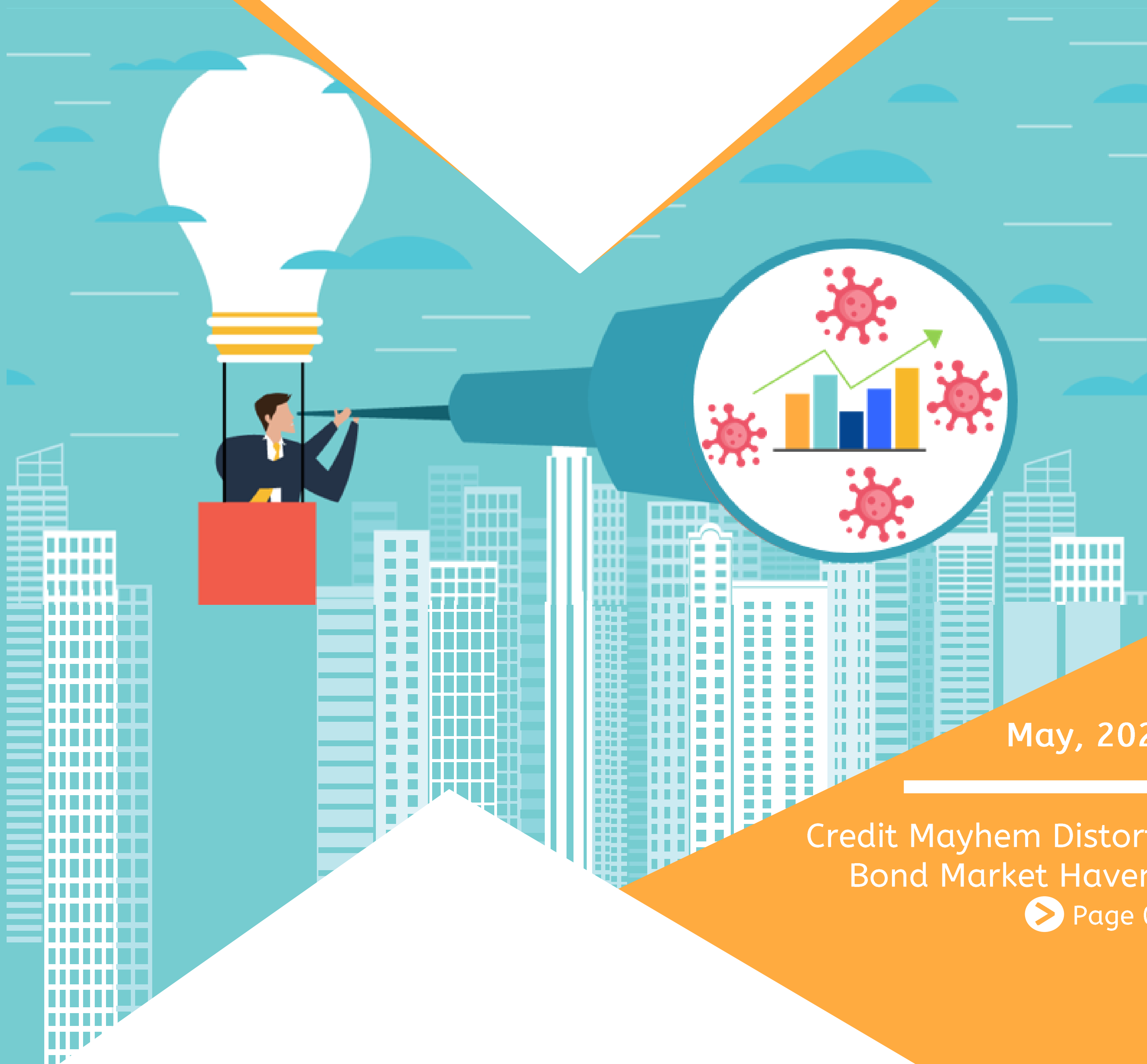
Leveraged Growth

Dissecting the Global Liquidity Crisis

ECONOMIES + SAFE HAVENS + STIMULUS + INDIA STORY



May, 2020

www.leveragedgrowth.in

Executive Summary

The scale and seriousness of quarantines introduced during March 2020 effectively brought economic activity to a global standstill. Italy seems ready to enter into a painful cycle of excruciating debt and aging population, France is marginally better placed. Germany has twin problems of stagnating exports and deflation, it seemingly also has the resources to fight them for now. UK seems lost between dealing with Brexit or the health crisis looming at its doorstep. USA, after embroiling itself in a historic trade war, now finds itself in a different war altogether – one that it will need 'unlimited' resources to fight and win.

Stating the obvious, there has never been a bear market quite like this. What's incredibly intriguing are the occurrences across asset classes, considered unprecedented even for crises. The US bond market warrants deep analysis given the unnatural and abysmal performance of Investment Grade Bond ETFs to that of Junk Bond ETFs. Moreover, US Treasury Bond ETFs were in chaos as flight to safety clashed with illiquidity causing severe market imbalance, dwindling investor confidence. Globally, currency markets faced a similar chaotic brunt as foreign investor withdrawals put pressure on respective central bank's dollar reserves; who to stabilize their local currency inturn amplified the global selling spree by liquidating their dollar asset holdings. Yen's status as the crisis currency is being put to the test, with Japanese policy makers enhancing downward pressure on Yen by successfully encouraging foreign asset buying for protection during the crisis. Commodities are a strange asset class too. While gold is following a similar trajectory to the previous financial crisis of 2008-10, the global demand for the commodity has fallen over the years dwindling investor hopes of bumper crisis returns. Similar fundamentals follow silver that is maintaining twice the positive correlation to the S&P500 than it did through 2008-10. The oil market is facing its own crisis since the OPEC+ ended; Saudi Arabia has been flooding the market in a domination war, threatening near or complete bankruptcy of other suppliers.

Global policy responses have come to end chaotic market behavior by providing liquidity and tackling recessionary fears while also raising cautionary eyebrows along the way. On one hand, the high economic output losses from global efforts to contain the COVID-19 pandemic are unprecedented. On the other hand, it is unclear if the opposite scenario would be less costly – an uncontrolled pandemic such as the 1918 Great Influenza resulted in substantial and persistent damages to human life. Governments across the world are thus caught in a Catch-22, and policy decisions taken today will have long lasting and deep effects for generations to come. Take for example FED's 'whatever-it-takes' policy to provide endless liquidity and to inject trillions of dollars into the financial system; or ECB's decision to boost its asset purchase programs to provide temporary relief to the hard hit Euro Zone. Both these central banks have spent a decade in fighting crises and reviving their respective economies, the jury is still out on their success; and are only continuing their quantitative easing programs in hopes to one day normalize their balance sheets having no chartered route to do so. The last time Fed announced a withdrawal of its QE plans, 2013, it spurred massive asset selling across developing economies, especially the Fragile Five which then included India. The effects of developed economy central bank policies on developing economies at half the balance sheet size than that of today should spark concern among any investor. India, fortunately, has since evolved to a favored investment decision given the rising foreign assets in RBI's balance sheet and declining government deficit, further encouraged by positive policies from both the central bank and GoI.

