RESEARCH PUBLICATION

MOODY'S INVESTORS SERVICE

Macroeconomics – Global

Coronavirus and the Economy: Alternative Data Monitor

Risks to the economic recovery are rising as infection rates resurge. Key high frequency indicators show an improvement in US consumer confidence and employment, but also a renewed decline in household spending as lockdowns are re-introduced. Consumer lending conditions tighten in the US and euro area.

SECTOR IN-DEPTH

10 JULY 2020

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Contents

Key messages

1

Data indicate that US consumer confidence and employment conditions are improving

June and July alternative and high frequency data indices suggest that an improvement in the US labor market has lifted consumer sentiment, leading to a partial recovery in consumption.

2

But widespread restrictions due to a second wave of infections could hamper the positive momentum

Household spending data shows the impact of renewed localized lockdowns due to the resurgence in infections. Spending across all income groups declined at the end of June, with spending on apparel and general merchandise, as well as arts, entertainment and recreation most affected.

3

Macro fundamentals drive advances in financial conditions in June

Our proprietary Financial Conditions Indicators show continued favorable US and euro area financial conditions in June, driven by improved consumer sentiment, tightening spreads and advances in equity market valuations amid lower volatility. Nevertheless, consumer lending conditions have tightened.

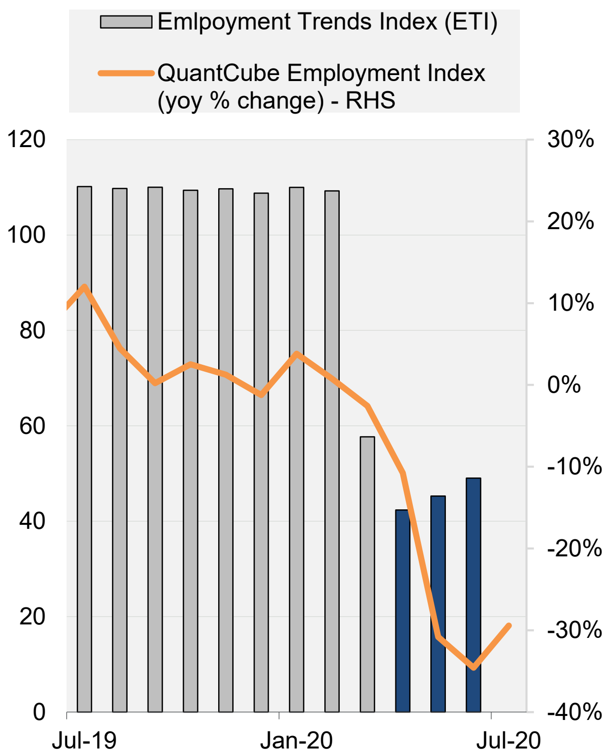
4

Risks to the economic recovery are rising; testing and tracing remain key in preventing a widespread resurgence of infections

The Oxford Lockdown Rollback Checklist reveals that very few countries are currently fulfilling World Health Organization (WHO) recommendations on large-scale testing, contact tracing and other criteria for a complete rollback of lockdown measures, even as many countries are proceeding with gradual reopenings. Thus, the risk of a new spike in infections remains high.

US labor market and consumer confidence are improving

EXHIBIT 1



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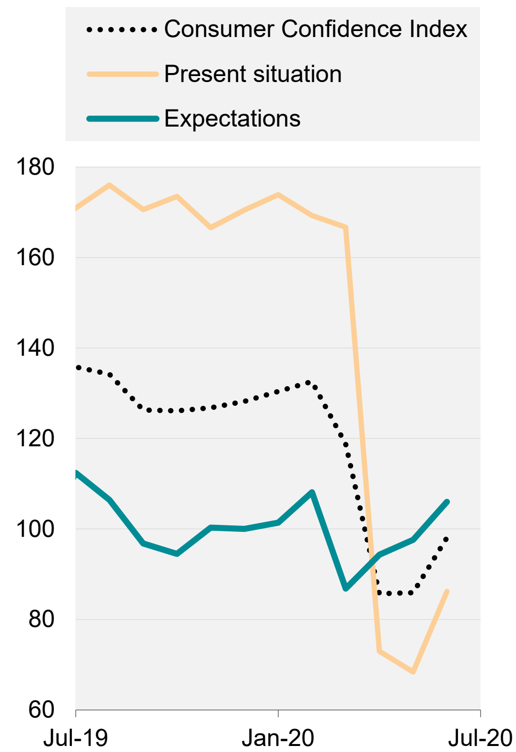


