Global Mobility Report

- Key takeaways from this week (Google data through August 14, Apple data through August 16):
  
  o The recent uptick in U.S. mobility seems to be fading a bit. State breakdowns show Texas and California heading lower, while Florida is flat and New York is drifting slightly higher. Time spent at home (not shown in this report) in the U.S. is roughly flat over the past month, suggesting little increase in appetite for being out and about. Aside from the U.K., the U.S. is increasingly looking like a laggard in mobility among major developed market (DM) economies.
  
  o European mobility is becoming more mixed as COVID cases rise in the region. Germany in particular has seen some slowing, while France has flat-lined and Italy has tapered off a bit as well. Chancellor Merkel said there was no further room for loosening restrictions on activity as COVID cases continue to drift higher in Germany. Italy announced nightclubs will be shut for several weeks and implemented compulsory mask wearing in some areas.
  
  o Japan’s jump in retail/recreation mobility is holiday-driven. There has been a concurrent drop in workplace mobility over the same time period. The workplace drop in other countries (France and Italy in particular) is harder to explain, as there are no public holidays in either country around that time.

1 For more information on the data, please refer to the first and second editions of this report, available upon request, or visit the respective Google and Apple websites.
Apple Data: Global Comparisons

**Driving**

![Driving chart](image)

Source: Apple, Wells Fargo Securities

**Transit**

![Transit chart](image)

Source: Apple, Wells Fargo Securities
Walking

Source: Apple, Wells Fargo Securities

Legend: JP = Japan, GE = Germany, FR = France, IT = Italy, CA = Canada, UK = United Kingdom, US = United States
Google Data: Global Comparisons

**Retail and Recreation**

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

**Grocery and Pharmacy**

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities
Transit Stations

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

Workplaces

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

Legend: JP = Japan, GE = Germany, FR = France, IT = Italy, CA = Canada, UK = United Kingdom, US = United States, SK = South Korea
Google Data: U.S. State Comparisons

**Retail and Recreation**

![Graph showing retail and recreation data for different states](image)

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

**Grocery and Pharmacy**

![Graph showing grocery and pharmacy data for different states](image)

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities
Transit Stations

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

Workplaces

Source: Google LLC "Google COVID-19 Community Mobility Reports," Wells Fargo Securities

Legend: CA = California, TX = Texas, NY = New York, FL = Florida
DISCLOSURE APPENDIX

Analyst's Certification
The research analyst(s) principally responsible for the report certifies to the following: all views expressed in this research report accurately reflect the analysts’ personal views about any and all of the subject securities or issuers discussed; and no part of the research analysts' compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the research analyst(s) in this research report.

Important Disclosures Relating to Conflicts of Interest and Potential Conflicts of Interest
Wells Fargo Securities does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities research analysts receive compensation that is based on and affected by the overall profitability of their respective department and the firm, which includes, but is not limited to, investment banking revenue. Wells Fargo Securities may sell or buy the subject securities to/from customers on a principal basis or act as a liquidity provider in such securities.
Wells Fargo Securities Fixed Income Research analysts interact with the firm’s trading and sales personnel in the ordinary course of business. The firm trades or may trade as a principal in the securities or related derivatives mentioned herein. The firm’s interests may conflict with the interests of investors in those instruments.

Additional Information Available Upon Request

About Wells Fargo Securities
Wells Fargo Securities is the global brand name for the capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including but not limited to Wells Fargo Securities, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission and a member of NYSE, FINRA, NFA and SIPC, Wells Fargo Prime Services, a member of FINRA, NFA and SIPC, Wells Fargo Bank, N.A. and Wells Fargo Securities International Limited, a U.K. entity investment firm authorized and regulated by the Financial Conduct Authority.

Notice to U.S. Investors
Unless prohibited by the provisions of Regulation S of the 1933 Act, this material is distributed in the U.S., by Wells Fargo Securities, which takes responsibility for its contents in accordance with the provisions of Rule 15a-6 and the guidance thereunder, under the U.S. Securities Exchange Act of 1934. Any transactions in securities identified herein may be effected only with or through Wells Fargo Securities.

This report was prepared by Wells Fargo Securities Global Research Department (“WFS Research”) personnel associated with Wells Fargo Securities and Structured Asset Investors, LLC (“SAI”), an investment adviser subsidiary of Wells Fargo & Co. If you are paying directly for this research, it is being provided by SAI. For all other recipients in the United States, this report is being provided by Wells Fargo Securities.