The flow of events in India have a different story to tell altogether. Economic growth in the country was already fraught with challenges as the entire financial system was reeling from the multiple shocks in terms of GST implementation, NPA crisis, NBFC defaults and other reformative measures undertaken by the government. In this backdrop, an unprecedented hit on cash flows due to lock-downs might be the trigger to push the corporate sector into the default zone. The government is yet to announce significant relief measures as it faces tough choices regarding its finances. The reforms in the first place were aimed at helping India climb the ranks as the favored destination to manufacture and export. However, we seem to be missing that bus as exporters are largely left to fend for themselves amidst the crisis. Moreover, considering its qualitative monetary space, whether RBI will be required to announce quantitative easing like the developed economies is a curious yet concerning event to track

Leveraged Growth

Contents

Part I - Economies + Safe Havens

Global Economy

US Bond Market

Currency Markets

Commodity Markets

Equity Markets

Part II - Stimulus + India Story

Relief Packages & Stimulus Measures

India Story

Leveraged Growth

GLOBAL ECONOMIES

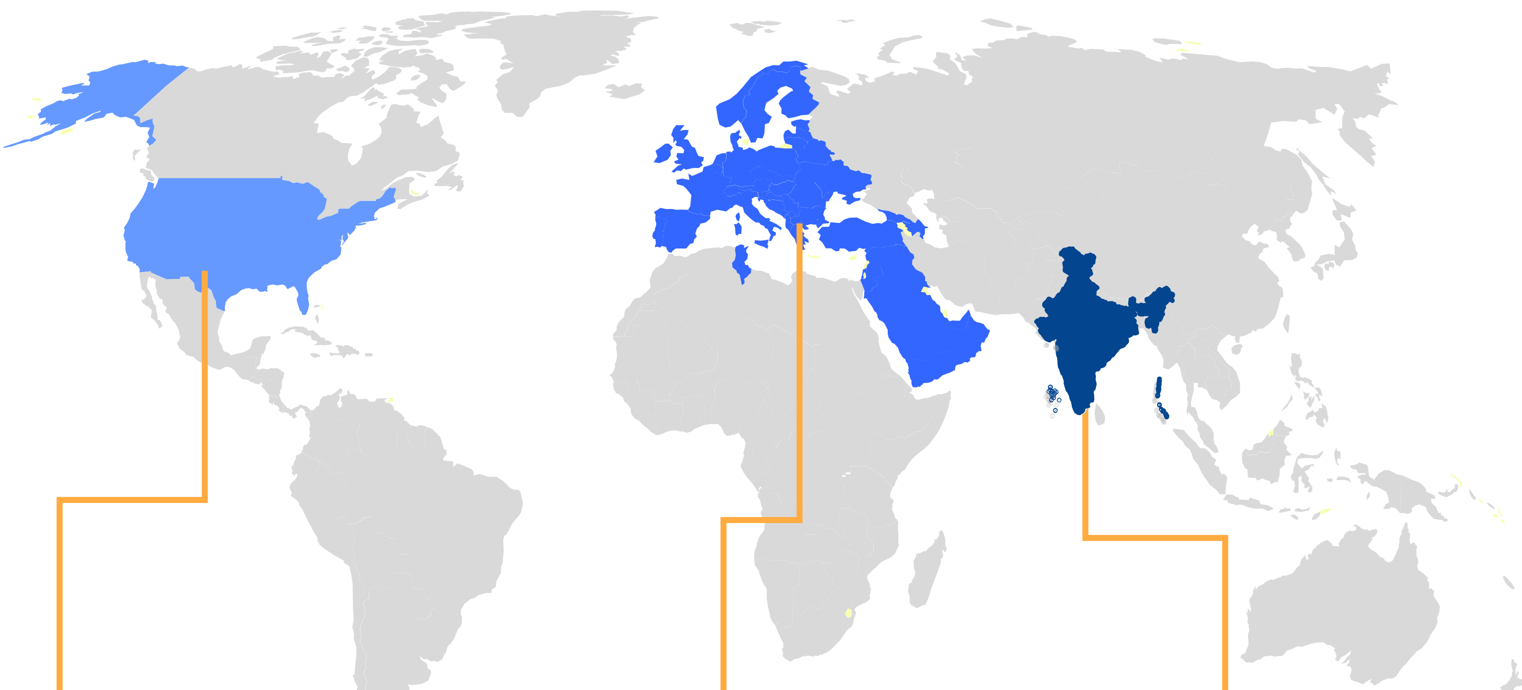
Revealing the Fault Lines

Tale of a Sick Man

Consider this – there was once a healthy man, on steroids, living an unhealthy lifestyle, not listening to advice and pushing the limits of what his body could take. As was bound to happen, he fell sick and contracted a disease. As much as he tried to mask it with false reassurances, he knew it was a long time coming. All his vitals were faltering and he was diagnosed with a 'flu.' What's worse, another damaging ailment had slowly been spreading through his entire body. As soon as the doctor confirmed it, he went into a state of delirium. He was living on borrowed time, and steroids could keep him going for only so long.

As the flu spread through his entire body, one after the other, his organs slowly started giving up on him. The hospital seemed like the only option now, even if it would erode his entire bank account. His doctor gave him a booster shot, but told him that he would need a rescue operation. Even then, chances of his revival were bleaker than ever. He stared into a dark future and a long time in the ICU, still cherishing hopes of an eventual recovery, thinking if this could have been prevented...

Snapshot of the Global Symptoms



Loss to GDP	>1.7%
Relief packages to GDP	>9%
Cases to population	140K / 329M

Loss to GDP	>3.9%
Relief packages to GDP	>3.2%
Cases to population	1K/ 1312M

Loss to GDP	>3.3%
Relief packages to GDP	>3.9%
Cases to population	423 K / 342M

Presented in the following pages is a brief snapshot of the economic health of various countries. While recessions and booms are all temporary and the cycle takes its turn eventually, it is important to know where you stand today, and how quickly the situation is snowballing. As you will see, the world was already ailing.

The virus was simply a trigger to accelerate a long due recession. The analysis in the coming pages touches upon the unique situations that some of the world's biggest economies find themselves in.

Source: imf.org

A Developing Disease? The Dreaded Health Check-up (1)

Leveraged Growth

ITALY

The Diagnosis

Italy's sovereign credibility has been under scrutiny for years. Its political crisis has left the country in heavy debts, at 140% of its GDP, more than twice the EU-mandated level of 60%. Moreover, it is the only European country, apart from Greece, that has not recovered to the levels before the 2008 financial crisis.