The Conference Board Employment Trends Index™ (ETI) aggregates 8 labor-market indicators: Percentage of Respondents Who Say They Find "Jobs Hard to Get" (The Conference Board *Consumer Confidence Survey*®), Initial Claims for Unemployment Insurance (U.S. Department of Labor), Percentage of Firms With Positions Not Able to Fill Right Now (© National Federation of Independent Business Research Foundation), Number of Employees Hired by the Temporary-Help Industry (US Bureau of Labor Statistics), Ratio of Involuntarily Part-time to All Part-time Workers (BLS), Job Openings (BLS), Industrial Production (Federal Reserve Board), Real Manufacturing and Trade Sales (US Bureau of Economic Analysis). Latest QuantCube data as of 1July 2020

Sources: QuantCube, Conference Board and Moody's Investors Service

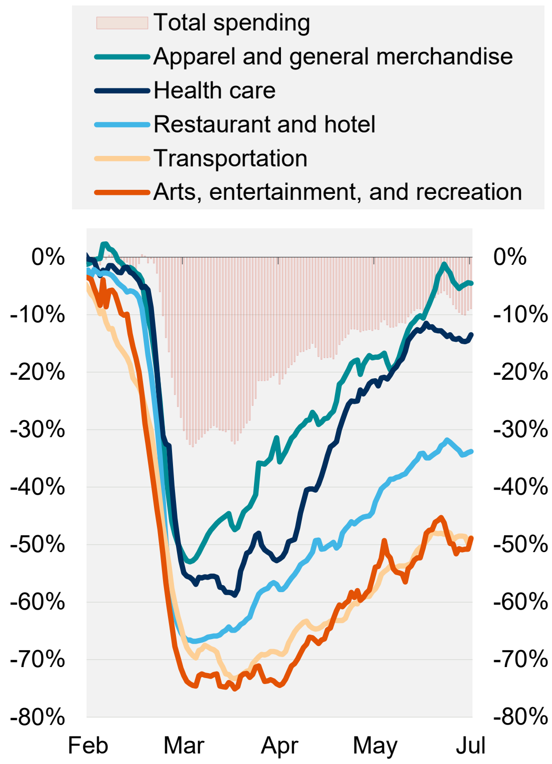
Key Takeaways

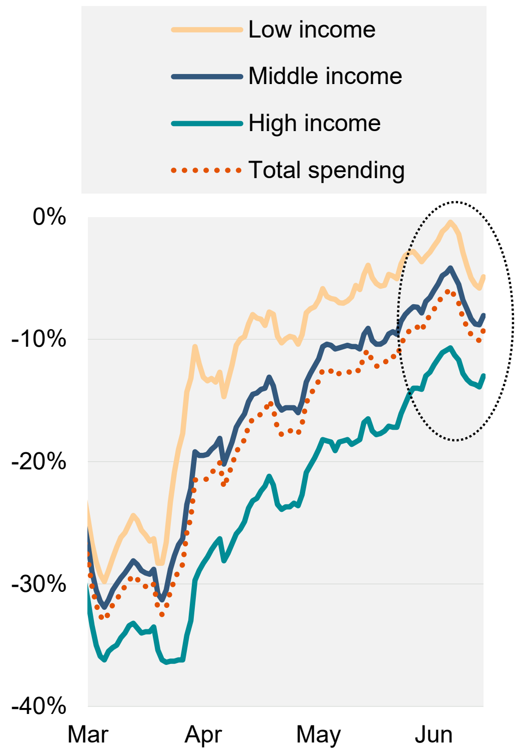
- Leading indicators point to the US labor market experiencing a gradual recovery
- The Conference Board Consumer Confidence Index signals consumers' more optimistic view of the future
- Nevertheless, a widespread second wave of infections and renewed lockdowns could reverse the positive momentum and derail the economic recovery

But new lockdown measures could hinder the recovery

EXHIBIT 3

US household spending (daily data, compared to January 2020)





Sources: "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data", by Raj Chetty, John Friedman, Nathaniel Hendren, Michael Stepner, and the Opportunity Insights Team. June 2020. Available at: https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf and Moody's Investors Service

Key Takeaways

» Overall US consumer spending bounced back quickly in May and June

» But challenges are manifesting as infections surge again and some states place re-openings on hold or re-introduce localized lockdowns

» The newly imposed measures are causing a retrenchment in consumption across all income groups and creating uncertainly about the pace of the recovery

