



During the COVID-19 crisis we will provide regular updates such as this one in between our quarterly webinars which discuss themes affecting global markets. Other COVID-19 updates are available on our website, www.eipny.com.

SLIDE 1

Month Two of the Global Recession: The End of the Beginning?

Contrast the outlook on three dates

- Jan 6: Fading concerns, modest returns (on trade war détente)
- Feb 15: COVID-19 growth peaked in China, minimal spreading elsewhere (a replay of SARS)
- March 9: COVID-19's growth ex-China accelerating (a global recession appears inevitable)
- April: Likely to change again

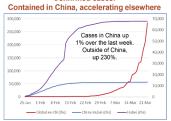
Requirements for markets to stabilize

- 1) Peak in the rate of new infections
- (a) A large, timely & effective fiscal package:
 To support the real economy
 (b) Fed updates GFC playbook: To stabilize financial markets
- Credit markets: Liquidity and depth improve, reversing negative feedback loops

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- Known knowns
- 2) Known unknowns
- 3) Unknown unknowns

Confirmed cases:

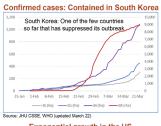


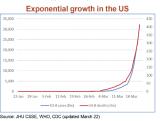
Source: JHU CSSE, WHO (updated March 22)

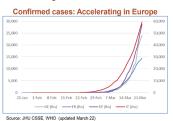
The outlook of investors has changed dramatically since the beginning of the year and will likely continue to shift as we enter Q2. The key development over the last month is that, while few new infections have been diagnosed in China, the number of new cases in Europe, the U.S. and many other countries is accelerating. The associated shocks have resulted in severe market dislocations, with the main purpose of this deck being to explain the three requirements for markets to stabilize and begin to recover.

SLIDE 2

Global Pandemic: Cases Still Rising Exponentially Outside China









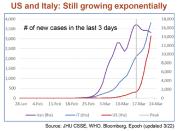
Outside of China, South Korea is one of the few countries to experience a declining trend in new cases. Unfortunately, the number of confirmed cases in Europe and the U.S. are still increasing exponentially. One reason why the numbers in the U.S. are rising so quickly is that testing is finally ramping up. By the end of the month we should be able to perform a million tests per day.



Rate of Change and S-shaped Curves: Exponential vs. Logistic Growth

Clear inflection points: Hubei & S Korea f new cases in the last 3 days

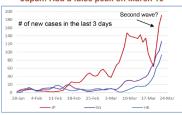
ource: JHU CSSE, WHO, Bloomberg, Epoch (updated 3/22)



Number of new cases in the last 3 days

- Hubei: Peaked Feb 16
 - 6 or 7 weeks after epidemic started o Data pre-Jan 21 is spotty
- S Korea: Peaked March 3
 - o 6 weeks after outbreak commenced

Japan: Had a false peak on March 10



Source: JHU CSSE, WHO, Bloomberg, Epoch (updated 3/22)

Another way to look at the outbreak is to chart the number of new cases over the last three days. On that metric, Hubei and South Korea are clearly past the peak, with their inflection points being reached about six weeks after their outbreaks started. One worrisome development is that Japan appears to be experiencing a second wave of cases, questioning their ability to suppress the spread of the virus.

SLIDE 4

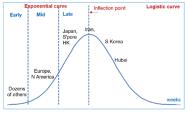
An Inflection Point in the U.S.: Could be Four to Six Weeks Away

Similar patterns in Europe and the US



Source: JHU CSSE, WHO, CDC, Bloomberg, Epoch (updated 3/22)

Hypothetical, just for illustrative purposes: Number of new cases



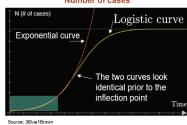
In the real world, there is no such thing as an exponential curve

- Real limits always set it: For example, the entire population becomes infected
- Logistic and exponential curves: Look identical up to the inflection point

The number of cases will eventually inflect

And that point will be crucial to market

Exponential vs Logistic curves: Number of cases



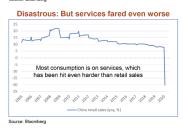
Many commentators worry that the number of new cases will continue to skyrocket indefinitely. However, in the real world there is no such thing as an exponential curve, even though it might look like it for two to six weeks. The evidence from Hubei and South Korea suggests the U.S. could reach its inflection point in four to six weeks. This will also depend on the success of the government-mandated social distancing measures being implemented.

