Global Economic Insight



Finding certainty through data in 2022

Parsing current trends to see what 2022 will bring seems as fraught with uncertainty as any time over the past two years since the pandemic began. After one of the strongest fourth quarters on record for consumer spending, the emergence of the Omicron variant and the return of public health interventions to contain its rapid spread now cloud the outlook.

Just as medical advancements provide us with better tools to mitigate the health risks from new outbreaks, new data tools launched during the pandemic bring greater clarity and certainty into what this latest phase of the pandemic might bring. Using such tools, including the Visa Spending Momentum Index, reveals three insights into the pandemic's evolving influence on the economic recovery:

- 1. Consumer spending may slow as a result of the Omicron variant, but the potential shock will be less: each successive variant's impact on spending has been less than the one before.
- 2. The recovery is moving to a more sustainable footing as some of the initial unevenness linked to the pandemic is dissipating. Spending by the affluent and within large cities has recovered.
- 3. Although each wave is now having less of an impact on consumer demand, it still has the power to disrupt the supply of services and goods as sickness sidelines workers. As such, COVID-19 could temporarily contribute to higher inflation than traditional models would suggest until it moves from being pandemic to endemic.

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Richard Lung
Principal Global Economist

Dulguun BatboldGlobal Economist

Key Points:



Omicron's impact on consumer demand should be limited



The global recovery is shifting to a more sustainable footing



Disruptions to business operations from sickness is the key economic risk from the current and future variants





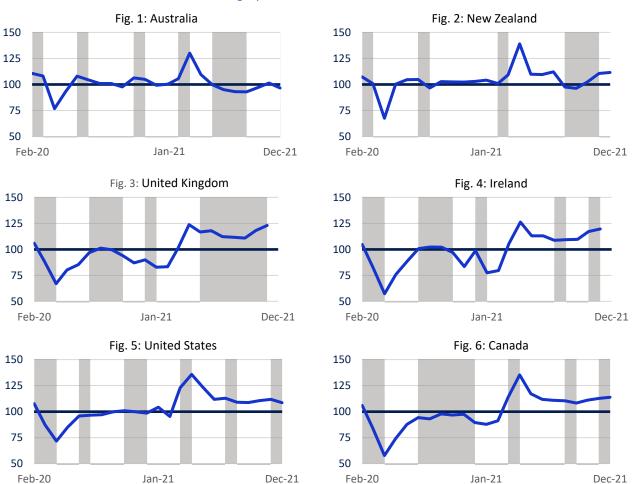
COVID-19's impact on consumer spending is waning

Since the pandemic began, countries around the world have balanced public health interventions with keeping the economy running. The trade-off between the two has become less stark as new innovations in business and health help to lower the economic costs of containing outbreaks.

In February 2020, much was unknown about how COVID-19 spread and how to contain it. Medical innovations and advancements since then have helped bring better ways to contain the disease without cutting off commerce. With each successive wave¹ – an average of five in total for the six countries depicted below –businesses and consumers have also adapted, allowing more spending to continue.

From Australia to the United States, consumer spending momentum may have slowed with each outbreak, but not to the same extent as the first outbreak in spring 2020. Spending momentum has mostly remained near or above the critical 100-point threshold of the Visa SMI index, indicating that more households continued to spend more through the later outbreaks. The Omicron variant's impact fits this trend too.

SMI in six markets (>100 more consumers are spending more, <100 fewer consumers are spending more). Periods of outbreaks are areas shaded in grey.



Sources: Visa Spending Momentum Index, Our World In Data/Haver Analytics

A broader basis now underpins the recovery

Early in the recovery, spending momentum in large cities and by the affluent lagged. However, over the past year, both have started to rally, helping to put the expansion on a more sustainable footing.

Since June 2021, the largest most globally-connected cities, including New York, London, Toronto, Sydney, Dublin and Auckland, have started to regain spending momentum lost during the pandemic. This welcome upturn points to a return of urban dynamism that over time can speed and sustain the recovery.

For the greater part of the past two years, consumer demand in these cities plus their peers included in our SMI index for the top 50 cities globally ("Top 50 Cities SMI")² lagged smaller cities ("Small Cities SMI" - those with populations less than 500,000). Falling activity in large cities gave rise to concern that their decline could erode productivity and weaken economies over time.

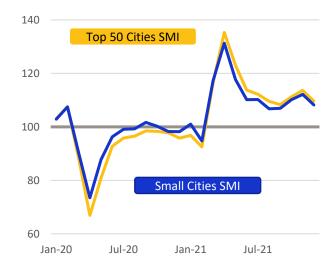
Strengthening demand as measured by the SMI points to a revival of commerce, which can help to fill now-vacant storefronts. As urban amenities lost during the pandemic return, this could attract new residents or encourage those that relocated to return.

Based on depersonalized transaction data, as many as 3 million people in these top 50 cities may have relocated to less populated areas during the pandemic, or an average of 2 percent of the cities' pre-pandemic population between Q3-2019 and Q3-2021.

