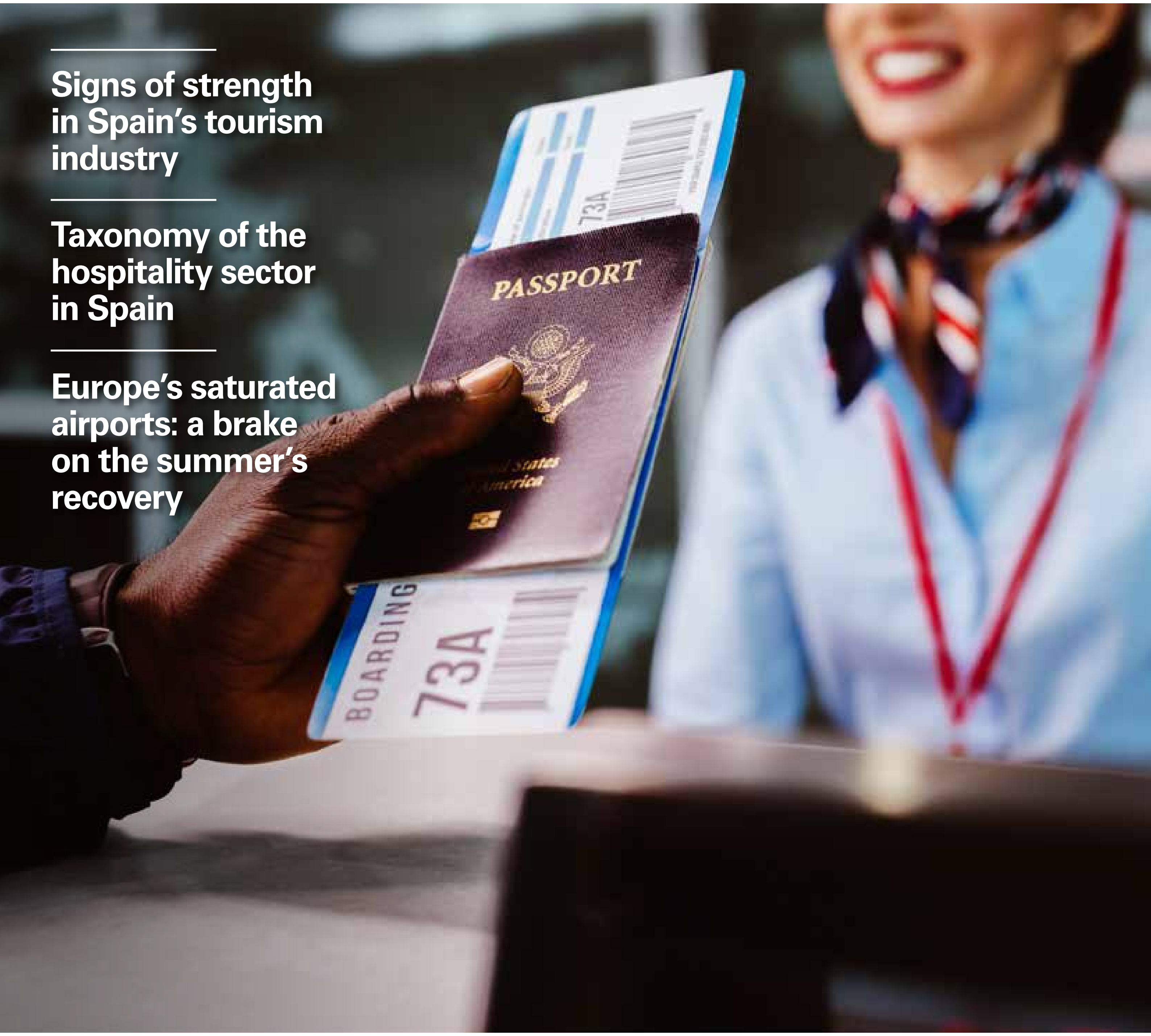
Tourism

Sector Report

2/2022

Spain's tourism sector, in an advantageous position



Signs of strength in Spain's tourism industry

Taxonomy of the hospitality sector in Spain

Europe's saturated airports: a brake on the summer's recovery

CaixaBank Research

SECTOR REPORT
Tourism Second Semester 2022

The *Sector Report* is a publication produced by CaixaBank Research

CaixaBank Research
Enric Fernández Chief Economist
José Ramón Díez Head of International Economies and Financial Markets
Oriol Aspachs Head of Spanish Economy
Sandra Jódar Head of Strategic Planning
Javier Ibáñez de Aldecoa Coordinator of the *Tourism Sector Report*
Date this issue was closed: 22 November 2022

Summary 2/2022

02 SIGNS OF STRENGTH IN SPAIN'S TOURISM INDUSTRY

Tourism ended this year's summer season in great shape. Nevertheless, we believe that demand still has significant levers of growth for the coming year and therefore expect the industry to complete its recovery in 2023.

10 TAXONOMY OF THE HOSPITALITY SECTOR IN SPAIN

CaixaBank's internal data reveal major differences within the sector, with one part much improved compared with 2019 while the other is still lagging behind.

16 EUROPE'S SATURATED AIRPORTS: A BRAKE ON THE SUMMER'S RECOVERY

Air travel's rapid recovery during the summer months caught the industry without enough manpower to cope with the growth in passengers.

«We don't travel to run away from our lives but to ensure our lives don't run away from us»

ANONYMOUS

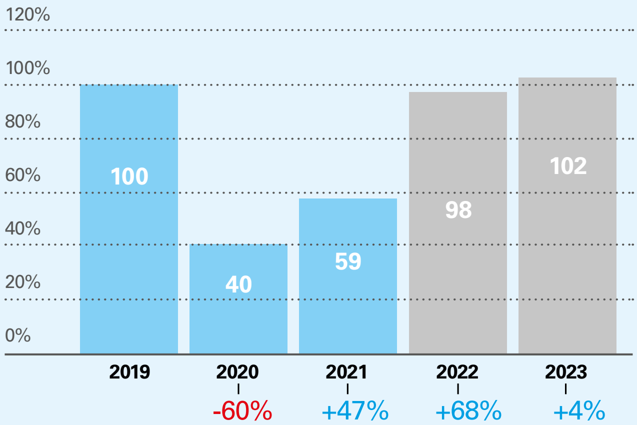
Tourism

CAIXABANK RESEARCH PROJECTIONS FOR SPAIN'S TOURISM INDUSTRY

CaixaBank Research

TOURISM-RELATED GDP

Index (100 = 2019)



A positive outlook for 2023

Recovery in Europe's air travel: the episode of airport saturation will be overcome.

Recovery in long-haul tourism: considerable growth potential for tourism from the US and Asia.

Negative economic context: high inflation and loss of purchasing power.

RECOVERY IN THE HOSPITALITY SECTOR

CaixaBank internal data indicate an uneven recovery from the pandemic's impact

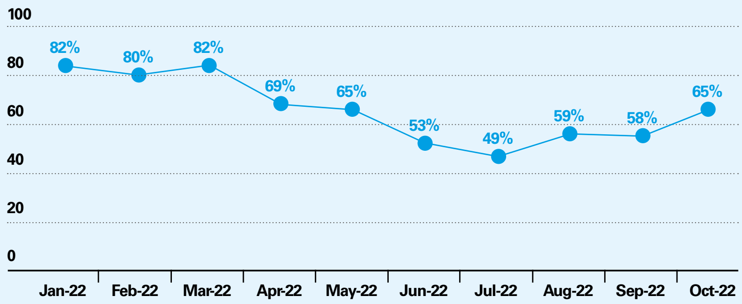
	2020	2021	2022	
% of businesses posting a drop in turnover	71%	38%	26%	A high proportion of **hospitality businesses** are still experiencing difficulties.
Change in median POS turnover vs. 2019	-22%	17%	47%	Strong **growth in POS turnover** across a large part of the hospitality sector, thanks to the recovery in travel.

Source: CaixaBank Research, based on CaixaBank's internal data.

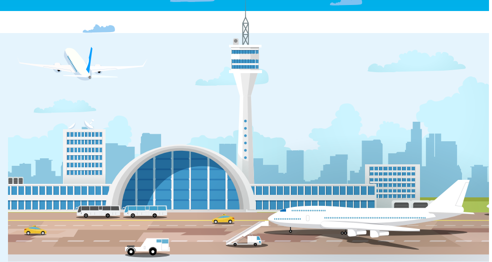
SATURATED AIRPORTS IN SUMMER

The rapid recovery in air travel led to severe air transport saturation in Europe due to staff shortages

% of departures with no delays at northern European airports



Source: CaixaBank Research, based on data from Eurocontrol.



- 45% of flights operated in northern Europe were delayed.
- Germany, the United Kingdom, the Netherlands and France were the most affected countries.
- By 2023, the problems experienced this summer are expected to be completely resolved and this is likely to become a lever for growth.