SLIDE 5

China's Macro Experience with a Fifty-Day Lockdown: Are We Next?

China's PMIs: Worse than during GFC





Production and Investment: Off a cliff

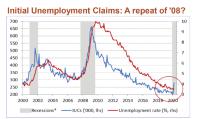




Hubei imposed a fifty-day lockdown period to suppress the virus. One result was the most severe economic contraction experienced in China since Mao. The good news is that economic activity is climbing back to normal, albeit very slowly. The gradual rate is deliberate and meant to minimize the chance of a second wave of cases, which would be a disturbing and worrisome development.



U.S.: Govt-mandated Social Distancing - Expect a Breathtaking Spike in Layoffs



	Impact of	% of	Peak impact on		
Sector	COVID-19 (%)	US GDP	level of US GDP (ppts)		
Hospitals	+15	5.4	+0.8		
Outpatient care	+15	5.1	+0.8		
Package tours	-90	0.1	-0.1		
Casino gambling	-90	0.7	-0.5		
Sports & entertainment	-85	1.0	-0.9		
Public transportation	-75	0.8	-0.6		
Hotels & food services	-65	4.8	-3.1		
Domestic services	-50	0.4	-0.2		
Social services	-30	1.0	-0.3		
Personal care	-30	0.7	-0.2		
Education services	-15	1.4	-0.2		
Non-profit services	-15	2.1	-0.3		

rce: Bloomberg, Epoch Investment Partners

Who's most at risk?

Leisure & hospitality employs 17 mn people; retailing (aside from groceries, pharmacies & gas) has 10 mn; and air travel 0.5 mn.

27 million jobs in danger

Losing half those jobs would put unemployment Source: JP Morg north of 10%, the GFC peak

GDP Forecasts: Economists remain too optimistic

	%, yoy						
	2019	2020	2021	1Q20	2Q20	3Q20	4Q20
US	2.3	-1.8	2.3	-4	-14	8	4
Euro Area	1.2	-3.4	4.7	-15	-22	45	4
China	6.1	1.1	9.8	-41	57	24	6
World	2.6	-1.1	4.3	-12	-1	19	4

While the U.S. data may not turn down as sharply and deeply as China's, a recession seems inevitable and we should witness a breathtaking spike in layoffs, likely beginning this Thursday. At the beginning of the year initial unemployment claims and the unemployment rate were at their lowest levels since Nixon was President. Unfortunately, they are both likely to soon retest their highs of the Global Financial Crisis.

SLIDE 7

Monetary Policy at the Lower Bound: The New Normal 2.0

What can the Fed do, and will it make any difference?

- 1) Cut rates to zero
- 2) Forward guidance
- QE4: Treasuries + MBSs
- 4) Increase repos: Provide liquidity to banks
- 5) Purchase CP: Liquidity for large corporates
- Reactivate liquidity facilities used during GFC: As liquidity and funding sources dry up

Monetary policy can't mend broken supply chains

- Fed can't reopen factories shuttered by quarantine
- Likewise, monetary policy will not get shoppers back to the malls or travelers onto airplanes
- Open Table: Restaurant bookings down 98%

Modern Monetary Theory

Fusion of Monetary & Fiscal Policy

Who will pay for the \$1.5 tn fiscal package?