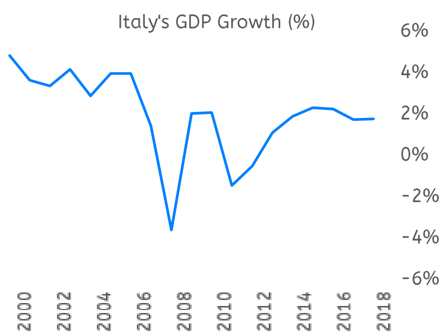
Will COVID-19 push Italy over the edge of bankruptcy?

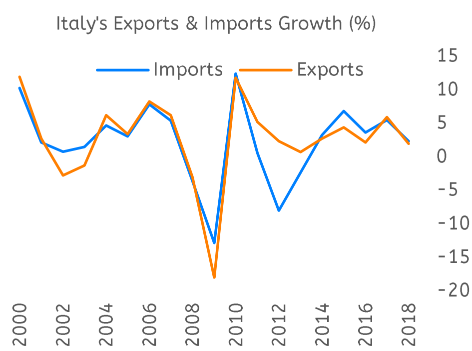
Breaking it Down

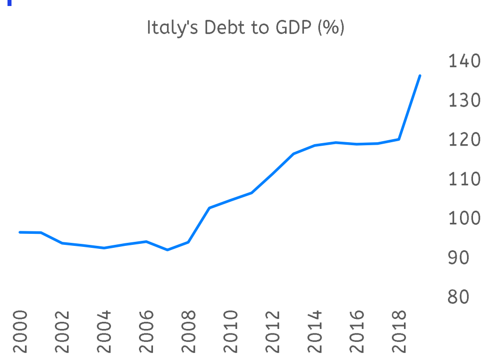
Italy is the 7th largest net exporter, with over 70% exports going to non-EU countries, which could be a cause for concern. Additionally, it has the **second highest youth unemployment rate** in EU, at ~30%. This has been dwindling its growth prospects, since household consumption contributes ~60% to its GDP. Also, Italy's VAT rate is confirmed to increase, to reduce the country's debt burden.

The Take-Away

While the nationwide lockdown measures and the recently announced relief package seem to "Heal Italy," the beleaguered country's cry for help from the Eurozone through economic relief loans and "Corona Bonds" isn't appealing to Germany, as they share other ways to display solidarity.







FRANCE

The Diagnosis

During the 2008 financial crisis, France's unemployment rate rose above 10%. Under President Macron, the numbers finally reached their lowest levels in a decade, although remaining well above the European average. France has announced an aggressive stance to maintain its state-aided unemployment numbers.

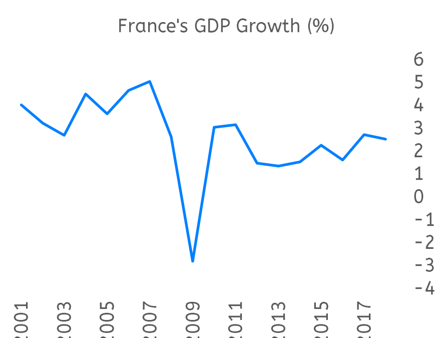
But with debt at nearly 98% of GDP, will COVID-19 allow it?

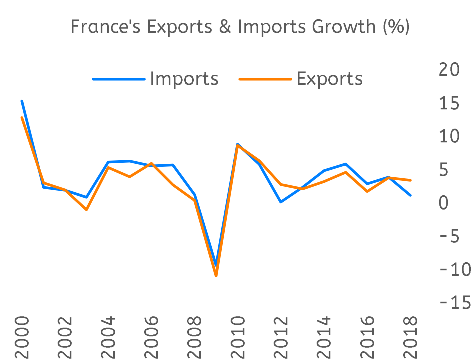
Breaking it Down

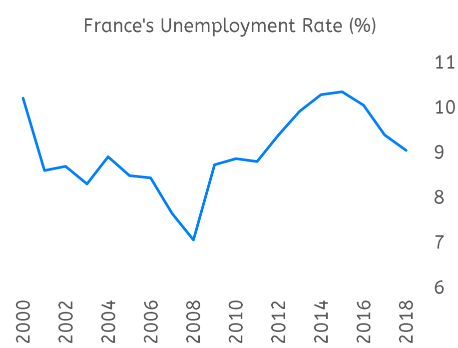
France maintains a low trade deficit, with exports contributing nearly 32% to GDP. Unlike Italy, France trades largely with the EU, which accounts for nearly 60% and 70% of its exports and imports, respectively. Moreover, the rise in oil prices had increased its deficit by nearly 12% in 2018. On the debt angle, over 90% of its sovereign debt is long-term, enabling it to take on further debt if needed.

The Take-Away

While the fallout from the lockdown is yet to be seen, a possible debt appetite and oil prices at historic lows position France in a favorable situation to help the Eurozone overcome this crisis.







Source: imf.org

A Developing Disease? The Dreaded Health Check-up (2)

GERMANY

The Diagnosis

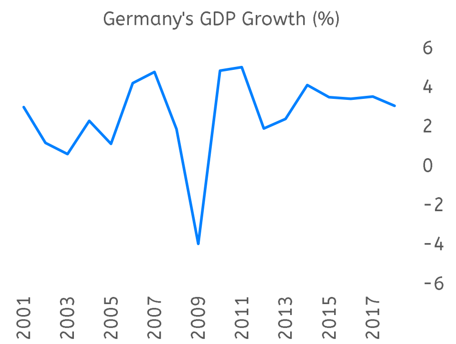
Germany has been prudent about its debt levels since the “debt brakes” were put in place after 2008. However, it has been fighting deflation for years and its negative interest rates haven't spurred consumer spending as intended. Increasing anti-globalization is also affecting the economy. COVID-19 is now bringing Germany’s reliance on exports to China into the forefront.

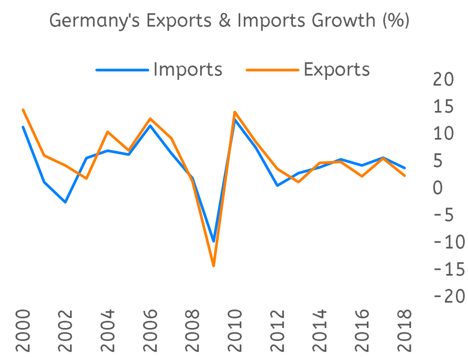
Breaking it Down

47.4% of Germany’s GDP relies on exports and around 7% of exports go to China. About 10% of Germany’s imports also come from China. Additionally, Germany relies heavily on its auto industry. With its budgetary surplus, Germany has to save money to pay for the healthcare of its aging population and improve wage growth for its workers to encourage spending.