Executive summary

The tourism industry, in an advantageous position

Tourism ended this year's summer season in great shape with international tourist arrivals coming very close to the records set in 2019, a year that was extremely positive for the industry. Domestic tourism has also continued to post very good figures. However, **the macroeconomic scenario represents a risk for the trend in tourism activity over the coming quarters**. Widespread high inflation is leading to a loss of purchasing power for European consumers, while high energy prices and tougher macro-financial conditions are putting pressure on much of the EU's businesses.

Nevertheless, our analysis of the tourism industry's situation leads us to predict a relatively positive outlook for 2023. The sector is starting from an advantageous position due to its low exposure to energy costs (only 3% of its income is used to cover them). Prices have also been raised in 2022 in response to the strong demand, enabling businesses to defend their margins and prepare themselves for increasingly higher costs in 2023. On the other hand, tourism demand is resilient and still has some room for growth compared with the volumes posted in 2022. For all these reasons, **our 2023 forecast predicts growth in tourism business. Specifically, we expect tourism GDP to go 2.3% higher than its level in 2019**, after closing 2022 at 1.8% below.

This report also contains **an analysis of the hospitality sector using CaixaBank's internal data**. According to official figures, hospitality turnover has picked up strongly during 2022. However, the aggregate numbers could be hiding what is really going on in some areas of the hospitality sector, which tends to be extremely diverse. Thanks to the sample of hospitality businesses with a CaixaBank POS terminal, we have been able to assess the sector's speed of recovery in 2022, quantifying the proportion of businesses that continue to encounter difficulties and determining what characterises them. We have also been able to confirm that the vast majority of the hospitality sector has seen a very positive trend this year.

Lastly, **we also pay particular attention to understanding the episode of air transport saturation experienced at northern European airports** during the summer months. In light of our analysis, we estimate that the recovery in EU tourist arrivals was limited last summer, particular in the case of British, German and Dutch tourists. However, we expect the factors causing this saturation to adjust by 2023, providing an additional lever for growth in Spain's tourism industry.

Situation and outlook

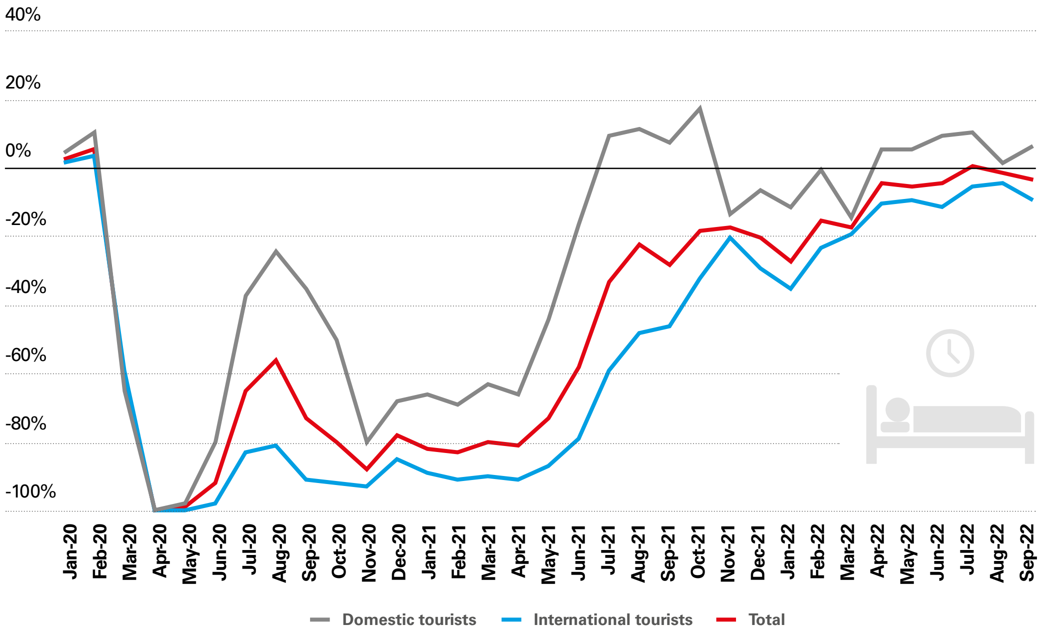
Signs of strength in Spain's tourism industry

Tourism ended this year's summer season in great shape with international tourist arrivals coming very close to the records set in 2019, a year that was extremely positive for the industry. Domestic tourism has also continued to post very good figures. However, the macroeconomic scenario represents a risk for the trend in tourism activity over the coming quarters due to high inflation and the economic slowdown in Europe. Nevertheless, we believe that tourism demand still enjoys significant levers for growth in the coming year and we therefore expect the sector to complete its recovery in 2023.

The situation in the tourism industry has altered dramatically. After an extremely difficult 2020 and a 2021 in which the recovery was far from satisfactory, 2022 has categorically confirmed that the sector continues to be a driver of growth for the Spanish economy. Official business indicators published by Spain's National Statistics Institute (INE) point to the fact that, this summer, real tourism demand (without the price effect) was very close to the figure recorded in the same period of 2019. Total overnight stays in hotel and non-hotel accommodation during the months of July, August and September were just 1.3% below those of summer 2019. These good figures were further cemented by dynamic domestic tourism, whose volume of overnight stays was 6.6% higher than in 2019. However, this figure was slightly down on the one posted in the summer of 2021, probably due to an increase in trips abroad thanks to the recovery in international travel. For its part, international tourism performed much better than in 2021, reaching a level of overnight stays just 5.9% lower than in 2019.

Tourist overnight stays

Change compared with the same month in 2019



Note: Tourist overnight stays in hotels, rural tourist accommodation, tourist apartments and campsites.
Source: CaixaBank Research, based on data from the National Statistics Institute.

An unmitigated recovery in international demand

If we look at which countries lie behind this strong recovery in international tourist arrivals in recent months, we can see some interesting trends. Based on passenger data for flights operated in Spain (see the table below), we note that improvements in tourist arrivals from the EU have been key. The figures are still 9% below those of 2019 (coming from –42% in 2021), mainly due to the saturation problems experienced at northern European airports.[1] The impact of this saturation can be seen most clearly in UK passenger arrivals which, in the summer, were 14% below those of the same period in 2019. The situation appeared somewhat similar for arrivals from Germany, with numbers still 15% lower, but this was not the case for arrivals from countries with less saturation, such as France and Portugal. It should be noted that the sharp drop in the number of passengers from countries under the «Rest of Europe» heading since Q2 2022 reflect the cutting of air connections with Russia since the start of the war in Ukraine, although this decline is not noticeable in the overall figure due to its small relative weight.

On the other hand, 2022 has also been a turning point for long-haul tourism. After the extremely low number of arrivals in 2021, the most recent figures for 2022 are highly positive for tourism from the Americas, and particularly from Latin America. We therefore anticipate that, looking ahead to 2023, the recovery in non-European international arrivals will be one of the key levers of growth. This will also mean the return of the emerging markets prior to the pandemic, which were the ones offering the greatest growth potential for some Spanish tourist destinations.

1 **See the article «Europe's saturated airports: a brake on the summer's recovery», in this *Sector Report*.**

Tourism

Passenger arrivals on flights to Spain by airport of origin

Change compared with the same period in 2019

	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Jul-22	Aug-22	Sep-22
Total	-84%	-75%	-42%	-28%	-28%	-11%	-8%	-7%	-8%
Domestic	-74%	-56%	-16%	-19%	-22%	-4%	2%	6%	1%
International	-90%	-83%	-52%	-33%	-32%	-14%	-12%	-13%	-12%
EU	-90%	-76%	-41%	-25%	-30%	-10%	-8%	-9%	-9%
UK	-98%	-97%	-70%	-45%	-38%	-16%	-13%	-15%	-13%
Rest of Europe	-87%	-87%	-76%	-47%	-43%	-62%	-69%	-69%	-66%
North America	-97%	-92%	-75%	-63%	-41%	-23%	-16%	-23%	-21%
LatAm	-79%	-77%	-58%	-36%	-9%	3%	-1%	-1%	-2%

Source: CaixaBank Research, based on data from AENA.