- Taxpayers: Not in a recession (or ever)
- Bond market: Risks dramatic rise in interest rates
- The Fed (via QE): Provided inflation remains tepid

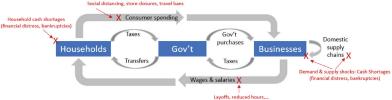
Fed Treasury Purchases: Already ramping up QE4



The Fed was the focus of policymaking in 2008. This made sense as the GFC was primarily a crisis of the financial sector, that then spread into the real economy. The situation today is the reverse as the ongoing supply and demand shocks are hitting the real economy directly, and then spreading into the financial sector. This means fiscal policy, possibly financed by Fed QE, needs to play the leading role.

SLIDE 8

Economic Map: The Disruption Resulting from Social Distancing



Supply & demand shocks: Struck the economic 'machine' in several places simultaneously

- Need to protect the economy's productive capacity: So it can rebound once virus risk recedes COVID-19 shouldn't destroy otherwise healthy businesses
- Support cash-strained households: By transfers & expanding existing safety net programs

Implies two objectives of economic policy

- Help most vulnerable and exposed households and businesses
- Prepare so that the eventual recovery is as rapid and robust as possible

Unfortunately, this is extremely difficult to do in a timely and effective manner

- Current policy proposals fall far short of what is needed
- Moreover, the Small Business Administration is notoriously inefficient, slow and cumbersome Key policy challenge: Reduce the accumulation of 'economic scar tissue

This schematic illustrates how money flows through the real economy, with a red "X" used to show disruptions caused by the shocks associated with social distancing. This demonstrates that during the current crisis the key objective of economic policy needs to be supporting vulnerable and exposed households and businesses. Unfortunately, policymakers don't have a tried and tested playbook for this type of scenario, suggesting a very rocky road likely lies ahead.



Economic Map: Adding in the Financial Sector

Reaching for the GFC playbook: The policies that worked then, won't suffice today

The GFC was, first and foremost, a financial shock: It then took a severe toll on the real economy Today, 50% of small businesses have less than 15 days of cash buffer (Source: JPMorgan)

- 75% have already experienced a decline in sales (Source: Goldman Sachs)



Source: Mankiw, G (2010), "Mac nomics" and Baldwin, R (2020), "Economic medicine for a medical shock," VoxEU

Credit markets seizing up: Amplifying the economic fallout

Negative feedback loops, between volatility and

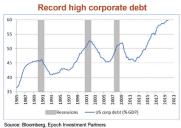
- Market liquidity
- Funding markets
- 3) Deleveraging by VaR sensitive investors

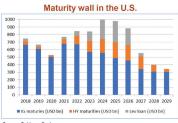
The Fed will, once again, run into the "Whac-A-Mole" problem

Adding the financial sector to the schematic helps demonstrate the key role played by the financial sector and credit markets in today's complex and interlinked economy. As also happened during the GFC, credit markets are seizing up and market volatility has spiked. This has brought into play a number of negative feedback loops that the Fed is frantically, and so far with mixed success, trying to suppress.

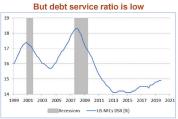
SLIDE 10

Debt Refinancing Issues Loom Large





Source: Goldman Sachs

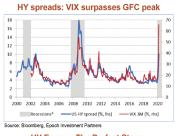




To some extent this is a problem of the Fed's own making. Since 2008 it has helped keep interest rates extraordinarily low and done much to suppress market volatility. This has encouraged corporates to raise leverage to record high levels, as seen in the explosive growth of both investment grade and high yield markets. The latter is particularly problematic, as the Fed has few tools available to manage disruptions and dislocations in the high yield market.

SLIDE 11

HY Spreads: Volatility Threatens Liquidity & Funding Markets





CDS spreads: Up from historical tights



Other HY sectors: More disruption to come?



Sharply higher volatility has been associated with a spike in HY spreads, a collapse in liquidity and a seizing up of funding markets. This represents a clear and present danger for American businesses, especially small- and medium-size enterprises, as well as larger firms without an investment grade rating. Alleviating these disruptions and dislocations needs to be a key focus of policymakers.