The Take-Away

Due to the global halt in trade and a weakening Chinese economy, Germany has become one of the most exposed countries in Europe. Adding to this is the worldwide auto slowdown gradually taking shape over the past year. **Does the disruption of trade due to COVID-19 spell more trouble for Germany than the lockdown itself?**





UNITED KINGDOM

The Diagnosis

In October 2019, Boris Johnson’s Brexit deal was expected to cost the UK economy 4% of its then GDP (~£70Bn) over the next decade. This was considering that free trade would prevail, a thought that now seems questionable. Moreover, Britain’s GDP had already shrunk 2.5% by then, solely attributable to its decision to leave the EU.

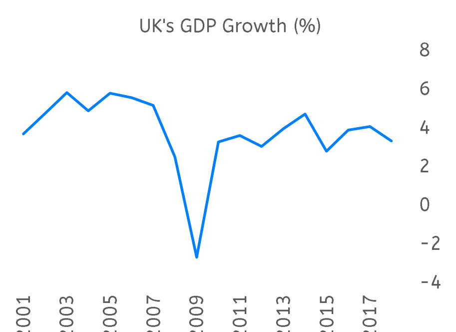
Mounting costs and dwindling future estimates – has COVID-19 turned UK’s dream of a ‘Greater Britain’ into a nightmare?

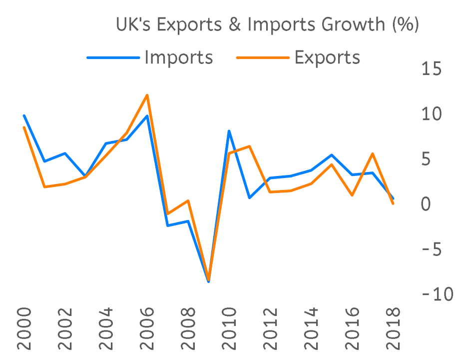
Breaking it Down

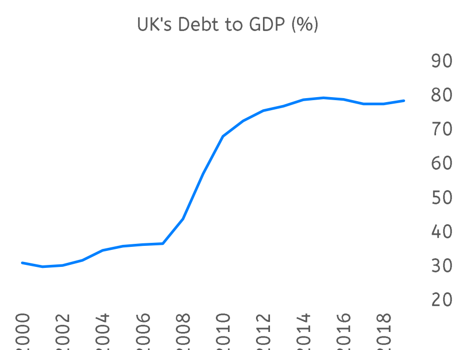
UK’s trade deficit widened to an eight year high in 2018 on account of a weakening service sector. While its exports contribute nearly 31% to GDP, it suffers from a lack of competitiveness and weak investments. Moreover, 55% of its exports go to non-EU countries, of which US holds the largest export share, which ties it closely to the EU and US’s economic health. On the debt side, UK’s Debt to GDP ratio is almost double than what it was in 2008, standing at 80%.

The Take-Away

Bank of England claims to have plenty of policy room to act on, to boost the already slowing economy. Unlike EU, that currently has negative interest rates, UK is at 0.75%. However, with an existing policy paradox of balancing growing inflation, which usually calls for an interest rate hike; and the economic slowdown requiring interest reduction; the COVID-19 crisis seems to call for a gunpoint decision.







Source: imf.org

A Developing Disease? The Dreaded Health Check-up (3)

Leveraged Growth

UNITED STATES OF AMERICA

The Diagnosis

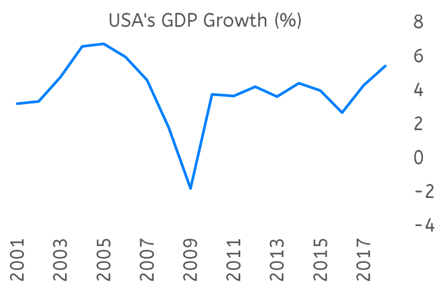
The decade of 2010 was one of economic recovery. America has stabilized its GDP growth rate, although at a low level of ~2%. Unemployment fell to 4%, below the EU average of 6.5%. However, all this was achieved with a total lack of consumer savings, that stands at just 1.3% of the GDP, and mounting trade deficits with over 100 countries. **Will COVID-19 force USA to start from square one, once again?**

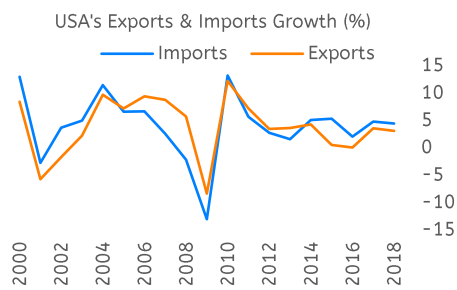
Breaking it Down

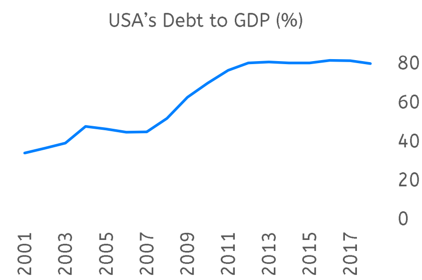
China is the second largest foreign holder of US Treasuries, having fueled most of the spending that helped revive the economy post 2008. Moreover, USA maintains a trade deficit with China, which accounts for 21.2% and 7.2% of USA's imports and exports, respectively. This was largely encouraged due to high growth of the domestic wage rate and a strong Dollar which made USA's own products uncompetitive.

The Take-Away

Even as President Trump has been strong-arming China into reducing their trade deficit, the manufacturing shutdown in China is still threatening supply chain disruptions across the USA. **Additionally, as the country looks to stimulate its economy, will it continue to allow China to own a big piece of its Treasury pie and finance its recovery again?**







INDIA

The Diagnosis

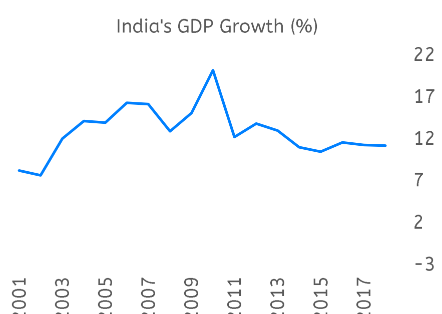
Our analysis so far centered around developed economies of the west and India's issues are more structural than cyclical, as is typical for an emerging economy. GDP growth has been rising, boosted by falling interest rates. However, a slew of corporate and political scandals in the former half of the previous decade left investment sentiment weak. Surprisingly, the female labor participation rate in the growing economy has declined instead of increasing.