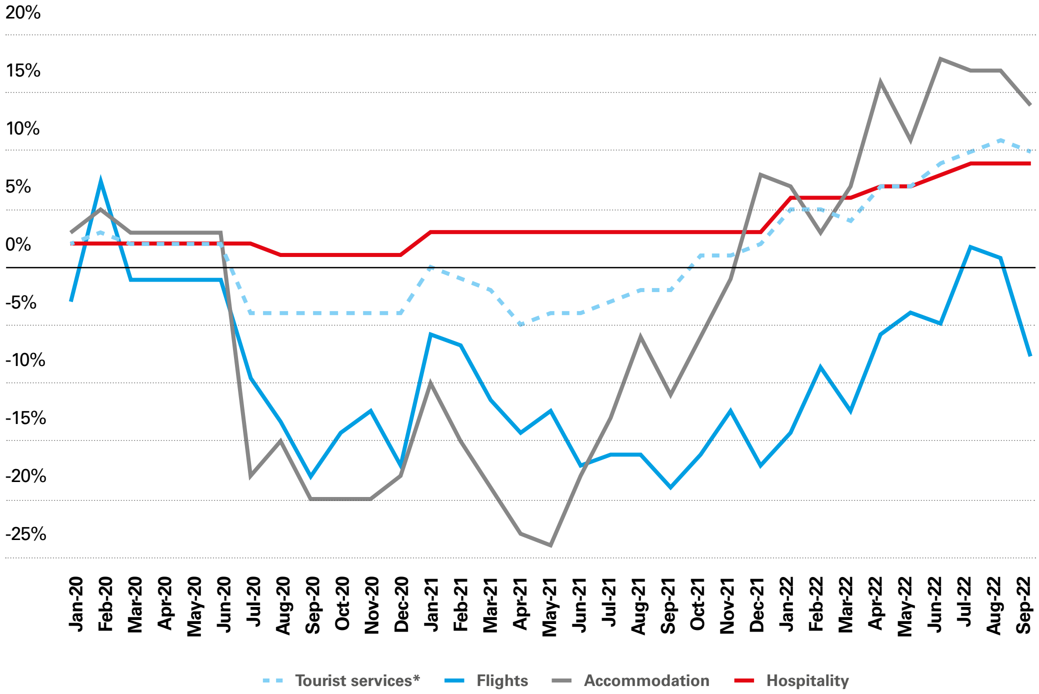
Sharp increases in tourism prices

This good performance by tourism demand is surprising because of two factors: it has been achieved in an environment of sharp price rises and also a loss of purchasing power among consumers throughout the EU. **Tourism prices were no exception, reaching record highs during the last summer season**. Consequently, for the time being it seems that the tourism sector has been able to raise its prices without too much impact on demand.

Although tourism prices have responded to the rise in production costs, according to our analysis **the increase seen in prices has been mainly due to the strong recovery in international demand** which, together with domestic demand, filled the market in many Spanish tourist destinations. This has been the case in the hotel sector, achieving occupancy rates above 80% in a third of the more than 100 tourist municipalities analysed by Spain's National Statistics Institute in its hotel occupancy survey. CPI accommodation prices were more than 17% higher than those recorded in summer 2019 and this situation can also be seen in other prices related to tourism, such as hospitality and air travel, as shown in the chart below.

Trend in tourism-related prices of the CPI

Change compared with 2019



Note: (*) Weighted average of the 13 CPI subclasses related to tourism services.
Source: CaixaBank Research, based on data from the National Statistics Institute.

The short-term outlook remains positive

Looking ahead to the next few months, the indicators for interest in travelling to Spain we produce based on Google search results have remained dynamic, albeit somewhat less «euphoric» for European tourism. The interest indicator places searches from the United Kingdom and EU within the benchmark range,[2] which is very good news given the economic situation in Europe, especially in the United Kingdom with sharp increases in inflation and an economic slowdown, in addition to the depreciation of the pound for British tourists. Given this situation, one would expect a decline in interest in travel from European countries, something which is not being observed, however.

Also noteworthy is the fact that **interest in travelling to Spain seems to have returned to normal in the US market since March** and, more recently, **the interest of Japanese tourists appears to be picking up**, after remaining at very depressed levels until last June. This is highly relevant since it suggests that two of the most important outbound markets (USA and Canada, Japan and Korea) that generated the most growth in the tourism sector before the pandemic, in the absence of the Chinese market, might recover throughout the course of 2023.

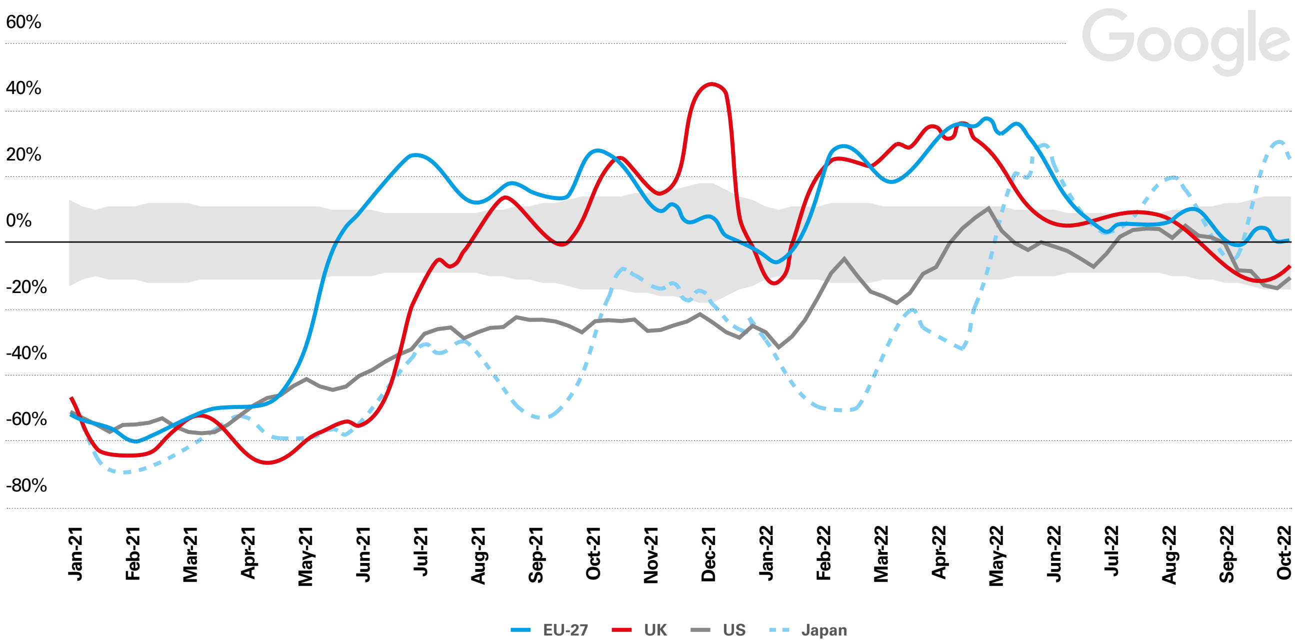
(2) The benchmark range is constructed from searches recorded between 2017 and 2019.

> **The data point to recovery throughout the course of 2023 in two of the fastest growing pre-pandemic outbound markets (USA and Canada, Japan and Korea)**

Tourism

Weekly searches in Google for trips to Spain

Change compared with the benchmark



Notes: Data have been used from searches using the word «Spain» in the UK, Germany, France, Italy, Netherlands, US and Japan in each country's official language within the category of travel. Expected searches consist of the projected searches carried out based on data from one year previously, using an ARIMA model $(1, 1, 1)_{52}$. The shaded area reflects a 68% confidence interval (α = 1).
Source: CaixaBank Research, based on data from Google Trends.

CaixaBank Research projections for the tourism industry in Spain

The current scenario is difficult to interpret: It looks very positive judging by the recent trend in all indicators, both official and internal and also high-frequency, but negative due to the macroeconomic outlook of the outbound countries. Nevertheless, our forecast for 2023 remains positive, supported by the levers for growth we continue to see for the sector and tourism demand's limited exposure to the macroeconomy.

1. Improved air travel in northern Europe: tourist arrivals from northern Europe were trapped by a growth ceiling due to airport saturation in the summer (the figures for the United Kingdom and Germany, for instance, are about 20% below their pre-COVID air travel level). This situation should adjust in the coming quarters and could lead to a considerable improvement in international travel by European tourists.[3]

2. High potential and great room for improvement in long-haul tourism: indicators point to the improving trend in long-haul tourism continuing over next few quarters. The room for improvement is still significant, with US tourist arrivals 20% below their pre-COVID levels and Korean and Japanese tourist arrivals more than 70% below

3. Low exposure to the macroeconomy: according to the sensitivity analysis we carried out in order to understand how declines in economic activity in outbound markets correlate with declines in tourism demand for Spain, we estimate that the tourism sector has only limited exposure to the economic slowdown in Europe. Specifically, we estimate that the drop in economic activity in the United Kingdom (GDP is

3 See the article «Europe's saturated airports: a brake on the summer's recovery», in this *Sector Report*.

expected to fall by 1.3% in 2023) will impact annual growth in British overnight stays by –2.9 percentage points. For Germany (GDP is expected to fall by 0.2% in 2023), we estimate an impact of –2.2 percentage points of growth in overnight stays.[4] These impacts, which are certainly appreciable, are nevertheless relatively small compared with the margin for growth enjoyed by both the United Kingdom and Germany thanks to the improvement in airport saturation.