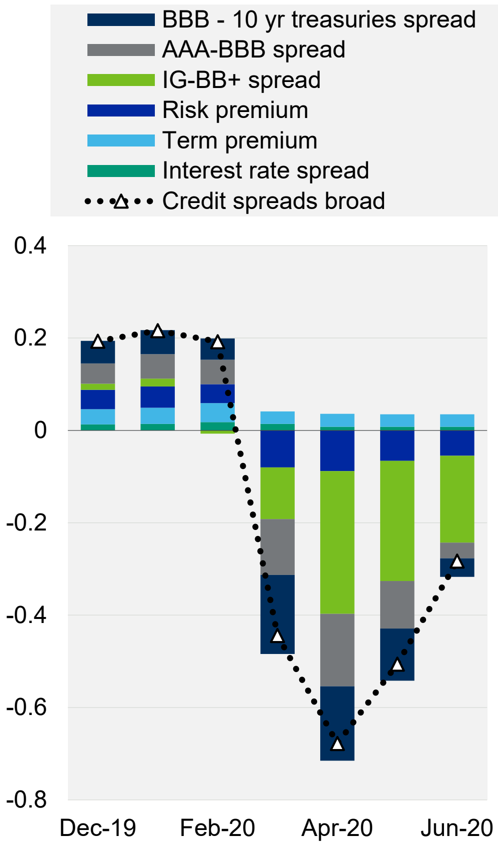
» Household spending on apparel and general merchandise, as well as arts, entertainment and recreation were most affected

Lending conditions remain favorable

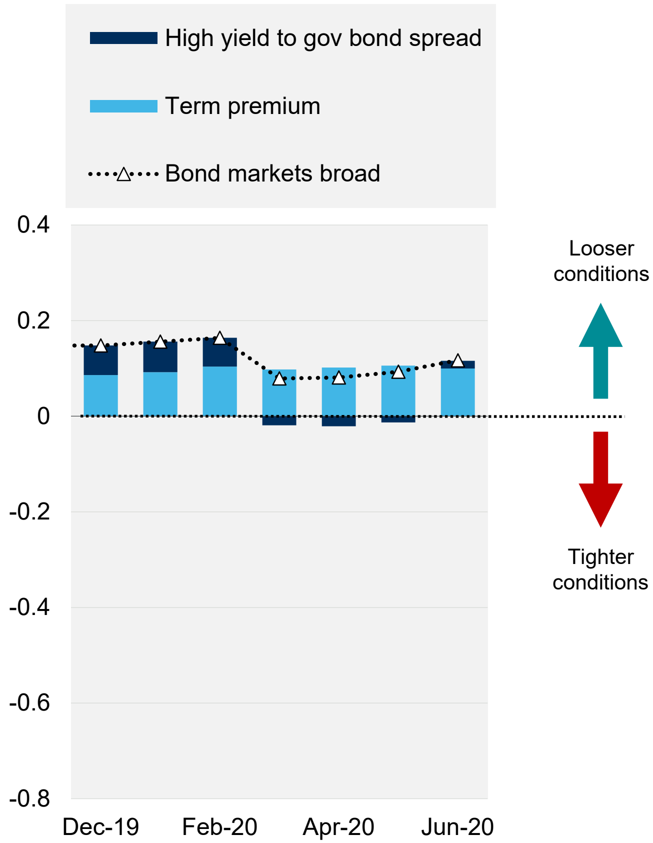
Monthly individual and broad indicators (weighted), contributing to Moody's FCI

EXHIBIT 4

US



Euro area



*See slides 13-15 for details on the FCI. Latest data as of 7 July 2020.
Source: Moody's Investors Service

