwerte Ave	Chula Vista	91910	Mar-25	156	3
Home2 Suites by Hilton San Diego Downtown	1357 Fifth Avenue	San Diego	92101	Apr-25	134	4
Tru by Hilton San Diego Downtown	1357 Fifth Avenue	San Diego	92101	Apr-25	133	3
Wyndham Garden Oceanside	375 Airport Road	Oceanside	92058	Jun-25	86	3
Fairfield Inn & Suites El Cajon	1274 Oakdale Ave	El Cajon	92021	Jun-25	111	3
Gaylord Resort & Convention Center Chula Vista	520 Marina Parkway	Chula Vista	91910	Jul-25	1,600	5
Home2 Suites San Marcos	SWQ Montiel Road	San Marcos	92069	Jul-25	107	3
EVEN Hotels San Diego	W A St & State St	San Diego	92101	Sep-25	145	3
Staybridge Suites San Diego	W A St & State St	San Diego	92101	Sep-25	145	3
				2025 Total	**2,864**	
Embassy Suites by Hilton Oceanside	Jefferson Street	Oceanside	92054	Jan-26	179	3
Homewood Suites by Hilton Oceanside	SEQ S.R. 78 Jefferson Way	Oceanside	92054	Jan-26	112	3
Residence Inn Oceanside/Downtown	1103 N Coast Hwy	Oceanside	92054	Jan-26	125	3
Fairmont One Broadway Plaza & Hotel	937 N Harbor Dr	San Diego	92101	Jan-26	1,168	4
Hampton Inn San Diego State University	6650 Montezuma Rd	San Diego	92115	Apr-26	125	3
Hampton Inn Oceanside	SWQ S.R. 78 Jefferson Way	Oceanside	92054	May-26	135	3
Hampton Inn & Suites San Diego Gaslamp	502-538 Seventh Avenue	San Diego	92101	Aug-26	132	3
AC Hotels San Diego Airport/Point Loma	1325 Scott Street	San Diego	92106	Oct-26	95	3
Home2 Suites by Hilton Santee	NEQ Mission Gorge Rd & Cuyamaca St	Santee	92071	Nov-26	92	3
				2026 Total	**2,163**	

***Potential Hotels Rating Scale:** (5) Hotel is under construction. (4) Project is under contract and construction will begin in the next 12 months. (3) Project is confirmed and expected to begin construction in 13+ months. (2) Project is unconfirmed with no discernible timeline. (1) Conceptual idea only.

PHILADELPHIA
303 Lancaster Avenue, Suite 1b
Wayne PA 19087, USA
Tel: +1 610 995 9600

OXFORD
Abbey House, 121 St Aldates
Oxford, OX1 1HB, UK
Tel: +44 1865 268900

LONDON
Broadwall House, 21 Broadwall
London, SE1 9PL, UK
Tel: +44 207 803 1400

BELFAST
Lagan House, Sackville Street
Lisburn, BT27 4AB, UK
Tel: +44 28 9266 0669

NEW YORK
817 Broadway, 10th Floor
New York, NY 10003, USA
Tel: +1 646 786 1863

SINGAPORE
No.1 North Bridge Road
High Street Centre #22-07
Singapore 179094
Tel: +65 6338 1235

PARIS
9 rue Huysmans
75006 Paris, France
Tel: + 33 6 79 900 846

email: info@tourismeconomics.com

www.tourismeconomics.com

TOURISM ECONOMICS
AN OXFORD ECONOMICS COMPANY