The COVID-19 impact on Consumption in Real Time and High Definition A Big Data BBVA Research Project

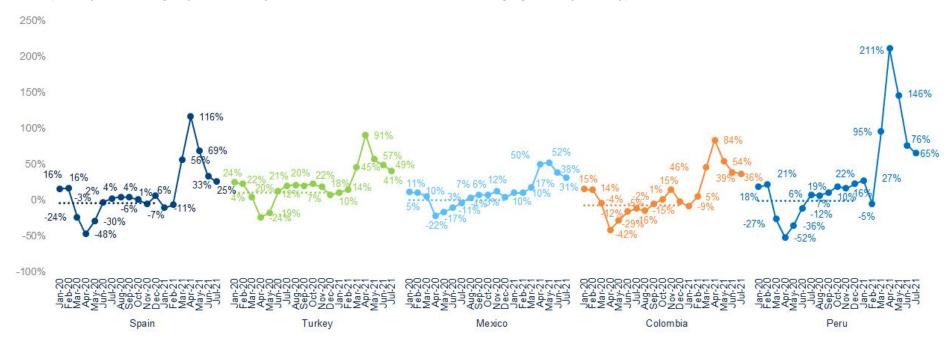
Monthly presentation

August, 2021

Consumption growth rates remained high in July, although most of the base effect on year over year terms has been corrected

BBVA RESEARCH BIG DATA CONSUMPTION INDICES: TOTAL CONSUMPTION EVOLUTION IN 2020 AND 2021

(% daily YoY average by month and year. Dashed line shows the 2020 average growth by country)



The growth rates correction stabilizes in most countries during July. Argentina drops for a base effect from a July 2020 Hot Sale

BBVA RESEARCH BIG DATA CONSUMPTION INDICES

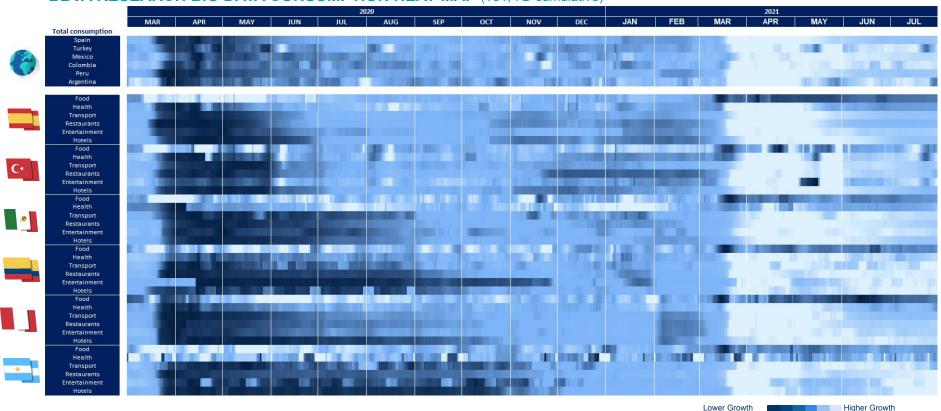
(Total consumption by card, % YoY, 7D cumulative)



Source: BBVA Research. Spending at BBVA POS by BBVA and non-BBVA customers plus spending by BBVA customers at non-BBVA POS. This data considers final expenditures, so not intermediate consumption is included. Therefore, the correspondence with national accounts household consumption is not fully equivalent. More detail about the data could be found in the following link.

Consumption Diffusion Heat Map: correction effects are more evident in Spain, Turkey and Peru during June and July

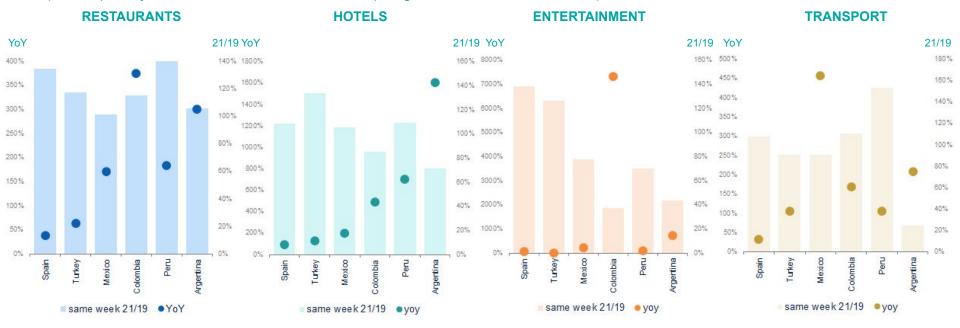
BBVA RESEARCH BIG DATA CONSUMPTION HEAT MAP (YoY, 7D cumulative)



As the summer begins restaurants and hotels show higher dynamism. Entertainment and transport are recovering at different paces

BBVA RESEARCH BIG DATA CONSUMPTION INDICES IN MAY

(Consumption by card, % YoY and ratio 2021/2019 comparing the same week, 7D cumulative)

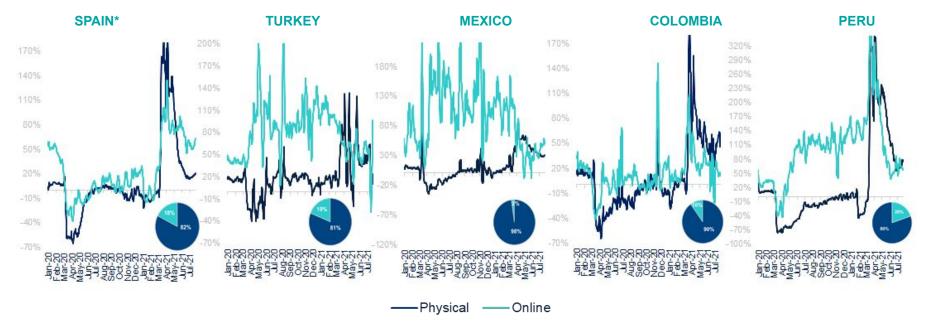


Source: BBVA Research.

The gap between e-commerce and physical purchases has narrowed, but in Spain and Mexico online sales are recovering

BBVA RESEARCH BIG DATA CONSUMPTION INDICES: PHYSICAL VS ONLINE

(Total consumption by Point of Sales. % YoY, 7D cumulative. Pie chart reflects the proportion of online and physical purchases in 2019)



Source: BBVA Research.* In the case of Spain, the online series considers non physical data, which includes online purchases, as well as purchases done by call, mobile phone using apps, by postal code or online subscriptions.

The lower growth of ATM withdrawals vis-a-vis card spending has been more noticeable in Peru during 2021

BBVA RESEARCH BIG DATA CONSUMPTION INDICES: CARD PURCHASES VS ATM WITHDRAWALS

(Total consumption by Point of Sales. % YoY, 7D cumulative)



—Total purchases —ATMs withdrawals

Source: BBVA Research



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