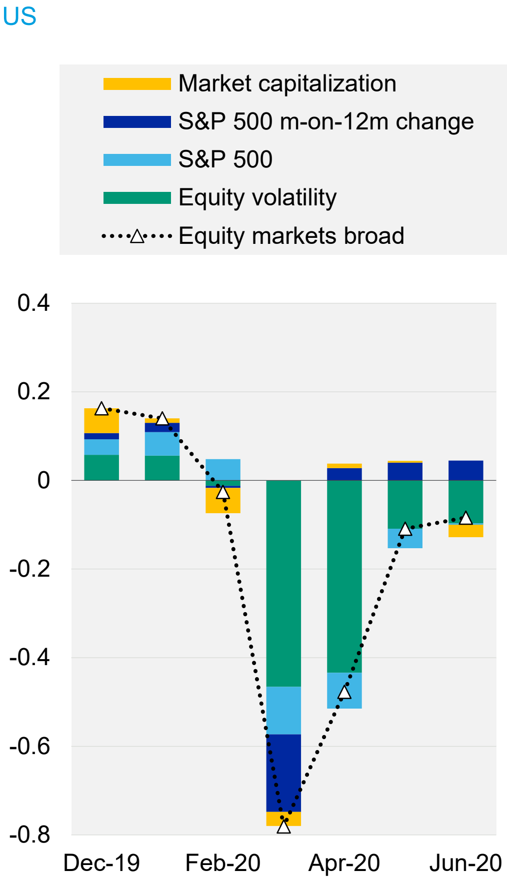
Key Takeaways

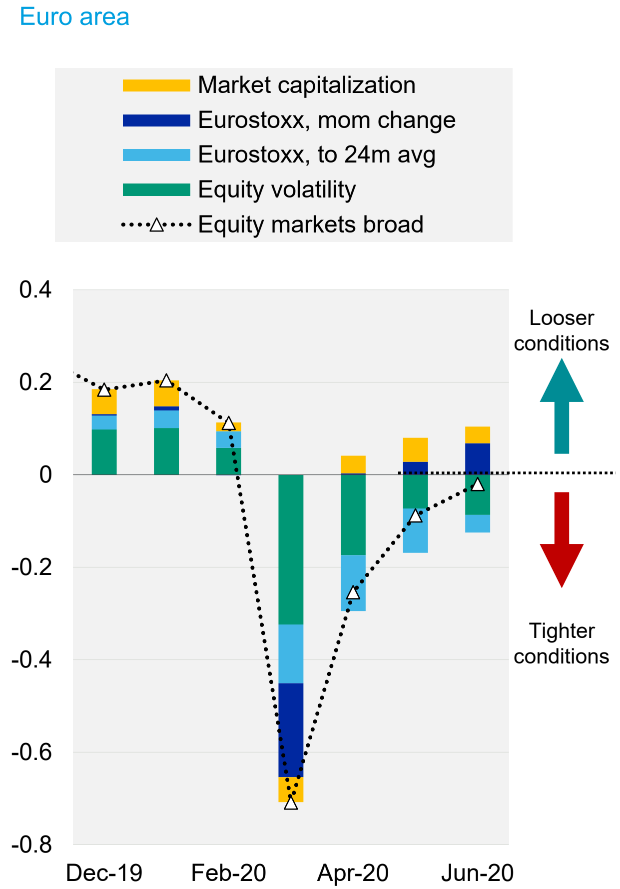
- In June, US credit spreads continued their relative tightening, which started in May, although they remain wider than historical averages and continue to drag down the overall Credit Spreads' contributions to our FCI index
- Euro area spreads remain below their long-term averages, pointing to more favorable borrowing conditions compared with the US
- Tightening of credit spreads lowers issuers' borrowing cost and supports liquidity

Equity market turbulence has subsided

Monthly individual and broad indicators (weighted), contributing to Moody's FCI

EXHIBIT 5





*See slides 13-15 for details on the FCI. Latest data as of 7 July 2020.
Source: Moody's Investors Service