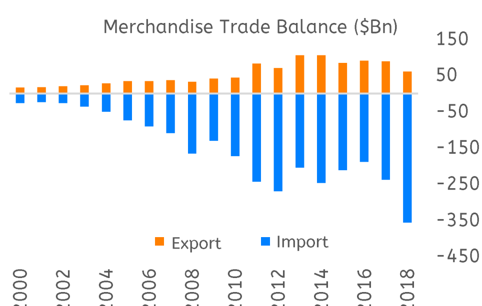
Breaking it Down

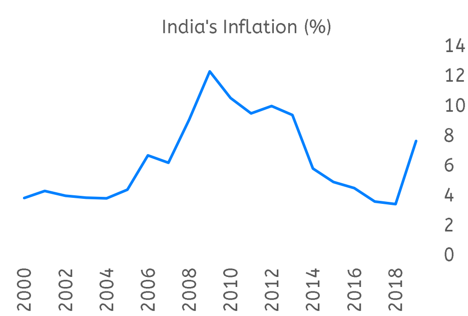
The country's lack of structural reforms had its roots in politics, but the new regime is taking up the challenge to implement them. India has been a 'traditional' economy that is largely unorganized. However, with more sectors adopting an organized structure, and a vast number of employable youth, India is presented with an opportunity to position itself as a sustainable solution to the world's **"China problem"**. The country is currently experiencing a severe credit crunch in response to previous reforms, that have wrecked the entire banking system.

The Take-Away

India's COVID-19 cases are relatively low, which is commendable given its population. However, India's value proposition as the antidote to China will only diminish if it further delays the impending reforms. It remains to be seen if we finally have a winner in India, and if the reforms brought about will bear fruit and help fight the crisis or go to waste because of it. **Will COVID-19 shift India's focus from growth to recovery, as India prepares to reap its demographic dividend?**







Footnote:
1. Due to the lack of transparent and reliable data, China has not been covered.

Source: imf.org

As China Sneezes, the World Catches a Cold

Leveraged Growth

The Diagnosis

Prior to the COVID-19 outbreak, global economic activity had remained soft and industrial production had continued to decline and stagnate through FY2019. Merchandise trade volumes contracted in Q4 FY2019, and declined in 2019 as a whole – the first calendar year fall since FY2009. Additionally, today, China plays a far greater role in global output, trade, tourism and commodity markets than it did during the SARS outbreak. Given this backdrop, how significant will economic spillovers to other countries be, due to an adverse shock in China?

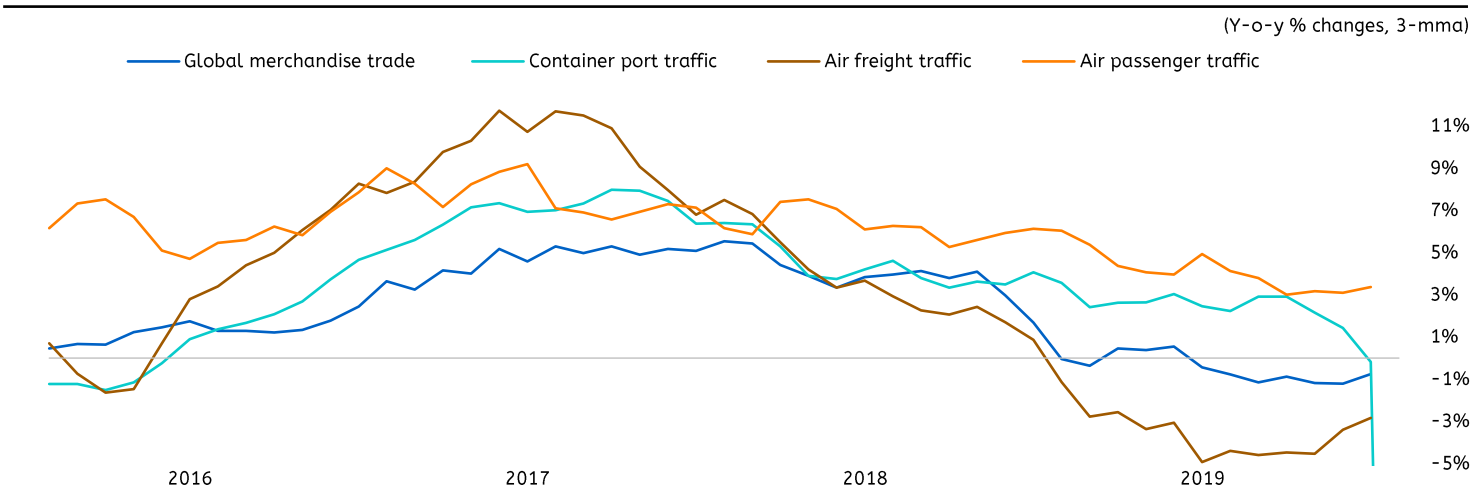
Breaking it Down

Given the strong linkages China now has around the world compared to 2008, global GDP and trade deceleration could intensify if commodity-producing economies fail to react adequately. The adverse impact on confidence and disruption to supply chains will spell disaster for many economies, particularly for the ones strongly interconnected to China, such as Japan, USA, Germany, Korea and Australia. Continued uncertainty about trade policies remains a significant source of risk to global investment.

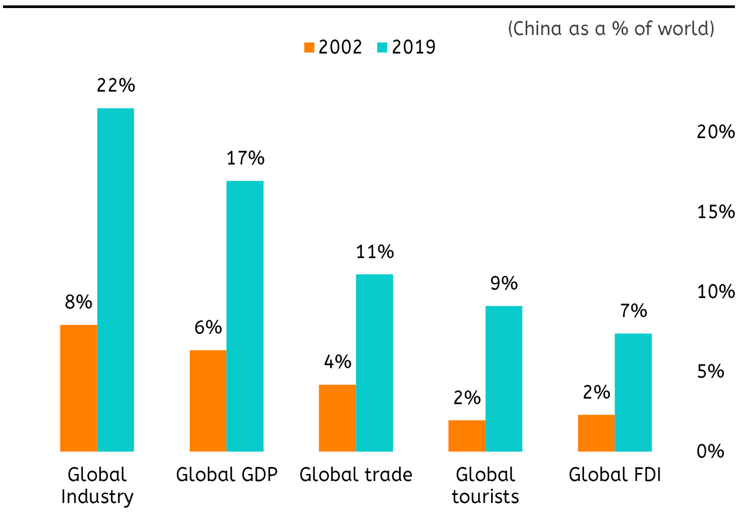
The Take-Away

Significant bond repayments are due in the emerging economies, especially in China, over the 3 next years. A sharper than expected slowdown in global growth will pose difficulties in servicing elevated debt burdens. **Will emerging market debt witness fire sales and flight to safety, as seen in the previous crisis?**

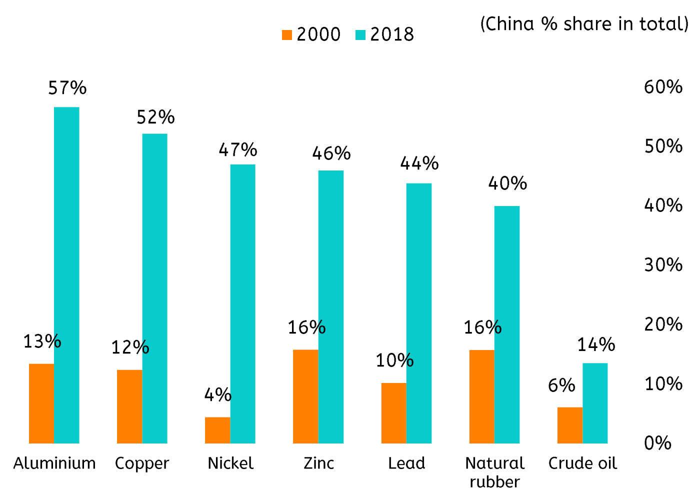
Global Trade Growth is Already Weak



China is More Integrated in the Global Economy



China Accounts for a Large Share of Global Commodities Demand



Source: oecd.org

ASSET CLASSES

“It’s Safe” Wasn’t as Safe this Time

COVID-19 – The Culprit or Trigger of Global Recession?