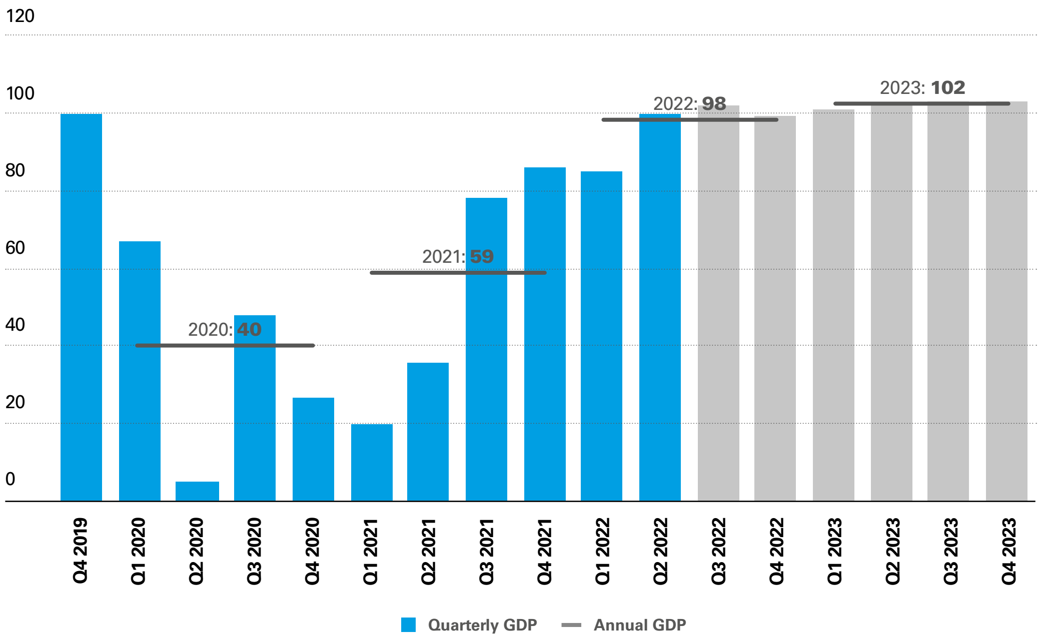
Taking all this into account, **our tourism GDP forecast for 2022 stands at 98% of its 2019 level**; i.e. just 2% below its pre-COVID level and 66% above the figure for 2021. It should be noted that we expect the sector's dynamism to be somewhat weaker in Q4 this year as the economic difficulties faced by the EU are felt, albeit to a limited extent. However, we expect tourism activity to pick up strongly from Q2 2023 onwards, as well as some improvement in the economic tone of the EU, so **we have placed our tourism GDP forecast 2% above the 2019 level of activity for the whole of next year.**

Our tourism GDP forecast for 2022 is just 2% below its pre-COVID level and 66% above the figure for 2021

4 For each outbound country, we have estimated the linear sensitivity of the growth rate in hotel overnight stays to the year-on-year growth in that country's GDP. To calculate the impact of our macroeconomic scenario on growth in tourism demand, we use the difference between our most recent growth forecast for each country and that of our counterfactual scenario (we have used our February 2022 scenario, prepared before the outbreak of the war in Ukraine).

Tourism

Tourism GPD
Index (100 = 2019)



Note: Forecasts in grey as from Q3 2022.
Source: CaixaBank Research, based on data from the National Statistics Institute.

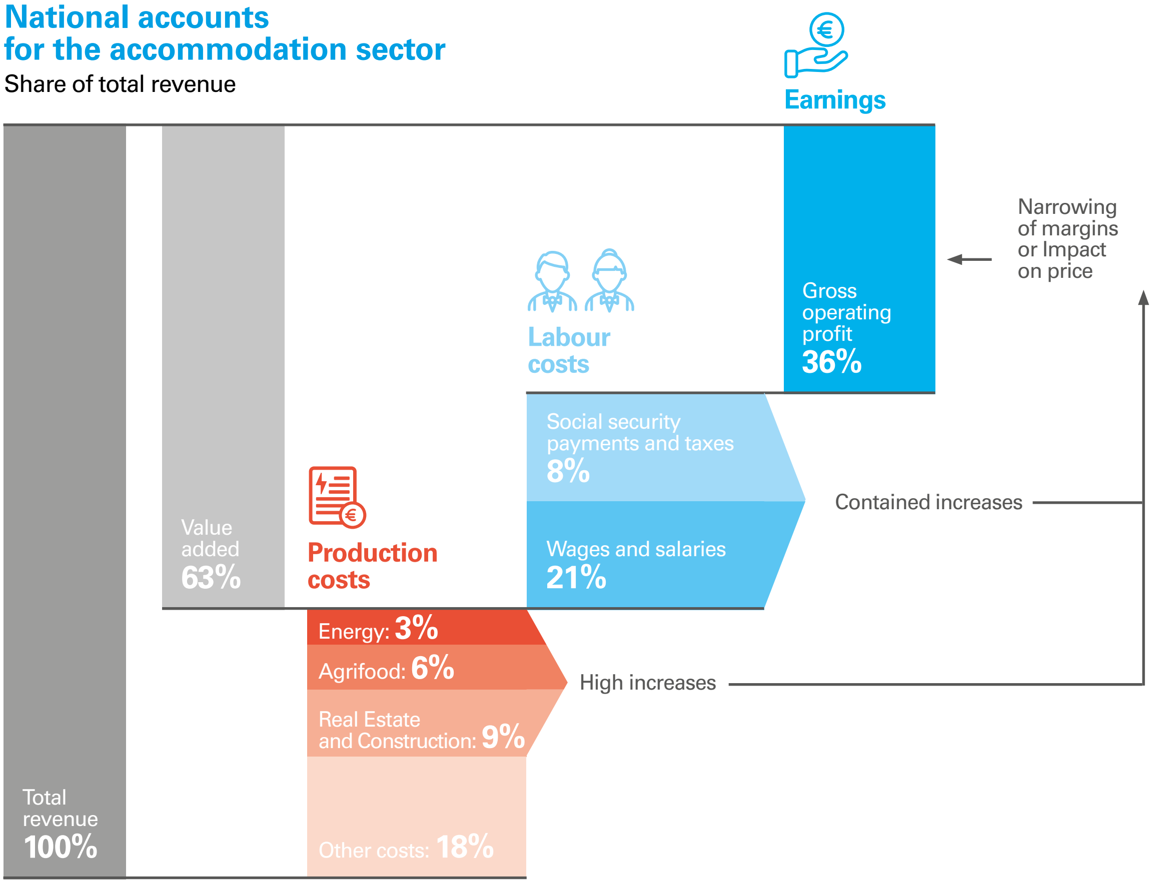
Although the outlook is positive, we can only repeat the mantra that we are currently going through a time of great economic uncertainty. In the case of the tourism sector, **the main source of uncertainty is related to costs**, so managers of tourism firms will have to be vigilant in order to tackle any possible deviation from what has been budgeted for 2023. For the time being, the upturn in costs in 2022 is being handled without any major tensions in the sector as a whole, thanks to the significant increases in tourism prices we have seen. This has been very effective in combating the rising energy costs (which have more than doubled compared with the previous year), the cost of agrifood products (whose prices rose by 12% year-on-year in September) and renovation costs (with construction materials 16% more expensive than a year ago at the end of July).

Looking ahead to 2023, we expect production costs to remain high and, in some cases, to continue rising. There is also the potential impact from wage increases which, although they are expected to be contained, are the main cost for tourism businesses (on average, companies in the sector spend 21% of their revenue on wages), as can be seen in the next chart. As a result, if the sector wants to go on defending its margins, it will be forced to continue to raise prices.