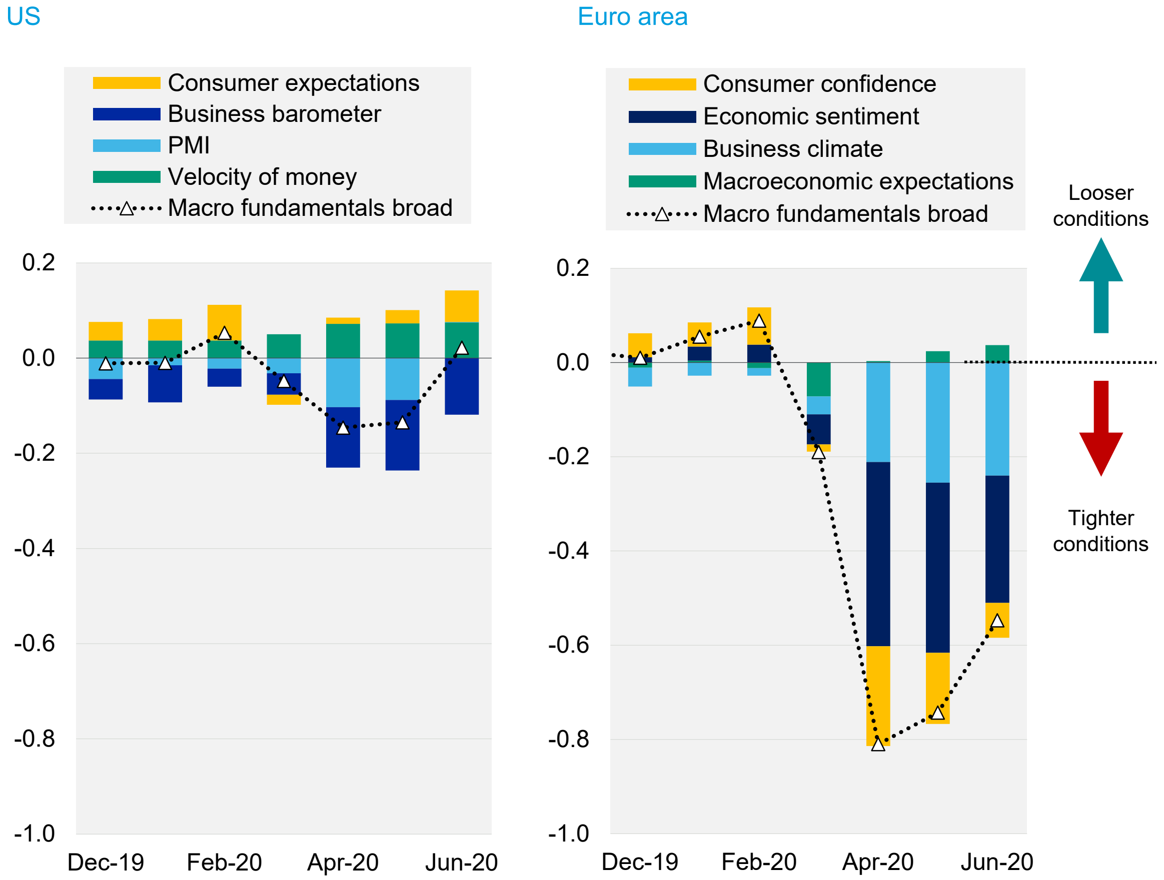
Key Takeaways

- Equity markets broad indicators for the US and euro area improved in June, although they remain in negative territory
- Equity market turbulence has subsided, more so in the euro area
- Equity markets valuations have staged a recovery amid lower volatility
- The equity markets recovery limits potential negative effects on the economy via wealth effects, but is to a large extent due to central bank support measures

US macro fundamentals stage a recovery

Monthly individual and broad indicators (weighted), contributing to Moody's FCI

EXHIBIT 6



*See slides 13-15 for details on the FCI. Latest data as of 7 July 2020.
Source: Moody's Investors Service

Key Takeaways

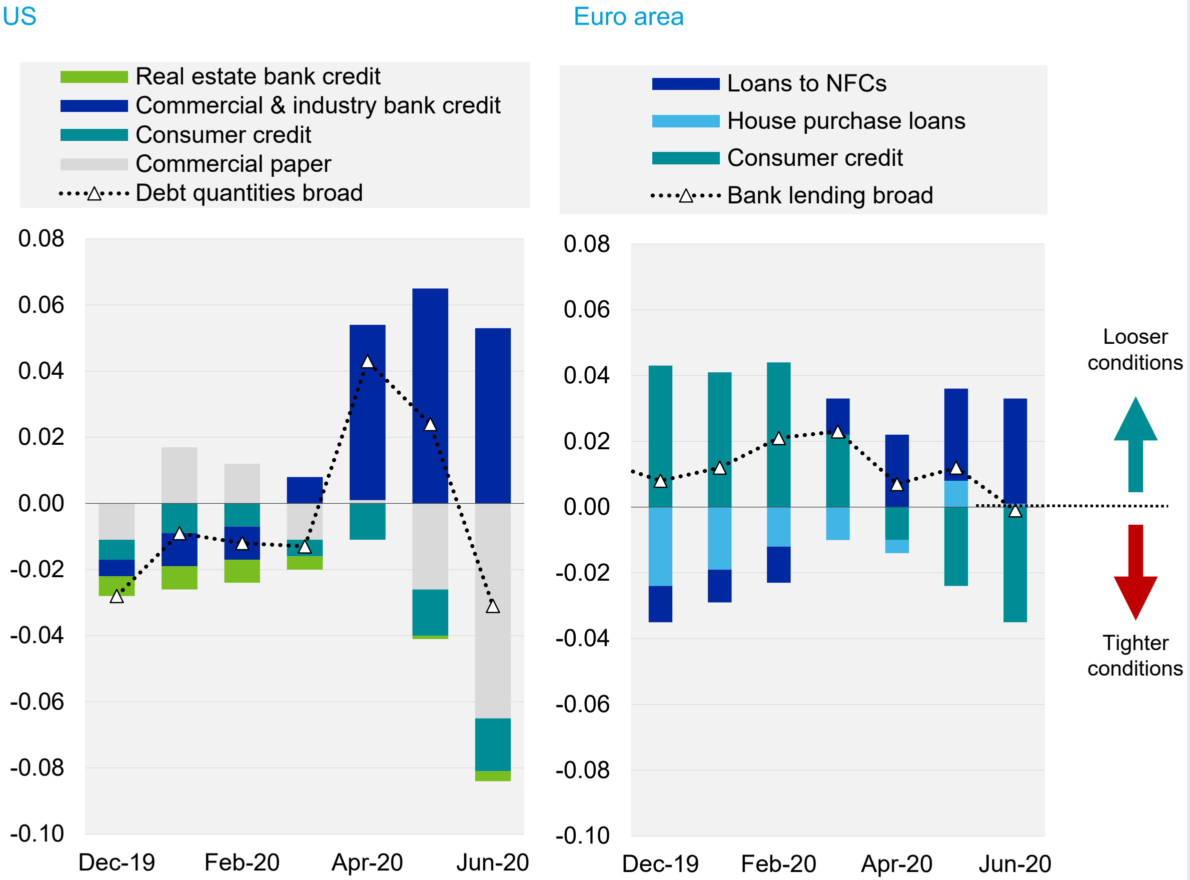
» US macro fundamentals posted a strong recovery, returning to positive territory led by consumer expectations. Business confidence, however, improved only slightly and remained in negative territory, reflecting business disruptions due to the new lockdowns and surging infection rates