Leveraged Growth

The Diagnosis

Grounded flights, business closures and falling markets - all in order to stop the spread of the COVID-19 outbreak. Has the resultant loss of business and fall in asset values led to the slowdown in global growth? Did COVID-19 really push us into recession or is it simply a trigger to what was already looming?

Breaking it Down

The US Federal Reserve popularly uses the 10Y 3M Treasury Yield Spread as a warning indicator of a possible recession. Investors, on the other hand, prefer the 10Y 2Y Spread. Combined, these spreads have successfully predicted each recession in the past 5 decades.

The Take-Away

Here, we dive into the past 2 recessions to analyze the strong track record of the spreads. We show how these spreads indicated, in 2019, the possibility of a recession. COVID-19, however, is not just a trigger to the looming recession, it's also amplified it, the extent of which is yet to be learnt.

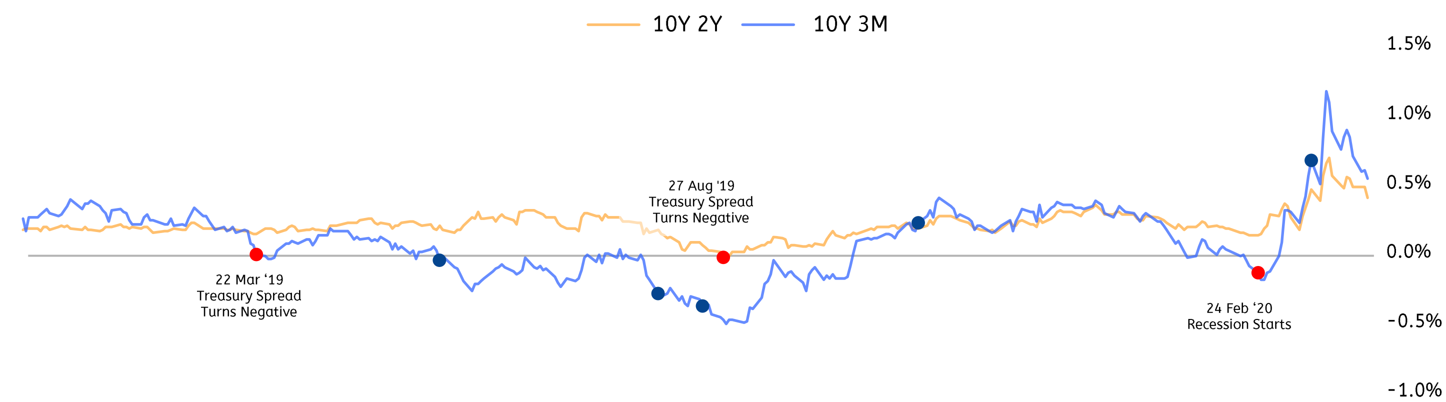
Caveat

Former Federal Reserve Chair, Janet Yellen, commented:

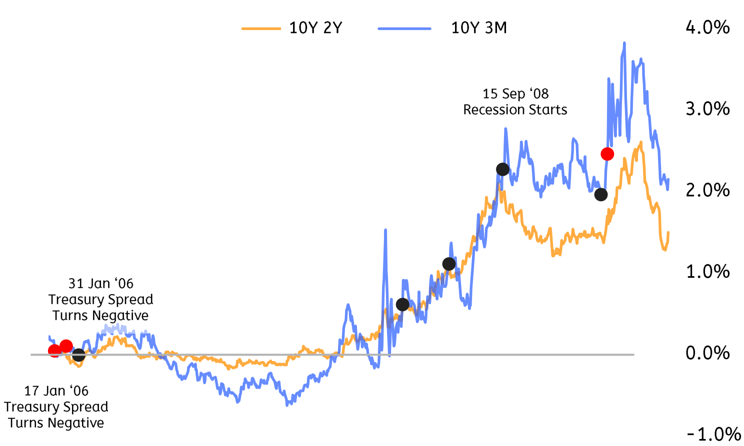
"I would really urge that on this occasion it may be a less good signal"

A Look at Previous Recessions

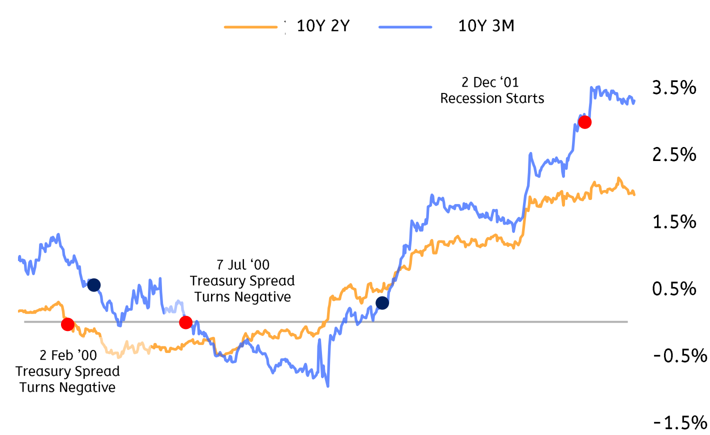
COVID-19 - Ingredient X in the Barrage of Recession Symptoms



Great Recession - Symptoms Began Early On



Dot-com Bubble- Symptoms from Silicon Valley & Beyond



Events Surrounding the Fall in Spreads that Led to the Recessions

02 Feb '00	10Y 2Y Treasury spread turns negative
10 Mar '00	The Dot-com bubble bursts
07 Jul '00	10Y 3M Treasury spread turns negative
15 Mar '01	US economy peaks
02 Dec '01	Enron files for Bankruptcy - Recession starts
17 Jan '06	10Y 3M Treasury spread turns negative
31 Jan '06	10Y 2Y Treasury spread turns negative
26 Feb '07	Alan Greenspan warns of a recession - results in widespread stock market crash
18 Sep '07	LIBOR Rates unexpectedly diverge
12 Dec '07	Fed announces TAF to restore bank confidence; foreclosure rates double
16 Mar '08	Fed bails out Bear Stearns
06 Sep '08	Fannie Mae and Freddie Mac were bailed out by the federal government
15 Sep '08	Lehman Brothers declares bankruptcy - Recession starts
22 Mar '19	10Y 3M Treasury spread turns negative
24 May '19	Theresa May announces resignation as British PM and Conservative Party Leader
05 Aug '19	US Department of Treasury officially declares China as a Currency Manipulator
20 Aug '19	Italian PM Giuseppe Conte resigns
27 Aug '19	10Y 2Y Treasury spread turns negative
01 Nov '19	WTO allows China to impose trade sanctions on US goods of up to $3.6 bn
24 Feb '20	Italy reaches 100+ cases - Recession starts
15 Mar '20	Fed cuts interest rate to 0%

