

CIO Viewpoint

Tracking the recovery with Big Data

Investment Solutions

15 June 2020

After six weeks at sea, the bulk carrier “[Anetos](#)” docked at the port of Xiamen, China on 11 June a little before 10 p.m. local time. The Marshall Islands-registered vessel carried a cargo of copper concentrate from Chile. On its own, this snapshot of international trade does not tell us much about the world economy. Aggregated with thousands of examples, and correlated with other indicators, it has the potential to reinforce, or challenge, investment convictions about global trade.

Combined with the right analytical skills, big data is now opening new opportunities for investment insights. Tracking technologies, installed in devices from mobile phones to commercial shipping, have made data both highly granular and timely. Investors relying on traditional shipping data from the Chinese authorities, for example, will have to wait for at least a month to spot a trend in the country’s imports. At the time of going to print, the latest available numbers date from April 2020. Yet commercial vessels carry an [identification system](#) tracking their positions every few minutes or even, when moving, every few seconds.

Big data tools can show us cargoes moving through Chinese ports within 24-hours, and by comparing official sources with such aggregated ‘real time’ data, we see high correlations with official [trade](#) statistics. More importantly, this gives us a timely understanding of the health of key parts of the international economy.

With the Covid-19 epidemic’s first wave now under control, we are looking to understand the re-emergence of economies around the world as markets reflect the view that the worst of the [pandemic](#)’s impact is behind us.

The challenge for investors is to gauge progress toward ‘normalisation’ (see chart 1), in comparison with historic levels of supply and demand. As a result, this pandemic is turning into the most powerful test yet for the value of data science.

The right data sets can help us to improve our real-time diagnosis of the recovery and market trends. That means that it can also help us as we make investment decisions and construct portfolios. We are working with data from all of the regions affecting our portfolios and choosing our sources carefully. Before we can include a data set in our investment analysis, we compare it with other indicators to ensure that their insights are adding value to our forecasts.

We can then use this to fill the gap between official government numbers, which often reports statistics with a lag of a month or more. New data sources also let us capture measures, such as pollution and mobility, simply not available until now. The pandemic is bringing these statistical advances to life as we track the [economic recovery](#) and find new ways to understand economic developments ever closer to real time.



Stéphane Monier
Chief Investment Officer, Lombard Odier Private Bank

Key takeaways

- Investors and markets are focused on the emerging economic recovery
- Big data, combined with analytics, is proving a valuable tool to inform investment processes
- Economies are recovering in two phases with Asia in the lead, followed by the main European countries. Laggards include the US and the UK
- A ‘V-shaped’ recovery is priced into equities with little potential upside; our data will monitor this evolving trend.

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Data as of 15 June 2020 unless otherwise stated.

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Big data’s seven pillars of wisdom

We watch seven high frequency signals: imports and exports, city congestion levels, mobility data, retail/grocery consumption, workplace presence and air pollution levels for production. Taken together, they can give us a picture of the state of an economy’s recovery when compared with a pre-crisis average of three years, or from 2019.

Tracking levels of air quality can point to a pick-up in industrial activity, and we use indices that capture the numbers of people on business sites, cross-referenced with mobility data and city congestion indicators, against historic averages. These can tell us a great deal about the pace of economic activity.

Economic data broadly, and big data specifically, shows that the recovery is happening in two phases. National differences (see chart 1) show that in the immediate aftermath of the lifting of lockdowns, there is a phase of fast recovery. The second phase will be much longer, as certain sectors, such as travel and tourism remain depressed for longer. Unemployment rates, at record levels in many economies, should slowly fall over the next two or three quarters to levels close to their pre-pandemic levels.

By the end of this year, we expect that most economies will to have returned to above 85% of their pre-pandemic activity levels. South Korea, Japan and China have already crossed that threshold.

The second chart also applies coloured arrows to show the direction of an economy’s momentum. This indicates that most economies in the Group of 20 nations have already bottomed-out and that there is a correlation between the speed of lockdowns, and recoveries. Most European Union countries, including Germany, France and Italy, along with Switzerland,

are accelerating after lifting their lockdowns. The [UK](#), which was slow to impose confinement, is lagging its continental neighbours.