» While euro area economic sentiment, as well as consumer and business confidence, staged a modest improvement, they remain weak overall

Consumer lending conditions tighten

Monthly individual and broad indicators (weighted), contributing to Moody's FCI

EXHIBIT 7



*See slides 13-15 for details on the FCI. Latest data as of 7 July 2020.
Source: Moody's Investors Service

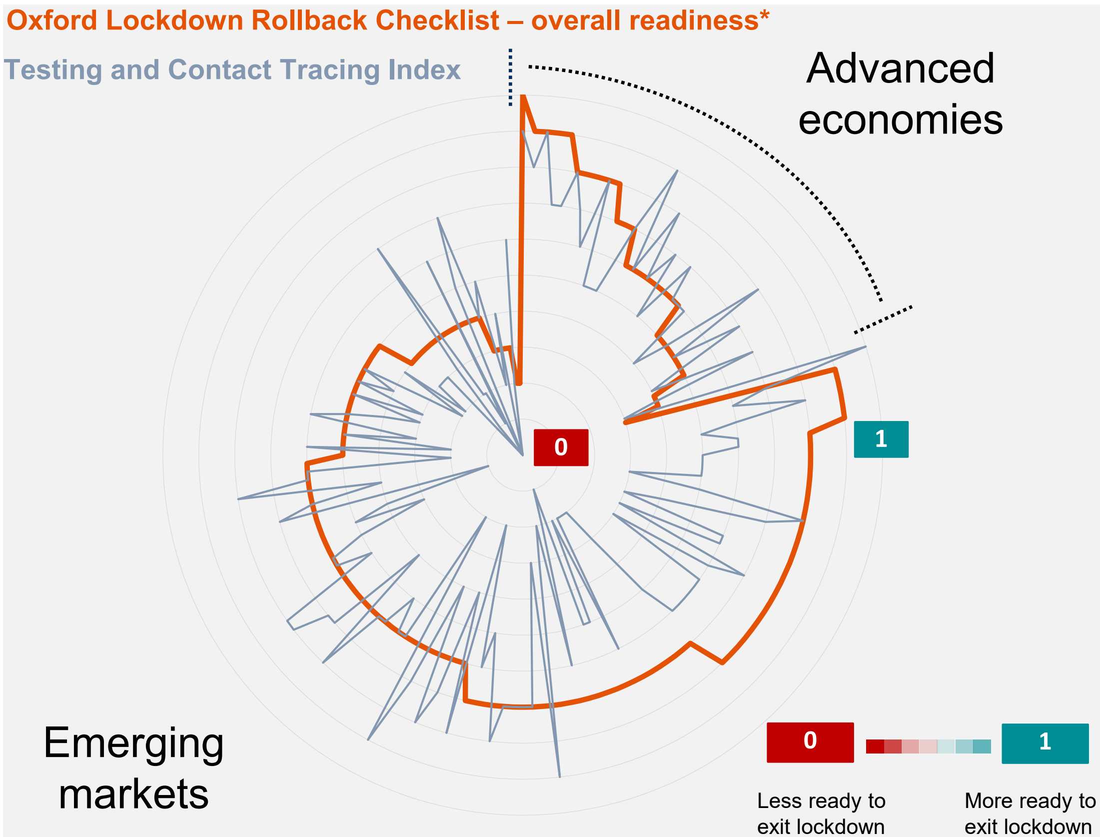
Key Takeaways

- Lending conditions for businesses remained favorable throughout June as financial markets priced in extended government support
- However, the Debt quantities and Bank lending indicators signal a weakening of consumer lending conditions
- Tighter consumer lending conditions will weigh on household spending. The low-income segment of the population is particularly vulnerable since COVID job losses were predominantly concentrated in lower-pay employment

Risk of a resurgence of infections persists

Few countries have fulfilled or come close to fulfilling WHO's recommendations for reopening their economies