Footnote: Dates (black markers) to be read with graphs.
1. 2019-2020: COVID-19
2. 2006-2008- Great Recession
3. 2000-2001 - Dot-com Bubble

Source: Federal Reserve Economic Data (FRED)

Credit Mayhem Distorts Bond Market Havens

Leveraged Growth

The Diagnosis

The sudden instability from the pandemic caused unusual occurrences, with daily price changes reaching non-intuitive levels. **Is it natural for US Treasury Bond ETFs to display similar daily price movements as the S&P 500 Trust ETF?** Moreover, why is the fall in Junk Bond ETFs less than that in Investment Grade Bond ETFs?

Breaking it Down

Investors usually buy bonds for two reasons: income and safety. These instruments act as safe havens, providing much needed protection in periods of severe uncertainty. However, complications arising out of growing liquidity needs and credit risks can create extreme market volatility – more than what's expected in times of crisis – as depicted in the charts.

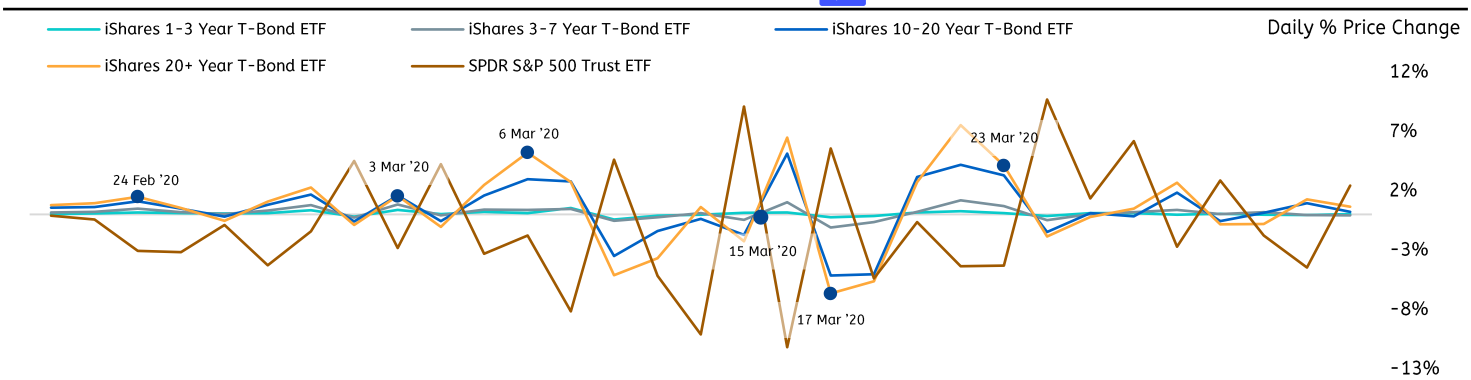
The Take-Away

The markets began to display the emergence and rapid spread of a credit crisis. This increased stress in fixed-income havens as markets chose to hold cash. At the same time, it also created unique entry points for those unaffected by rising illiquidity. Thus causing the volatility we see below.

Caveat

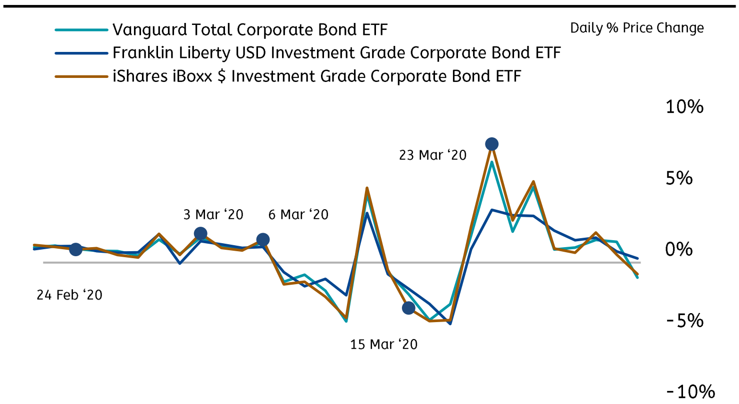
A short-term decline in daily price volatility doesn't necessarily mean that the threat is mitigated.

Unnatural Daily Price Movements: US Treasury ETFs vs S&P 500 ETF



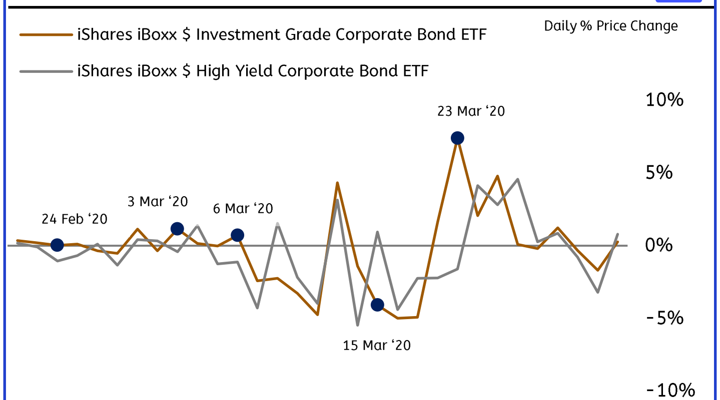
- Fears over the economic fallout caused by the virus pushed volatility levels to an all time high, as Treasury Bond ETFs displayed price movements last seen in the financial crisis of 2008.
- **As a liquidity crisis followed, Treasury ETFs saw price movements drop below the S&P 500 Trust ETF as holders began to exit their positions to meet cash requirements – an unnatural phenomenon for these safe havens.**

US Investment Grade ETFs Caught in the Liquidity Spiral



- As the liquidity crunch intensified, credit risks in the investment grade market increased, causing an otherwise quality asset class to display severe daily downward movements.

Junk ETFs Perform Better than Investment Grade ETFs



- With 83 investment grade bonds being impacted by COVID-19 in the US alone, and ETFs having the greatest exposure to BBB-rated bonds, investors fled from the quality asset class.
- The resultant price movements temporarily made junk bonds look like relatively safer instruments
- Moreover, flight to safety further increased price movements in Treasury ETFs.