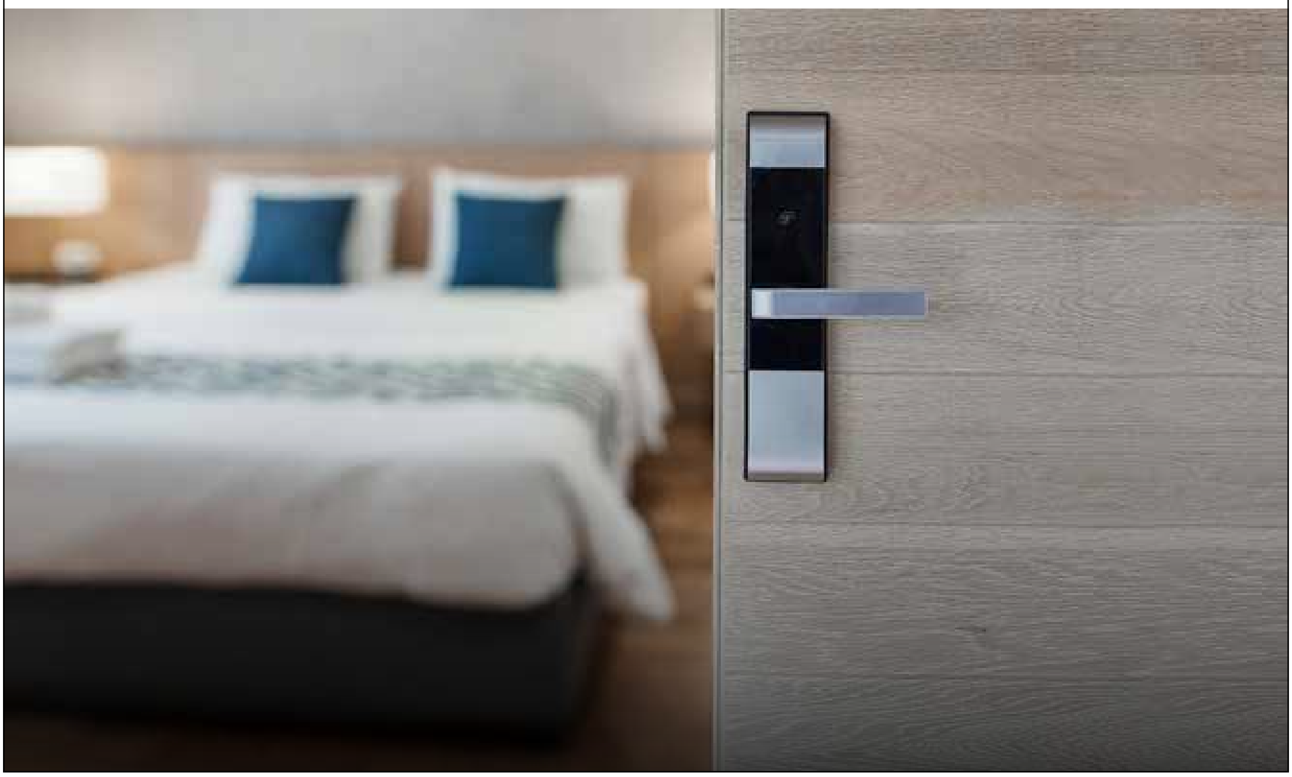
The upturn in costs in 2022 is being handled without any major tensions in the sector as a whole, thanks to the significant increases in tourism prices we have seen

National accounts for the accommodation sector

Share of total revenue



Note: Data from 2018.
Source: CaixaBank Research, based on data from the National Statistics Institute.



Hospitality

Taxonomy of the hospitality sector in Spain

The hospitality sector was among those hardest hit by the consequences of the pandemic as it was at the epicentre of the social distancing measures used to contain the spread of COVID-19. Although official indicators point to the sector's clear recovery in 2022, this has not been across the board. An analysis of CaixaBank's internal data reveals the great differences that exist within the sector, with one part that has greatly improved its situation compared with 2019 and another, non-too negligible part that is still encountering difficulties.

The consequences of the pandemic have been palpable in the hospitality sector over the past two years, this being one of the sectors hardest hit by the social distancing measures imposed to control the spread of COVID-19. Nevertheless, the data from 2022 already suggest a paradigm shift is occurring for the sector, which seems to have embarked on a decidedly positive trend. The turnover indicator produced by Spain's National Statistics Institute, for 2022 up to August, points to the food and beverage services sector (CNAE 56) being just 4.1% below its level in the same period in 2019, a considerable improvement on the 27% reduction posted in 2021. However, the hospitality sector is considerably diverse and we can therefore assume that its recovery has also been highly heterogeneous.

What do big data tell us about Spain's hospitality sector?

We have used CaixaBank's internal data to analyse the sector and understand its heterogeneous nature, specifically the data provided by hospitality businesses that use CaixaBank POS terminals for payments, from which we can extract highly valuable information to evaluate the hospitality sector. A simple exploration of the data (see the table below) reveals appreciable differences between the three different types of establishment identified: bars, restaurants and gourmet restaurants.

> **From the data provided by the hospitality businesses that use CaixaBank POS terminals for payments, we can extract valuable information to evaluate the hospitality sector**

Characteristics of hospitality establishments using CaixaBank POS terminals

	BARS	RESTAURANTS	GASTRONOMIC RESTAURANTS	TOTAL
Median bill (€)	**14.5 €**	**35.0 €**	**136.1 €**	**23.7 €**
Establishments (% of the total)	58%	42%	1%	**100%**
Turnover (% of the total)	32%	66%	3%	**100%**
Turnover using foreign cards (%)	18%	23%	37%	**21%**
Turnover using Spanish cards from the same province (%)	69%	61%	48%	**64%**
Turnover using Spanish cards from a different province (%)	13%	16%	15%	**15%**

Notes: Data from 2019. «Gastronomic restaurants» include establishments internally categorised as «4 forks restaurants» with a median bill of over 55 euros.
Source: CaixaBank Research, based on CaixaBank's internal data.

To assess how the recovery has been distributed across the hospitality sector between 2020 and 2022, we have looked at how the turnover of establishments using CaixaBank POS terminals between 2020 and 2022 has varied with respect to 2019.[5] Specifically, we have calculated the median change and the 25th and 75th percentiles for all the changes in turnover observed in the sample.[6]

According to our findings, in 2022 the median change in turnover was positive in the three types of business analysed. However, some large increases in turnover stand out, namely in bars with a median change, so far in 2022, of 100% compared with the same period in 2019. Moreover, the 25th percentile stands with 25% growth, pointing to an unmitigated recovery.[7]

The rebound in restaurants and, above all, in gastronomic restaurants has been somewhat weaker. Despite this, as can be seen in the chart below, the 75th percentiles and medians of both branches of activity have posted increases in turnover compared with 2019. Nevertheless, it should be noted that, in the case of gastronomic restaurants, the 25th percentile still shows a drop in turnover compared with 2019 (–22%).

> **Of particular note are the large increases in turnover in bars, with a median change, so far in 2022, of 100% compared with the same period in 2019**

5 For each year, we have limited the sample to those businesses with active POS terminals in both periods. The sample therefore excludes businesses that were forced to close during the period analysed.

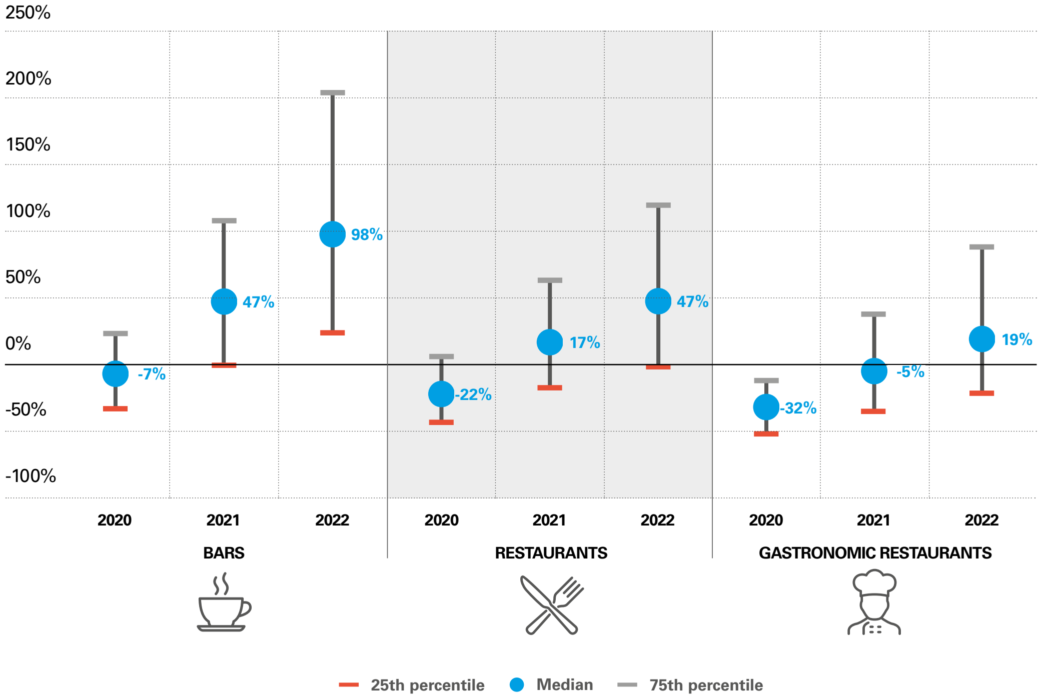
6 The 25th percentile (75th) reflects the change in turnover compared with 2019, which leaves 25% (75%) of the sample below this change.

7 It should be noted that card usage at hospitality establishments has grown considerably since the outbreak of the pandemic so that, on average, the change in POS turnover would be well above the actual change. In this respect, between January and August 2022 and according to the National Statistics Institute, hospitality turnover fell by 4% compared with the same period in 2019, while median POS turnover grew by 64%.