EXHIBIT 8

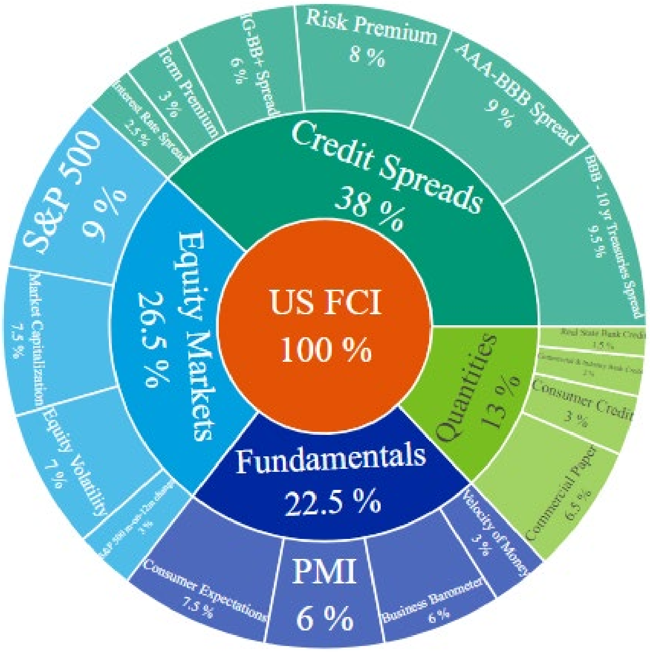


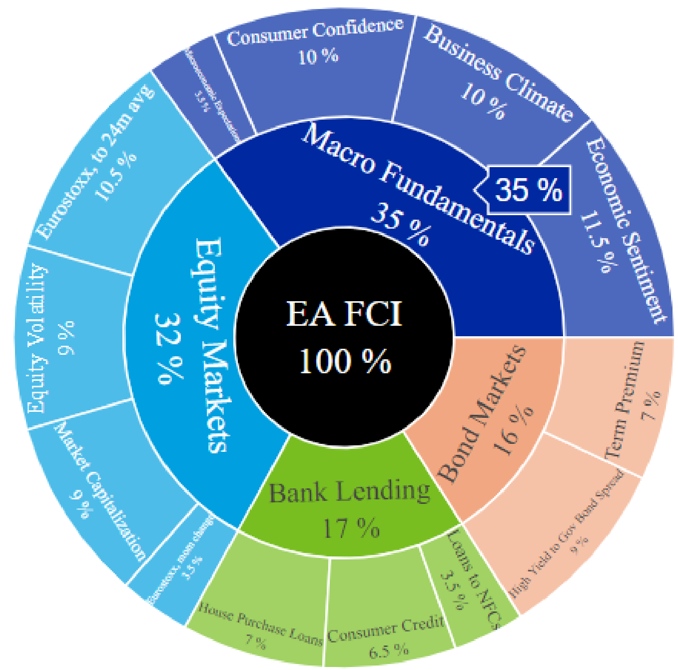
*See slide 15 for details on the indicators.
Sources: Oxford COVID-19 Government Response Tracker and Moody's Investors Service

Key Takeaways

- The Oxford Lockdown Rollback Checklist (overall readiness) and the Testing and Contact Tracing Index indicate that few countries are prepared to end restrictions, even as they continue to roll back lockdowns
- WHO advises measures such as large-scale virus testing and tracing to limit the risk of a second wave of infections. But very few countries have fulfilled WHO's recommendations for a complete rollback of lockdowns
- Advanced economies diverge widely in terms of degree of fulfillment of the recommendations. Easing of lockdowns advances in some countries, while reverses in others due to a spike in infection rates
- The Testing and Contact Tracing Index is a metric between 0 and 1, based on testing and contact tracing policy, as well as the number of tests per case that a country has conducted

Appendix: Moody's Financial Conditions Indicators (components)





The US Financial Conditions Indicator (FCI) is an indicator of the state of the financial stress in the US economy. It is constructed as a weighted-average of 18 individual components, which were normalized to have an average of zero and a standard deviation of one for the period starting in 1980 to January 2019. The individual components are grouped into four broad categories: Credit Spreads, Equity Markets, Fundamentals and Quantities.

Negative values of the FCI are to be interpreted as tighter-than-average financial conditions, whereas positive values as looser-than-average financial conditions.

The euro area (EA) Financial Conditions Indicator (FCI) is an indicator of the state of the financial stress in the euro area economy. It is constructed as a weighted-average of 13 individual components, which were normalized to have an average of zero and a standard deviation of one for the period starting in 1999 to September 2019. The individual components are grouped into four broad categories: Bond Markets, Equity Markets, Macro Fundamentals and Bank Lending.

When the FCI is close to zero, it indicates that overall financial conditions are close to their long-term averages (around 20-year). Negative values of the FCI are usually interpreted as tighter-than-normal financial conditions, while positive values are associated with stronger financial conditions than long-term averages.