Important Information for Non-U.S. Clients

EEA
The securities and related financial instruments described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited (“WFSIL”). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 (“the Act”), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU (“MiFID2”). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

Australia
Wells Fargo Securities, LLC, Wells Fargo Securities International Limited and Wells Fargo Securities Asia Limited are exempt from the requirements to hold an Australian financial services license in respect of the financial services they provide to wholesale clients in Australia. Wells Fargo Securities, LLC is regulated
under the laws of the United States, Wells Fargo Securities International Limited is regulated under laws of the United Kingdom, and Wells Fargo Securities Asia Limited is regulated under the laws of Hong Kong. All such laws differ from Australian laws. Any offer or documentation provided to Australian recipients by Wells Fargo Securities, LLC, Wells Fargo Securities International Limited or Wells Fargo Securities Asia Limited in the course of providing the financial services will be prepared in accordance with the laws of the United States, United Kingdom or Hong Kong and not Australian laws.

**Canada**

This report is distributed in Canada by Wells Fargo Securities Canada, Ltd., a registered investment dealer in Canada and member of the Investment Industry Regulatory Organization of Canada (IIROC) and Canadian Investor Protection Fund (CIPF). Wells Fargo Securities, LLC’s research analysts may participate in company events such as site visits but are generally prohibited from accepting payment or reimbursement by the subject companies for associated expenses unless pre-authorized by members of Research Management.

**Hong Kong**

This report is issued and distributed in Hong Kong by Wells Fargo Securities Asia Limited (“WFSAL”), a Hong Kong incorporated investment firm licensed and regulated by the Securities and Futures Commission to carry on types 1, 4, 6 and 9 regulated activities (as defined in the Securities and Futures Ordinance (Cap. 571 of The Laws of Hong Kong), “the SFO”). This report is not intended for, and should not be relied on by, any person other than professional investors (as defined in the SFO). Any securities and related financial instruments described herein are not intended for sale, nor will be sold, to any person other than professional investors (as defined in the SFO). The author or authors of this report is or are not licensed by the SFC. Professional investors who receive this report should direct any queries regarding its contents to Kelly Chiang and Mandy Wan at WFSAL (email: wfsalresearch@wellsfargo.com).

**Japan**

This report is distributed in Japan by Wells Fargo Securities (Japan) Co., Ltd, registered with the Kanto Local Finance Bureau to conduct broking and dealing of type 1 and type 2 financial instruments and agency or intermediary service for entry into investment advisory or discretionary investment contracts. This report is intended for distribution only to professional investors (Tokutei Toushika) and is not intended for, and should not be relied upon by, ordinary customers (Ippan Toushika).

The ratings stated on the document are not provided by rating agencies registered with the Financial Services Agency of Japan (JFSA) but by group companies of JFSA-registered rating agencies. These group companies may include Moody's Investors Services Inc, Standard & Poor’s Rating Services and/or Fitch Ratings. Any decisions to invest in securities or transactions should be made after reviewing policies and methodologies used for assigning credit ratings and assumptions, significance and limitations of the credit ratings stated on the respective rating agencies’ websites.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jay H. Bryson, Ph.D.</td>
<td>Chief Economist</td>
<td>(704) 410-3274</td>
<td><a href="mailto:jay.bryson@wellsfargo.com">jay.bryson@wellsfargo.com</a></td>
</tr>
<tr>
<td>Mark Vitner</td>
<td>Senior Economist</td>
<td>(704) 410-3277</td>
<td><a href="mailto:mark.vitner@wellsfargo.com">mark.vitner@wellsfargo.com</a></td>
</tr>
<tr>
<td>Sam Bullard</td>
<td>Senior Economist</td>
<td>(704) 410-3280</td>
<td><a href="mailto:sam.bullard@wellsfargo.com">sam.bullard@wellsfargo.com</a></td>
</tr>
<tr>
<td>Nick Bennenbroek</td>
<td>International Economist</td>
<td>(212) 214-5636</td>
<td><a href="mailto:nicholas.bennenbroek@wellsfargo.com">nicholas.bennenbroek@wellsfargo.com</a></td>
</tr>
<tr>
<td>Tim Quinlan</td>
<td>Senior Economist</td>
<td>(704) 410-3283</td>
<td><a href="mailto:tim.quinlan@wellsfargo.com">tim.quinlan@wellsfargo.com</a></td>
</tr>
<tr>
<td>Azhar Iqbal</td>
<td>Econometrician</td>
<td>(212) 214-2029</td>
<td><a href="mailto:azhar.iqbal@wellsfargo.com">azhar.iqbal@wellsfargo.com</a></td>
</tr>
<tr>
<td>Sarah House</td>
<td>Senior Economist</td>
<td>(704) 410-3282</td>
<td><a href="mailto:sarah.house@wellsfargo.com">sarah.house@wellsfargo.com</a></td>
</tr>
<tr>
<td>Charlie Dougherty</td>
<td>Economist</td>
<td>(704) 410-6542</td>
<td><a href="mailto:charles.dougherty@wellsfargo.com">charles.dougherty@wellsfargo.com</a></td>
</tr>
<tr>
<td>Michael Pugliese</td>
<td>Economist</td>
<td>(212) 214-5058</td>
<td><a href="mailto:michael.d.pugliese@wellsfargo.com">michael.d.pugliese@wellsfargo.com</a></td>
</tr>
<tr>
<td>Brendan McKenna</td>
<td>International Economist</td>
<td>(212) 214-5637</td>
<td><a href="mailto:brendan.mckenna@wellsfargo.com">brendan.mckenna@wellsfargo.com</a></td>
</tr>
<tr>
<td>Shannon Seery</td>
<td>Economist</td>
<td>(704) 410-1681</td>
<td><a href="mailto:shannon.seery@wellsfargo.com">shannon.seery@wellsfargo.com</a></td>
</tr>
<tr>
<td>Jen Licis</td>
<td>Economic Analyst</td>
<td>(704) 410-1309</td>
<td><a href="mailto:jennifer.licis@wellsfargo.com">jennifer.licis@wellsfargo.com</a></td>
</tr>
<tr>
<td>Hop Mathews</td>
<td>Economic Analyst</td>
<td>(704) 383-5312</td>
<td><a href="mailto:hop.mathews@wellsfargo.com">hop.mathews@wellsfargo.com</a></td>
</tr>
<tr>
<td>Coren Burton</td>
<td>Administrative Assistant</td>
<td>(704) 410-6010</td>
<td><a href="mailto:coren.burton@wellsfargo.com">coren.burton@wellsfargo.com</a></td>
</tr>
</tbody>
</table>