Tourism

Trend in turnover of hospitality businesses by type

Change compared with the same period in 2019

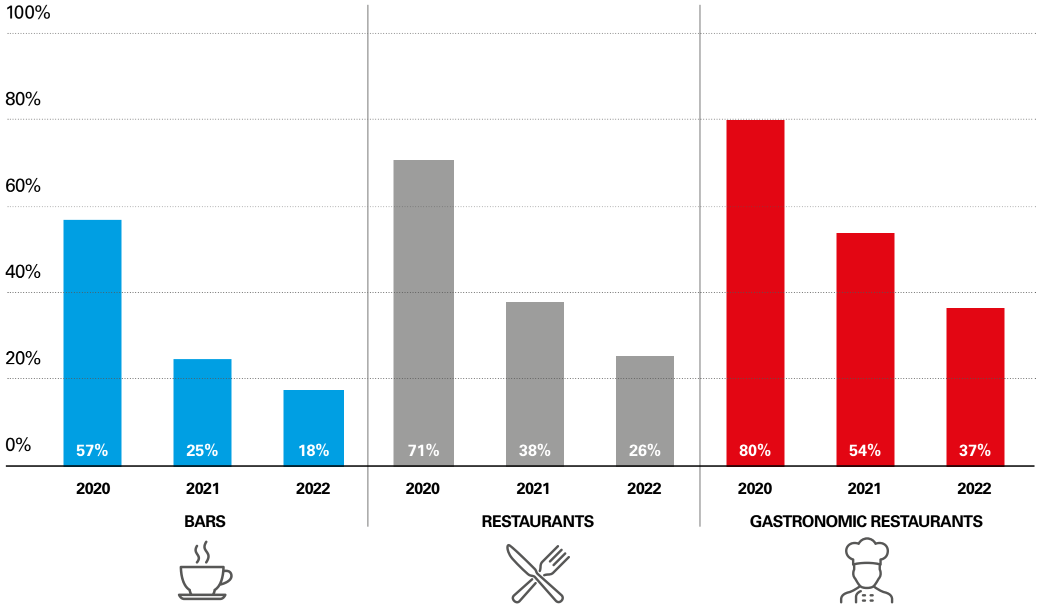


Notes: The median and percentiles are shown of the changes in turnover of hospitality businesses using CaixaBank POS terminals. The data for 2022 comprise turnover between January and August, compared with January-August 2019.
Source: CaixaBank Research, based on CaixaBank's internal data.

From the above findings we can conclude that the recovery has been mixed but generally positive. However, it can also be inferred that a number of businesses are still suffering from the consequences of the pandemic. To assess the extent to which there are still establishments showing signs of distress, we calculated the proportion of businesses reporting declines in turnover compared with 2019. The results, shown in the chart below, suggest that the number of establishments doing less business than in 2019 is still high, even among bars. Specifically, in 2022 18% of bars, 26% of restaurants and 37% of gastronomic restaurants were still experiencing drops in turnover compared with 2019. Although these figures are high, it is nevertheless clear that the situation in the hospitality sector has improved significantly if we compare the 2022 figures with those of previous years.

The recovery has been mixed but generally positive, although it can also be inferred from the data that a number of businesses are still suffering from the consequences of the pandemic

Share of hospitality businesses with less turnover than in 2019
% of the total



Note: The data for 2022 comprise turnover between January and August.
Source: CaixaBank Research, based on CaixaBank's internal data.

Are the different speeds of recovery due to a dependence on tourism?

Faced with the question of what is causing these big differences between establishments, we divided up the sample of hospitality businesses according to the characteristics of their consumers in order to identify those establishments that depend on international tourism.

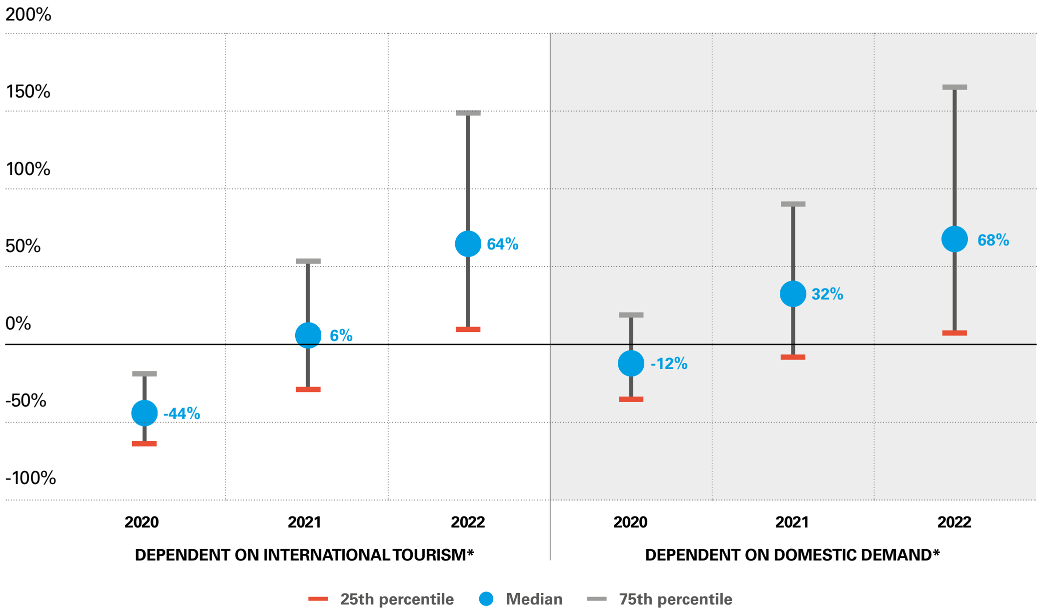
In addition to social distancing measures, the drop in tourism was one of the factors that most affected the hospitality sector during the toughest periods of the pandemic. The rebound in tourism demand in 2022 has therefore been great news. However, the fact that international tourist arrivals have not yet fully recovered could be one of the factors behind the uneven recovery in hospitality. Despite the strong recovery in tourism this year, international tourist arrivals to Spain so far in 2022 are still 17% below the level for the same period in 2019. Nevertheless, according to our analysis of businesses that use CaixaBank POS terminals, when we differentiate between establishments that depended on international tourism before the pandemic (i.e. in which foreign cards generated more than 35% of their turnover) and those that did not, no differences can be seen in 2022. In both cases turnover between January and August shows a median growth of around 65%, with the 25th and 75th percentiles also at similar levels for these two groups.

Tourism

As might be expected, in 2020 we did observe big differences between establishments that depend on international tourism and those that don't. In that year, establishments dependent on foreign consumption recorded median drops in turnover of 44% compared with 2019. On the other hand, businesses dependent on local consumption also felt the impact of the pandemic due to the tough social distancing measures imposed, but their reduction in turnover was appreciably smaller (a median drop of 12%). In 2021, the sector recovered at different speeds, with businesses not dependent on international tourism recovering faster, posting widespread increases in payments via their POS terminals. In contrast, a large number of tourism-dependent establishments still saw significant declines in their POS turnover in 2021 (the 25th percentile recorded a 29% drop).

Trend in the turnover of hospitality businesses by their dependence on tourism

Change compared with the same period in 2019



Notes: The median and percentiles are shown of the changes in the turnover of hospitality businesses that use CaixaBank POS terminals. The data for 2022 comprise turnover between January and August, compared with January-August 2019. (*) We have defined businesses dependent on international tourism as those which, in 2019, obtained more than 35% of their revenue from foreign consumers. The remainder have been categorised as businesses dependent on domestic demand.
Source: CaixaBank Research, based on CaixaBank's internal data.

In 2021 the sector recovered at different speeds, with businesses not dependent on international tourism recovering faster, posting widespread increases in payments via their POS terminals

Dependence on tourism in the hospitality sector is once again a sign of strength and will contribute positively to the sector's progress in 2023

Based on our analysis, there is no doubt that the recovery in the hospitality sector has been far-reaching, although a part of the sector is still encountering some difficulties. On the other hand, it should be noted that dependence on tourism is no longer a concern within the sector, since in 2022 this hardly had any effect on the differing speeds of recovery across hospitality businesses. We can therefore state that dependence on tourism in the hospitality sector is once again a sign of strength and will contribute positively to the sector's progress in 2023.

Air travel

Europe's saturated airports: a brake on the summer's recovery

The rapid recovery in air travel during the summer months caught the air transport sector with insufficient manpower to cope with the growth in passengers. According to our analysis, this has led to severe airport saturation problems in a large part of Europe, primarily in outbound countries, acting as a brake on tourism's recovery in Europe.

Air travel picked up strongly this summer, returning to its pre-pandemic levels in almost all western Europe thanks to the lifting of many travel restrictions and the easing of the pandemic. The number of flights operated at airports in continental Europe during the summer months reached 2.8 million, close to the 3.2 million recorded for the same period in 2019.

However, this rapid recovery in demand has led to airports across Europe becoming extremely saturated. The images of thousands of suitcases abandoned at Heathrow airport (London) have not gone unnoticed, this being due to the inability of ground staff to cope with the large number of flights, as well as the requests from German airport authorities for airlines to cancel some of their scheduled flights in July and August in order to avoid collapsing the system.

This saturation has a clear cause: a lack of personnel, both of airlines and airport operators. During the downtime caused by COVID-19 in 2020 and 2021, air transport companies were forced to restructure in order to reduce costs. According to Eurostat data, the number of employees in the EU's air transport sector posted a 20% drop in Q1 2022 compared with the same period in 2019. Once demand began to pick up again, the sector's ability to recover its workforce has been affected by labour shortages and the excessive red tape (especially in terms of security checks and specific training) that newly recruited airline and airport staff must face, which can delay the hiring process by several months.