It is clear that there is a correlation between the speed of lockdowns, and recoveries. So that north eastern Asia economies are leading the normalisation process, while in Europe, the UK lags the rest of continental Europe on a relative basis.

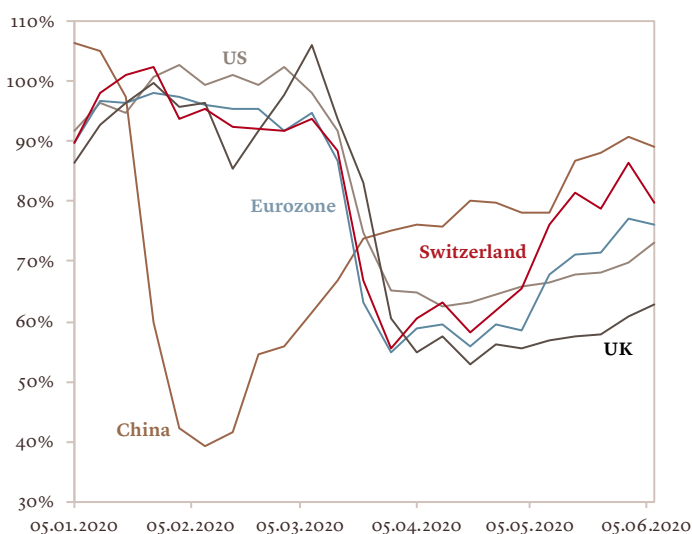
Risks and markets

The main risk to economic recoveries is of course the possibility of a second wave of Covid-19 cases. New cases rose in the US, including 25,000 recorded for 13 June, in part reflecting more testing. A surge of new infections in Beijing over the last four days, following a 55-day period with no domestic cases, has led to lockdowns in parts of the Chinese capital. Still, it is worth remembering that the tools for managing a resurgence of infections are [stronger](#), compared with three months ago.

As the pandemic’s risks have subsided, especially in the US, European Union and emerging markets, equity markets have started pricing-in a ‘V-shaped’ recovery, leaving little in the way of risk return available for stock market investors. Earnings per share expectations for this year have fallen in line with the wider economic slowdown, but since lockdowns have started to lift, they have begun to stabilise.

The S&P500 now looks fairly priced. Assuming a rapid economic [rebound](#), that leaves little upside for equity investors over the next 12 months. We continue to monitor our data signals to confirm that a V-shape recovery is indeed unfolding, along with second-quarter earnings and company guidance, and adjusting our clients’ portfolios to any potential downturns.

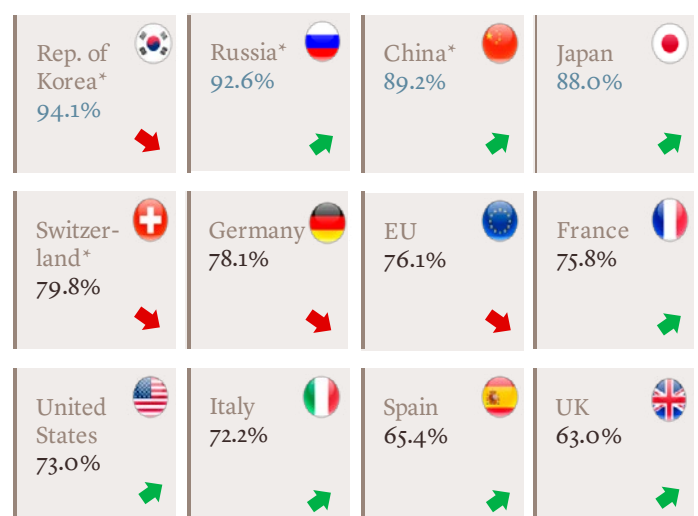
Chart 1: Economic normalisation: progress in selected countries



Source: Lombard Odier calculations

Chart 2: Real-time activity tracking in major economies

Normalisation of activity by country, as of 07.06.2020



* Computation completed upon alternative data sources
Source: Lombard Odier calculations

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SWITZERLAND

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Bank Lombard Odier & Co Ltd¹

Rue de la Corraterie 11 · 1204 Genève · Suisse
geneva@lombardodier.com

Lombard Odier Asset Management (Switzerland) SA

Avenue des Morgines 6 · 1213 Petit-Lancy · Suisse
Support-Client-LOIM@lombardodier.com
Management Company regulated by the FINMA.