A deeper dive into the data available from the United States also gives further evidence that a more sustainable recovery has taken hold. Spending momentum of consumers living in more affluent U.S. counties³ since early 2021 has also closed gaps that opened during the pandemic.

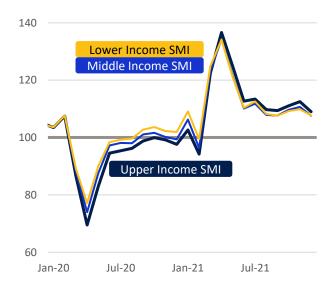
A key contributing factor to this turn-around was the emergence of vaccines, which enabled previously-cautious affluent consumers to return to eating out in restaurants, visiting entertainment venues and shopping in person. During the Delta variant wave last summer, counties that were more vaccinated took less of a hit to consumer demand than their less-vaccinated peers, even in areas where the disease was spreading more rapidly.

Fig. 7: Larger, more global cities have joined the recovery Visa Spending Momentum Index (>100 more households are spending more)



Source: Visa SMI

Fig. 8: More affluent U.S. counties are also rallying U.S. Visa Spending Momentum Index by county income classification (>100 more households are spending more)



Source: Visa SMI

The pandemic's impact on supply matters in 2022

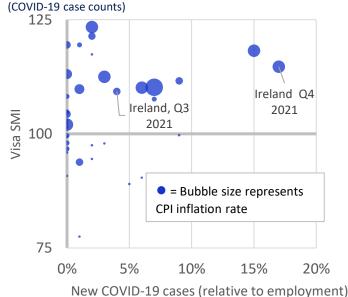
The Omicron variant and its potential successors' impact on consumer demand is lessening, but they still retain the power to disrupt supply chains and business operations. In future outbreaks, inflation could accelerate further for longer.

With consumer demand in major economies bolstered by the recovery in labor markets and stockpiled savings, each new COVID outbreak will likely lead to renewed inflationary pressures. Earlier in the pandemic this was not the case as both supply and demand were simultaneously curtailed.

Each new infection per 10 workers on average results in one percentage point higher price inflation – a measure of the virus' restraining effect on the productive capacity of the economy at a given level of demand, as measured by the Visa SMI across six key markets.

Just as societies learned to adapt to shop differently to keep demand from falling, the key challenge for this year and beyond is how to keep workers healthy so as to minimize disruptions to supply chains and business operations.

Fig. 9: When demand is greater and supply more constrained, inflation increases faster
Visa SMI vs. countries across different outbreak episodes



Source: Visa SMI, Haver Analytics

Notes

- 1. Outbreaks for this analysis are defined as periods where the estimated reproduction rate of the virus is equal to or above one (i.e. where each infected person on average passes the disease onto at least one other person).
- 2. Cities in the "Top Cities SMI" are New York, Los Angeles, Chicago, Dallas, Houston, Washington D.C., Miami, Philadelphia, Atlanta, Phoenix, Boston, San Francisco, Riverside, Detroit, Seattle, Minneapolis, San Diego, Tampa, Denver, St. Louis, London, Manchester, West Midlands, Leeds, Glasgow, Liverpool, Sheffield, Tynside, Bristol, Nottingham, Toronto, Montreal, Vancouver, Calgary, Ottawa-Gatineau, Edmonto, Quebec, Winnipeg, Hamilton, Kitchener, Sydney, Melbourne, Brisbane, Perth, Adelaide, Gold Coast, Canberra, Sunshine Coast, Auckland, Dublin.
- 3. U.S county income groupings are based on per capita personal incomes, whereby the top quartile of counties with the highest incomes within each state are classified as high and bottom quartile as low-income counties.

About the Visa Spending Momentum Index

First publicly released in May 2021, the Visa Spending Momentum Index (SMI) is an economic indicator to gauge the health of consumer spending. The Visa SMI delivers insight into what drives upturns and downturns in spending by measuring the breadth of the momentum supporting these trends. Currently available in six countries (Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States), the SMI provides a consistent method across countries to measure global spending trends.



A sample pulled from the Visa network

The SMI leverages the power of the Visa network utilizing a sample of depersonalized and aggregated spending data from Visa-branded credit and debit credentials. This makes it a timelier read on consumer spending compared to other consumer spending measures (e.g. retail sales and personal consumption expenditures).



Tracks upturns and downturns in consumer spending

The resulting sample data is then aggregated using a diffusion index framework where index values are scored from 0 to 200. When the Visa SMI rises above 100, the consumer spending momentum is strengthening and when it falls below 100, the spending momentum is weakening as fewer consumers are spending more relative to the previous year.



A better way to track the economic recovery

SMI has correlation with key macroeconomic indicators, including retail sales, unemployment and household income. The SMI does not take into account the volume of payments nor does it rely on all Visa credentials, and therefore does not reflect Visa's operational or financial performance. The SMI can assess the variation in spend down to a geographic (national, state, city and county) and industry vertical level.