Saturation index: how can we quantify saturation?

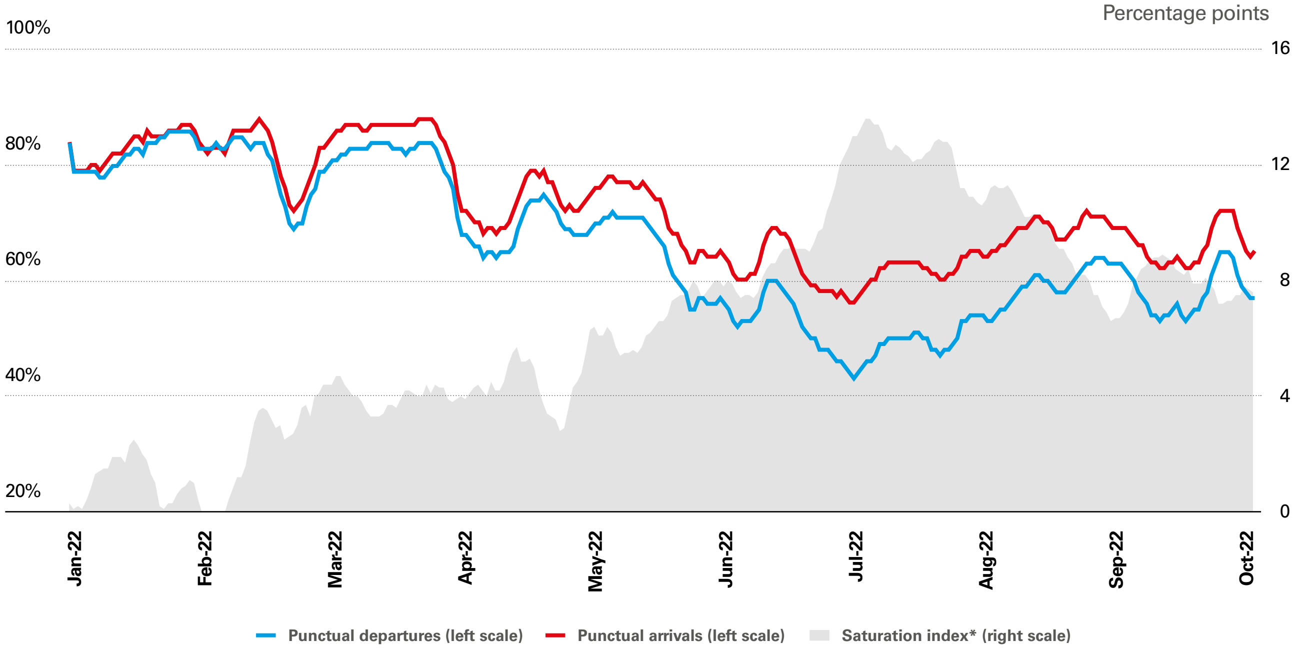
To quantify the extent of air transport saturation in Europe, we used Eurocontrol's flight delay database which collects data from all airports in continental Europe and provides accurate evidence of the high saturation experienced during the summer months. As can be seen in the chart below, the number of flights taking off on time at airports in northern Europe, the region that emits the most tourists, went from 82% in the January 2022 on average to a low of 43% in the first week of July.

To better gauge the saturation of each airport, we developed a saturation index that reflects the volume of delayed flights occurring during airport operations. We have used the difference between the proportion of flights arriving on time at an airport and the proportion of flights departing on time. If an airport is operating normally, it will have a saturation index close to zero because it doesn't generate delays in the flights it operates (the proportion of punctual arrivals and departures will be equal). On the other hand, if an airport is saturated, it will have a positive saturation index because the number of flights that take off on time is lower than the number of flights arriving on time; i.e. delays are generated during airport operations.

> **To better gauge the saturation of each airport, we have developed a saturation index that reflects the volume of delayed flights occurring during airport operations**

Tourism

Punctual arrivals and departures of flights operated in northern Europe
% of flights operated



Notes: Flights operated at airports in Germany, France, the Netherlands, Belgium, Denmark, Ireland and the United Kingdom. *The saturation index measures the difference between the % of punctual arrivals and the % of punctual departures. Positive (negative) values imply that the percentage of delayed flights increases (decreases) during airport operations.
Source: CaixaBank Research, based on data from Eurocontrol.

The chart above shows that the saturation index places the most complicated time for northern European airports during the first half of July, when it stood at around 13 points (61% punctual arrivals vs. 48% punctual departures). Another point worth noting is that the trend in airport saturation in northern Europe has been downward in recent months (the saturation index stands at 7.5 pp), despite the fact that the volume of air traffic has remained at an appreciably high level. This is a sign that the sector is beginning to adjust its capacity to the new demand.

Which countries have the most saturated airports?

If we look at the index for different countries and airports, as shown in the chart below, it can be seen that those countries that tend to be outbound countries for tourism have encountered the greatest saturation problems. It's also evident that each country's saturation problems tend to be more intensely concentrated at its major airports. Three groups of countries can be distinguished:

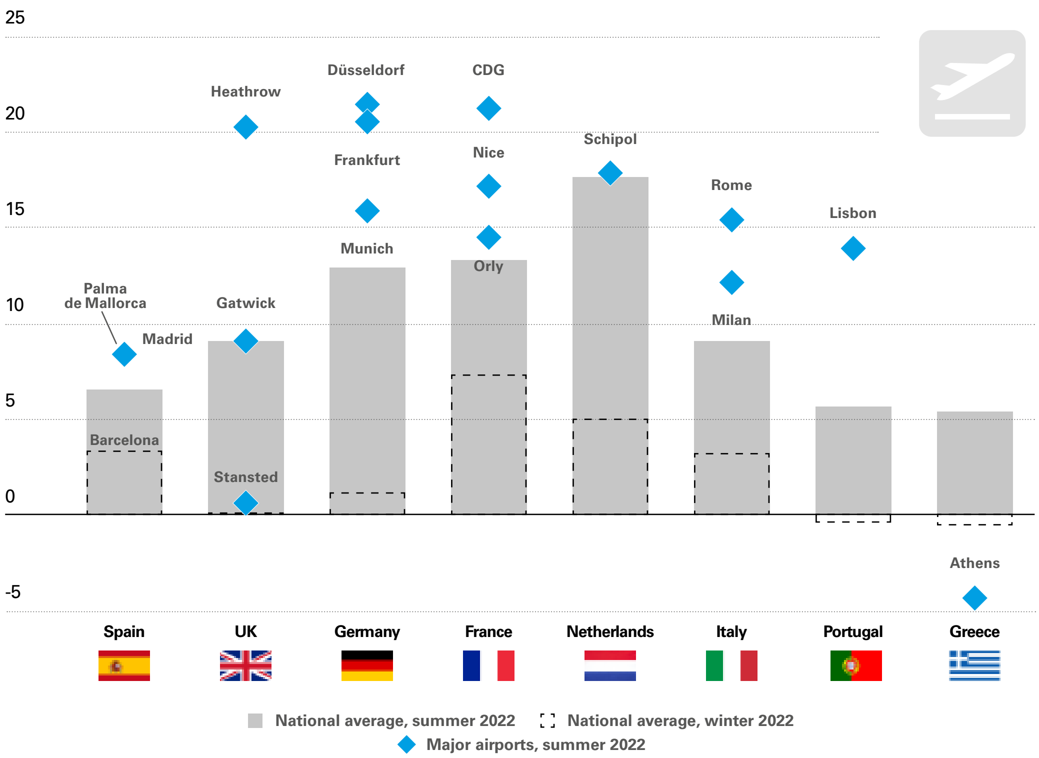
- The airports of **the Netherlands, France and Germany** have shown the highest saturation (saturation index above 20 points during the summer months). In these cases, strikes in the sector have further complicated the situation at their major airports. Moreover, these are the three EU countries that saw the biggest job losses in the airport sector during the pandemic.

▪ The **United Kingdom**, with Heathrow airport at the forefront (a saturation index of 21 points in summer), has been another case in point of airport saturation in Europe. Here the sector's recruitment complications have been further compounded by the severe labour shortages caused by Brexit.

▪ **Southern European countries have managed to maintain moderate saturation levels.** In these countries their tourism sectors, crucial for their domestic economies, were relatively more protected during the pandemic. For example, in the case of Spain the furloughs agreed for employees and the fact that the state holds a majority share in company that operates all its airports has helped to maintain the sector's workforce and therefore cope with the increase in demand.

Airport saturation index by country and airport

Percentage points



Notes: The saturation index measures the difference between the % of punctual arrivals and the % of punctual departures. Positive (negative) values imply that the percentage of delayed flights increases (decreases) during airport operations.
Source: CaixaBank Research, based on data from Eurocontrol.