FRIBOURG

Banque Lombard Odier & Cie SA · Bureau de Fribourg¹

Rue de la Banque 3 · 1700 Fribourg · Suisse
fribourg@lombardodier.com

LAUSANNE

Bank Lombard Odier & Co Ltd¹

Place St-François 11 · 1003 Lausanne · Suisse
lausanne@lombardodier.com

VEVEY

Banque Lombard Odier & Cie SA · Agence de Vevey¹

Rue Jean-Jacques Rousseau 5 · 1800 Vevey · Suisse
vevey@lombardodier.com

ZURICH

Bank Lombard Odier & Co Ltd¹

Utoschloss · Utoquai 29-31 · 8008 Zürich · Schweiz
zurich@lombardodier.com

EUROPE

BRUSSELS

Lombard Odier (Europe) S.A. Luxembourg · Belgium branch²

Avenue Louise 81 · Box 12 · 1050 Brussels · Belgium
brussels@lombardodier.com
Credit institution supervised in Belgium by the Banque nationale de Belgique (BNB) and the Financial Services and Markets Authority (FSMA).

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Lombard Odier (Europe) S.A. · UK Branch²

Queensberry House · 3 Old Burlington Street · London W1S 3AB · United Kingdom · london@lombardodier.com
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Lombard Odier (Europe) S.A.

291, route d'Arlon · 1150 · Luxembourg · Luxembourg
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Lombard Odier (Europe) S.A. · Succursale in Italia²

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milano-cp@lombardodier.com
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Bank Lombard Odier & Co Ltd · Representative Office Moscow

Letnikovskaya st.2, bld.1 · 115114 Moscow · Russian Federation · moscow@lombardodier.com
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Lombard Odier (Europe) S.A. · Succursale en France²

8, rue Royale · 75008 Paris · France. RCS PARIS B 803 905 157 · paris@lombardodier.com
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Bank Lombard Odier & Co Ltd · Representative Office Dubai

Conrad Business Tower · 12th Floor · Sheikh Zayed Road · P.O. Box 212240 · Dubai · UAE · dubai@lombardodier.com
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Bank Lombard Odier & Co Ltd

Alrov Tower 11th floor · 46 Rothschild Blvd. · Tel Aviv 6688312 · Israel · telaviv@lombardodier.com
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JOHANNESBURG

South Africa Representative Office ·

Bank Lombard Odier & Co Ltd

140 West Street · Sandton · Johannesburg 2196 · South Africa
johannesburg@lombardodier.com
Authorised financial services provider Registration number 48505.

MONTEVIDEO

Lombard Odier (Uruguay) SA

Luis Alberto de Herrera · Torre 2 · Oficina 2305
11300 Montevideo · Uruguay
montevideo@lombardodier.com
Supervised by Banco Central del Uruguay.

NASSAU

Lombard Odier & Cie (Bahamas) Limited

Goodman's Bay Corporate Centre · West Bay Street · P.O. Box N-4938 · Nassau · Bahamas · nassau@lombardodier.com
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Oceania Business Plaza Torre 2000 · Oficina 38-D · Blvd. Pacifica · Urb. Punta Pacifica · Corregimiento de San Francisco · Panamá · panama@lombardodier.com
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Lombard Odier (Hong Kong) Limited

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Lombard Odier (Singapore) Ltd.

9 Raffles Place · Republic Plaza #46-02 · Singapore 048619 · singapore@lombardodier.com
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Lombard Odier Trust (Japan) Limited

Izumi Garden Tower 41F · 1-6-1 Roppongi, Minato-ku · Tokyo 106-6041 · Japan · tokyo@lombardodier.com
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