Source: Moody's Investors Service

Appendix: Moody's Financial Conditions Indicators

Components in detail: **US** FCI

US FCI components and weights

Broad Component	Individual Component	Definition	Weight
Credit Spreads	Interest Rate Spread	10-Year Treasury Bond Less Fed Funds Rate, pp	2.5%
	Term Premium	10-Year Treasury Note Less 3-Month T-Bill, pp	3%
	Risk Premium	Investment Grade Yield Less-10-Year Treasury Note, pp	8%
	IG—BB+ Spread	15-Year BB+ Less Investment Grade, pp	6%
	AAA—BBB Spread	10-Year BBB Less 10-Year AAA, pp	9%
	BBB—10-Year Treasury Spread	10-Year BBB Less 10-Year Treasury Note, pp	9.5%
Equity Markets	Equity Volatility	Monthly Volatility of Daily Stock Returns, %	7%
	S&P 500	S&P 500 Index Relative to 24-Month Moving Average, ratio	9%
	S&P 500	S&P 500, month-over-month % change	3%
	Market Capitalization	Equity Market Cap/GDP, year-over-year % change	7.5%
Macro Fundamentals	Velocity of Money	Velocity of Money, ratio	3%
	Purchasing Managers' Index (PMI)	ISM Manufacturing: PMI Composite Index	6%
	Business Barometer	MNI-Chicago Report: Business Barometer Index	6%
	Consumer Expectations	Consumer Expectations, 1985=100	7.5%
Debt Quantities	Commercial Paper (CP)	CP Outstanding, real, year-over-year % change	6.5%
	Consumer Credit	Consumer Credit Outstanding, real, year-over-year % change	3%
	Commercial & Industry Bank Credit	Bank Credit: C&I loans, real, year-over-year % change	2%
	Real Estate Bank Credit	Bank Credit: Real Estate Loans, R\real, year-over-year % change	1.5%

Source: Moody's Investors Service

Appendix: Moody's Financial Conditions Indicators

Components in detail: **Euro area** FCI

Euro area FCI components and weights

Broad component	Individual component	Weight
Bond Markets	Euro area: 10-yr government bond yield (%); Euro area: 2-yr government bond yield (%), pp	7.0%
	Merrill Lynch euro area high-yield bond yields over 10-yr government bond yields	9.0%
Equity Markets	Stoxx 50 volatility index (VSTOXX)	9.0%
	Eurostoxx total return index, relative to 24m moving average	10.5%
	Eurostoxx total return index, mom % change	3.5%
	Euro market capitalisation/GDP, yoy %	9.0%
Macro Fundamentals	Euro area ZEW economic sentiment, macro expectations for the next six months	3.5%
	Euro area business climate indicator, European Commission	10.0%
	Euro area economic sentiment indicator, European Commission	11.5%
	Euro area consumer confidence indicator, European Commission	10.0%
Bank Lending	Bank lending to households, yoy % change	6.5%
	Bank mortgage lending, yoy % change	7.0%
	Bank lending to nonfinancial companies, yoy % change	3.5%

Source: Moody's Investors Service

Appendix: Oxford Lockdown Rollback Checklist

WHO recommendation	**Data sources**	**Rollback readiness**
Transmission controlled	*No OxCGRT indicators* Daily cases and deaths (from European CDC via Our World in Data)	A metric between 0 and 1 based on new cases confirmed each day.
Test / trace / isolate	OxCGRT: H2 (testing policy) OxCGRT: H3 (contact tracing policy) Testing data from Our World in Data	A metric between 0 and 1, half based on testing and contact tracing policy, and half based on the number of tests-per-case a country has conducted. (does not measure isolation)
Manage risk of exporting and importing cases	OxCGRT: C8 (international travel restrictions)	A metric between 0 and 1 based on the stringency of the country's restrictions on travel arrivals. (does not measure risk of exporting cases)
Communities understanding and behaviour change	OxCGRT: H1 (public information campaigns) Travel and mobility data from Apple and Google. Daily cases and deaths (from European CDC via Our World in Data)	A metric between 0 and 1 based on whether a country has a public information campaign and the level of mobility reduction, weighted for current transmission risk.

Source: Oxford COVID-19 Government Response Tracker

Moody's related publications

Outlook

» Global Macro Outlook 2020-21 (June 2020 Update): Global economy is limping back to life, but the recovery will be long and bumpy, June 2020

Sector research

» Non-Investment Grade Sovereigns - Global: Coronavirus shock triggers sharp economic downturn and intensifies fiscal and external liquidity challenges (Slides), July 2020

» Credit Conditions – Global : Coronavirus will shape and accelerate global economic, business and consumption trends, June 2020

» Emerging Markets – Global: Financial conditions stabilise, but pandemic fallout casts shadow on H2 credit prospects, June 2020

» Global Trade Monitor: May 2020, May 2020

» Credit Conditions – Global : Coronavirus will shape and accelerate global economic, business and consumption trends, June 2020

» The State of the US Consumer: May 2020 (Slides), May 2020

» Macroeconomics – US: Staggering surge in unemployment likely to be temporary, April 2020

» Coronavirus – US: SMEs will bear the brunt of the coronavirus crisis, intensifying the economic downturn, April 2020

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