> **Southern European countries have managed to maintain moderate saturation levels. Their tourism sectors, crucial for their domestic economies, were relatively more protected during the pandemic**

Tourism

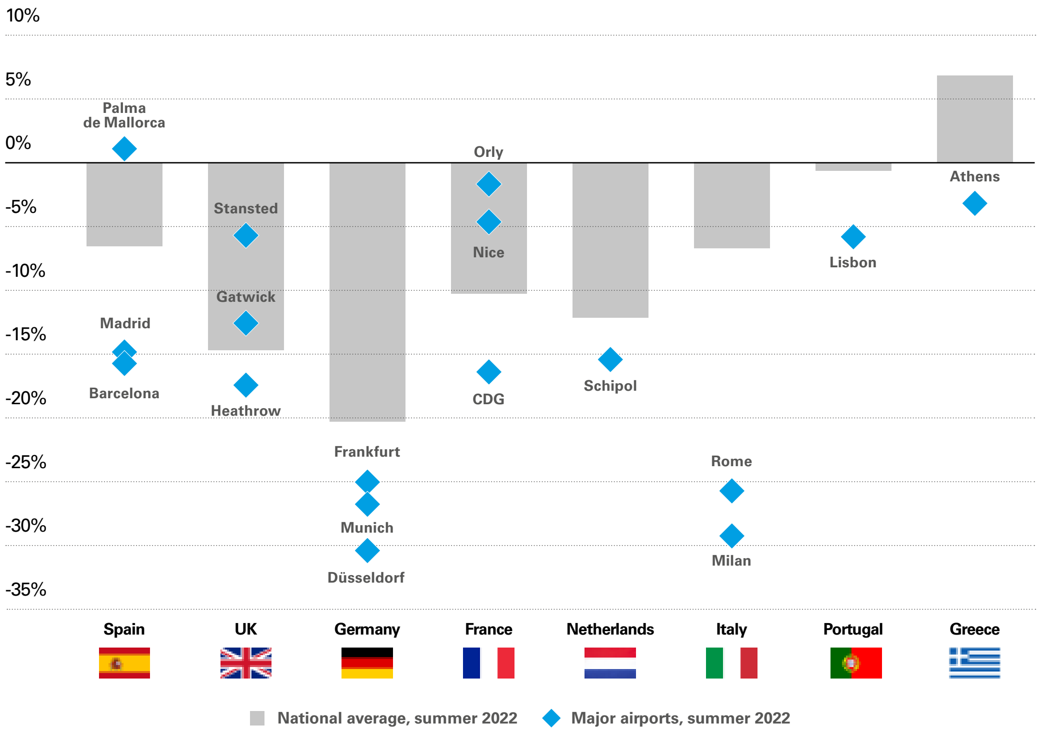
The consequences of saturation

Airport saturation in Europe limited the growth in air travel during the summer, preventing a full recovery in European tourism.[8] As we can see in the chart below, the volume of air travel recorded in summer in Germany, the United Kingdom, the Netherlands and, to a lesser extent, France was far from that recorded in the summer of 2019. In the case of Germany, Düsseldorf airport posted a decline of more than 30%. On the other hand, in countries without saturation problems such as Greece, Portugal and Spain, air travel was close to its 2019 levels or even higher, as in the cases of Palma de Mallorca airport and Greek airports as a whole.

8 The correlation between the saturation index and the rate of change of flights with respect to 2019 points to the fact that, for every pp of saturation, the rate of change fell by 0.7 pp.

Airport traffic in the summer months

Change compared with the same period in 2019



Source: CaixaBank Research, based on data from Eurocontrol.

By the summer of 2023, it's expected that the air transport sector will be able to adjust to the new context of increased international travel and get back to employment levels similar to those before the pandemic. The saturation problems observed this summer should therefore be completely resolved, providing an important lever for growth in British and German tourism.

Main indicators of the tourism industry

Percentage change compared with the same period the previous year, unless otherwise specified

	Average 2000-2007[1]	Average 2008-2014[2]	Average 2015-2019[3]	Average 2020	Average 2021	2022[4]	Trend[5]	Date latest data
Economic activity indicators								
Total GDP	3.4	-1.2	2.6	-11.3	5.5	3.8		Q3 2022
Tourism-related GDP	1.7	-0.7	4.6	-57.7	43.4	-		2021
Labour market								
Total affiliated workers	3.5	-2.3	4.1	-2.2	2.6	5.0		Oct-22
Affiliated workers in the tourism industry	4.4	-1.0	4.0	-10.1	2.4	2.0		Oct-22
Accommodation services	4.9	-0.8	4.9	-19.2	5.1	5.8		Oct-22
Food and beverage services	4.6	0.9	4.0	-11.1	2.2	0.3		Oct-22
Travel agencies/tour operators	5.6	-2.8	5.7	-10.6	-6.9	-8.9		Oct-22
Other tourism services	4.1	-3.1	3.6	-5.7	2.3	3.6		Oct-22
Balance of payments								
Tourism receipts (% of GDP)	4.7	4.6	5.6	1.4	2.4	5.8		Q2 2022
Tourism expenditure (% of GDP)	1.2	1.2	1.7	0.7	0.9	1.4		Q2 2022
Total tourism (% of GDP)	3.6	3.4	3.9	0.8	1.6	4.4		Q2 2022
Tourism demand indicators								
International tourism								
Number of international tourists	3.8	2.2	5.2	-77.4	64.7	66.3		Sep-22
Origin: United Kingdom	-	4.6	3.5	-82.5	36.6	128.4		Sep-22
Origin: Germany	-	5.7	1.6	-78.6	117.8	37.7		Sep-22
Origin: France	-	11.1	1.4	-65.2	49.8	35.3		Sep-22
Origin: Italy	-	14.1	4.8	-79.1	79.8	70.4		Sep-22
Origin: United States	-	1.2	15.8	-87.9	97.8	140.5		Sep-22
Origin: Rest of Europe	-	-	7.6	-77.5	82.7	32.6		Sep-22
Origin: Outside Europe	-	-	13.0	-79.2	6.9	152.0		Sep-22
Visitor exports	5.4	3.3	6.8	-78.5	76.4	83.0		Sep-22
Average duration (days)	-	-	7.6	6.6	8.4	7.0		Sep-22
Average daily expenditure per person (€)	-	-	141.7	104.0	133.3	169.0		Sep-22
Domestic tourism								
Overnight stays	-	-	0.1	-30.6	23.7	-4.1		Jun-22
Average duration (days)	-	-	3.5	4.3	3.6	3.0		Jun-22
Average daily expenditure per person (€)	-	-	51.2	40.5	50.7	75.0		Jun-22
Hotel supply indicators								
Number of available hotel places	3.3	1.2	1.3	-51.2	44.2	13.5		Sep-22
Category: 4 or 5-star	9.7	3.6	3.0	-53.4	53.4	12.3		Sep-22
Rest of categories	0.2	-0.8	-0.4	-48.7	34.8	15.0		Sep-22
Hotel occupancy rate (percentage points)	-0.4	0.2	1.2	-31.9	16.7	13.9		Sep-22
Category: 4 or 5-star	-0.6	0.6	0.7	-36.0	18.3	16.5		Sep-22
Rest of categories	-0.5	-0.5	1.4	-27.2	14.7	10.9		Sep-22
Average daily rate (ADR)	-	0.2	4.1	-28.7	31.6	14.0		Sep-22
Category: 4 or 5-star	-	-0.8	4.1	-25.7	30.5	12.4		Sep-22
Rest of categories	-	0.4	3.2	-31.6	27.5	17.9		Sep-22
Revenue per available room (RevPAR)	-	0.6	6.9	-60.0	61.9	41.4		Sep-22
Category: 4 or 5-star	-	0.4	5.6	-60.0	60.2	42.5		Sep-22
Rest of categories	-	-1.3	7.6	-57.8	54.9	40.5		Sep-22

Notes: 1. For the indicators «Number of international tourists» and «Visitor exports», the average corresponds to 2004-2007. 2. For the indicator «Number of international tourists by origin», the average corresponds to 2013-2014. 3. For the indicator related to domestic tourism overnight stays, the average corresponds to 2016-2019. 4. Latest data available for the year 2022 5. A sun denotes above the average growth in 2015-2017 minus 1/4 standard deviation; a sun with cloud denotes above the average growth in 2015-2017 minus 1 standard deviation; a cloud denotes negative growth or above the average growth in 2015-2017 minus 2 standard deviations; and rain denotes below the average growth in 2015-2017 minus 2 standard deviations.

Source: CaixaBank Research, based on data from the National Statistics Institute, the Ministry of Inclusion, Social Security and Migration, and the Bank of Spain.

CaixaBank Research

The *Sector Report* and the rest of the CaixaBank Research publications are available from the website www.caixabankresearch.com. Our research aims to stimulate debate and the sharing of opinions among all sectors of society, as well as raise awareness of the important social and economic issues of our time.

We recommend:

www.caixabankresearch.com research@caixabank.com @CABK_Research Newsletter

CaixaBank
Research