Accessibility Notes

- **Fig 1**. Line chart showing the SMI for Australia ranging from 110.6 in Feb-2020 to a low of 76.7 in Apr-2020 to a high of 130.2 in Apr-2021 and finishing at 96.6 for Dec-2021.
- **Fig 2**. Line chart showing the SMI for New Zealand ranging from 107.2 in Feb-2020 a low of 67.6 in Apr-2020 to a high of 139.1 in Apr-2021 and finishing at 111.6 for Dec-2021.
- **Fig 3.** Line chart showing the SMI for United Kingdom ranging from 105.9 in Feb-2020 a low of 67.0 in Apr-2020 to a high of 123.8 in Apr-2021 and finishing at 123.1 for Dec-2021.
- **Fig 4**. Line chart showing the SMI for Ireland ranging from 104.6 in Feb-2020 a low of 57.2 in Apr-2020 to a high of 126.2 in Apr-2021 and finishing at 119.5 for Dec-2021.
- **Fig 5**. Line chart showing the SMI for the United States ranging from 107.6 in Feb-2020 a low of 71.6 in Apr-2020 to a high of 135.7 in Apr-2021 and finishing at 108.5 for Dec-2021.
- **Fig 6**. Line chart showing the SMI for Canada ranging from 105.9 in Feb-2020 a low of 57.7 in Apr-2020 to a high of 135.3 in Apr-2021 and finishing at 113.8 for Dec-2021.
- **Fig 7**. Line chart showing SMI comparison of Top 50 cities versus small cities. In Jan-2020, the SMI for large cities was 103.0 while for small cities it was 102.8. The lowest SMI score was in April 2020 where SMI in large cities was at 66.9 while in smaller cities it was 73.5. The highest SMI score was in April 2021, the SMI for in large cities was at 135.3 and for small cities it was 131.2. In the latest Dec 2021 data, the SMI in large cities was 109.6 while for small cities it was 108.1.
- **Fig 8.** Line chart showing the SMI for the U.S. by county income classification. In Jan-2020, the SMI for Upper Income and Middle Income counties was 103.5 while Lower Income counties it was 103.6. The lowest SMI score was in April 2020, the SMI for Upper, Middle and Lower Income counties was 99.9, 98.9 and 99.2. The highest SMI score was in April 2021, the SMI in Upper Income counties was at 136.6, Middle Income counties at 134.3 and Lower Income counties at 134.1. In the latest Dec 2021 data, the affluent are leading as the Upper Income counties SMI is 109.0 while the Middle and Lower Income counties were both at 107.6.
- **Fig 9.** Scatter chart showing Visa SMI versus New COVID-19 cases (relative to employment) and CPI inflation rate. Visa SMI ranges from 75 to 125 while New COVID-19 cases (relative to employment) ranges from 0% to 20%. When SMI is as low as 73.2, share of new cases to employment is 1% while its inflation is 0%. When SMI is as high as 123.4, share of new cases to employment is 2% while its inflation is 5%. When share of new cases to employment is as high as 17%, the SMI is 114.7 and inflation 5%. Inflation is as high as 7% when the SMI is at 110.2 and new infection per employment is at 7%.



Forward Looking Statements

This report may contain forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Art of 1995. These statements are generally identified by words such as "outlook", "forecast", "projected", "could", "expects", "will" and other similar expressions. Examples of such forward-looking statements include, but are not limited to, statement we make about Visa's business, economic outlooks, population expansion and analyses. All statements other than statements of historical fact could be forward-looking statements, which speak only as of the date they are made, are not guarantees of future performance and are subject to certain risks, uncertainties and other factors, many of which are beyond our control and are difficult to predict. We describe risks and uncertainties that could cause actual results to differ materially from those expressed in, or implied by, any of these forward-looking statements in our filings with the SEC. Expect as required by law, we do not intend to update or revise any forward-looking statements as a result of new information, future events or otherwise

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Visa Business and Economic Insights Staff

Bruce Cundiff, Vice President, Consumer Insights	bcundiff@visa.com
--	-------------------

Michael Brown, Principal U.S. Economist	michael.brown@visa.com
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Adolfo Laurenti, Principal European Economist	laurenta@visa.com
---	-------------------

Richard Lung, Principal Global Economist	rlung@visa.com
--	----------------

Glenn Maguire, Principal Asia Pacific Economist	gmaguire@visa.com

Mohamed Bardastani, Senior CEMEA Economist	mbardast@visa.com

Jennifer Doettling, Director, Content and Editorial	idoettli@visa.com
Jenniner Boetting, Birector, Content and Eastorial	Jacctine visa.com

Michael Nevski, Director, Consumer Insights mnevski@visa.com

Dulguun Batbold, Global Economist dbatbold@visa.com

Travis Clark, U.S. Economist <u>wiclark@visa.com</u>

Angelina Pascual, European Economist anpascua@visa.com

Mariamawit Tadesse, Global Economist mtadesse@visa.com

Woon Chian Ng, Associate Asia Pacific Economist woonng@visa.com

Juliana Tang, Executive Assistant jultang@visa.com

For more information, please visit us at Visa.com/Economicinsights or VisaEconomicInsights@visa.com.