Liquidity and Market Depth are Poor: Negative Feedback Loops





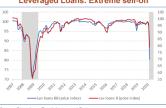
Commercial Paper: Liquidity risk soars





Funding markets: Stress fractures

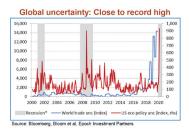
Leveraged Loans: Extreme sell-off



Broadly defined financial conditions are now as stressed as they were during the GFC. The Fed has implemented a wide range of policies to improve liquidity and market depth. However, this is especially difficult to do in markets associated with credit risk, as the Fed faces a number of statutory limitations, several of them imposed by Congress after the GFC. Among other things, this means the Fed will have to work more closely with the Treasury than it did in 2008.

SLIDE 13

Even Before COVID-19, It Was a Challenging Environment



Central banks' mispricing of capital

- The excesses finally come home to roost?
- · Leverage was built up on the premise of a CB put o Is this another Minsky moment?

A World of Yield Starvation

· Bond yields were driven lower by elevated policy aggressive central banks.

uncertainty, demographic challenges, and hyper-

Three Economic Scenarios for 2H2020 and 2021

- 1. Snap-back: Outbreak is contained in H1 and the massive monetary & fiscal stimulus kick in
- Stagnation: Virus is suppressed, but litters remain, Policy underwhelms (poorly designed, weak execution) and credit problems continue, keeping investment and employment depressed.
- 3. Subdued pick-up: Trend-like growth, with unemployment remaining high. Little boost to NIPA profits.

Key developments to monitor

• (1) Outbreak's trajectory; (2) Effectiveness of policy responses; and (3) Stabilization of credit markets

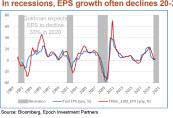
Among our economic scenarios, a snapback is the most optimistic. However, it requires three conditions: that the outbreak is quickly suppressed, that policy responses are timely and effective, and that credit markets rapidly normalize. While possible, this is a tall order and requires an awful lot of things to go right. We are especially concerned about all the hidden leverage ("you find out who's been swimming naked when the tide goes out") and the law of unintended consequences. The path out of a crisis is rarely smooth and uneventful.

SLIDE 14

U.S. Equity Markets: 2020 vs. Previous Bear Markets

Fastest descent: Bad news travels fast Historically, on average, it took 9 month for the SPX to decline 30% Average SPX decline 0 50 100 150 200 250 300 350 400 450 500 550

In recessions, EPS growth often declines 20-35%



SPX: Most similar to 1987, so far



Lower PERs: Reflecting stale EPS estimates?



Over the last fifty years it has, on average, taken over nine months for the SPX to drop by 30%. The speed and severity of this bear market is most similar to 1987 (which was more technical or structural in nature and did not involve a recession) and 2008 (after Lehman's collapse). While valuations may appear superficially attractive, we believe we are not yet at the point where markets can stabilize and begin to recover.



Conclusions and Investment Outlook

Requirements for markets to stabilize and begin to recover

- 1) Peak in the rate of new infections
- 2) (a) A large, timely & effective fiscal package: To support the real economy (b) Fed updates GFC playbook: Manages to stabilize financial markets
- 3) Credit markets: Liquidity and depth improve, reversing negative feedback loops

A World of Yield Starvation: Bond yields had been driven lower by elevated policy uncertainty, demographic challenges, and hyper-aggressive central banks. With COVID-19, bond yields plummeted to new record lows.

However, dividends are likely to remain robust: This partially reflects a capital-lite world. Consequently, even though some firms may reduce buybacks, the yield available from equities can be far superior to that attainable in fixed income markets.

Free cash flow yield: Is one of the variables with the best track record in the recovery from a bear market.

(Source: Empirical Research)

As a result of the above points, the best positioned companies are those that have a demonstrated ability to produce sustainable FCF and allocate that cash flow effectively between return of capital options and reinvestment/acquisition opportunities.

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