Wells Fargo Securities Economics Group publications are produced by Wells Fargo Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, the Financial Industry Regulatory Authority, and the Securities Investor Protection Corp. Wells Fargo Securities, LLC, distributes these publications directly and through subsidiaries including, but not limited to, Wells Fargo & Company, Wells Fargo Bank N.A., Wells Fargo Clearing Services, LLC, Wells Fargo Securities International Limited, Wells Fargo Securities Canada, Ltd., Wells Fargo Securities Asia Limited and Wells Fargo Securities (Japan) Co. Limited. Wells Fargo Securities, LLC. is registered with the Commodities Futures Trading Commission as a futures commission merchant and is a member in good standing of the National Futures Association. Wells Fargo Bank, N.A. is registered with the Commodities Futures Trading Commission as a swap dealer and is a member in good standing of the National Futures Association. Wells Fargo Securities, LLC. and Wells Fargo Bank, N.A. are generally engaged in the trading of futures and derivative products, any of which may be discussed within this publication. Wells Fargo Securities, LLC does not compensate its research analysts based on specific investment banking transactions. Wells Fargo Securities, LLC’s research analysts receive compensation that is based upon and impacted by the overall profitability and revenue of the firm which includes, but is not limited to investment banking revenue. The information and opinions herein are for general information use only. Wells Fargo Securities, LLC does not guarantee their accuracy or completeness, nor does Wells Fargo Securities, LLC assume any liability for any loss that may result from the reliance by any person upon any such information or opinions. Such information and opinions are subject to change without notice, are for general information only and are not intended as an offer or solicitation with respect to the purchase or sales of any security or as personalized investment advice. Wells Fargo Securities, LLC is a separate legal entity and distinct from affiliated banks and is a wholly owned subsidiary of Wells Fargo & Company © 2020 Wells Fargo Securities, LLC.

**Important Information for Non-U.S. Recipients**

For recipients in the EEA, this report is distributed by Wells Fargo Securities International Limited ("WFSIL"). WFSIL is a U.K. incorporated investment firm authorized and regulated by the Financial Conduct Authority. For the purposes of Section 21 of the UK Financial Services and Markets Act 2000 ("the Act"), the content of this report has been approved by WFSIL, an authorized person under the Act. WFSIL does not deal with retail clients as defined in the Directive 2014/65/EU ("MiFID2"). The FCA rules made under the Financial Services and Markets Act 2000 for the protection of retail clients will therefore not apply, nor will the Financial Services Compensation Scheme be available. This report is not intended for, and should not be relied upon by, retail clients.

**SECURITIES: NOT FDIC-INSURED/NOT BANK-GUARANTEED/MAY LOSE VALUE**