Events

24 Feb '20	Italy confirms 100+ cases	17 Mar '20	Fed provides $1 tn funding - CPFF & PDCF
03 Mar '20	Fed cuts interest rates by 50 bps	18 Mar '20	Lowest point for Investment Grade ETFs
06 Mar '20	Govt stimulus package Phase I	23 Mar '20	Fed bails out Investment Grade ETFs
15 Mar '20	Fed cuts rates to 0%		

Source: Investing.com

Safe Havens Witness a V-Shaped Recovery

Leveraged Growth

The Diagnosis

As the Coronavirus-inspired slowdown dwindled asset values, bond markets began to observe a V-shaped recovery. **What is the story that the Treasury ETFs are painting for us?** **What caused Investment Grade ETFs to recover in value?**

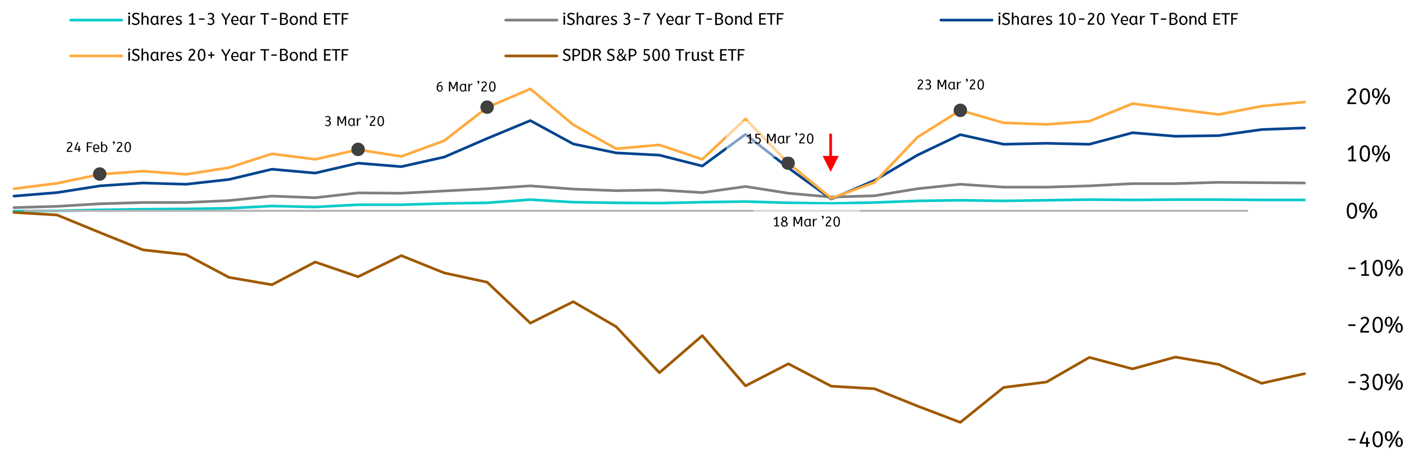
Breaking it Down

The US Bond Market was quick to respond to the Fed's Monetary and Fiscal measures that flowed to liquidate the economy, but was prudent in digesting the economic recovery estimates.

The Take-Away

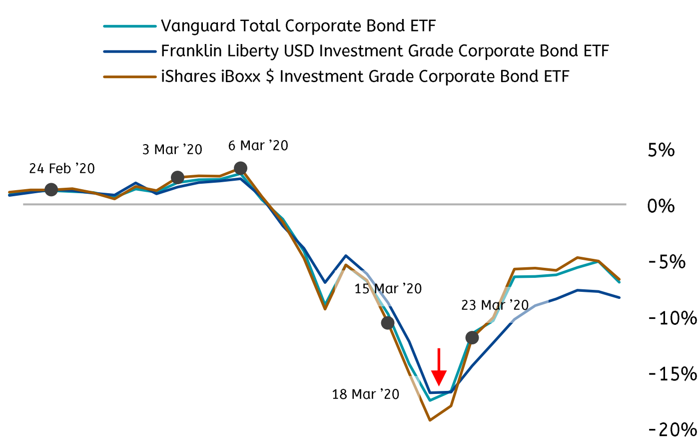
Investors paid dearly for protection, as the rapid spread of the Coronavirus imperiled corporate cash flows. They also demanded the harshest penalties to take on credit risk – this was paid for with either abysmally low asset prices or incredibly high relief measures.

Treasury ETFs Witness Change in Investor Sentiments as Fed Relief Boosts Risk Taking Appetite (CRI)



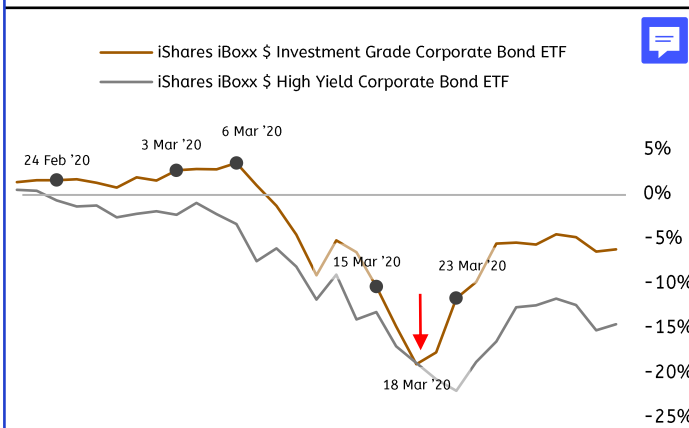
- As the S&P 500 Trust ETF cracked, the 20+ Year Treasury Bond ETF became the new market favorite, clearly indicating the market's expectation of a long-term impact on the economy.
- Although initially toppled by the market's illiquidity, they have reverted to their original status of safe haven as Government and Fiscal stimuli aim to revive stability.

Fed Stimulus Revives Investment Grade ETFs (CRI)



- Trapped in a liquidity crunch, the Fed came to the rescue of corporate markets with policies similar to those used in the financial crisis of 2008.
- The Fed even bailed out ETFs as it pledged to invest in them.
- The market provided a swift response, exiting Treasury ETFs to grab the quality corporate ETFs at highly discounted levels, justifying their respective V-shaped movements.

Investment Grade ETFs Not as Strong as Perceived (CRI)



- With instability in markets producing twice the number of fallen angels seen in 2008, investment grade ETFs quickly lost their lustre and came close to high yield ETFs in value.
- The liquidity lines offered by the Fed seem to have been successful in restoring the ETF's creditworthiness, as the value spread began to increase from the date of bailout.

Footnote:
1. CRI- Cumulative Return Index
2. All returns are indexed to 0%, base date 23rd Jan, 2020.
3. For Events refer to the previous page.

Source: Investing.com

Effect of Monetary Madness on Currency

Leveraged Growth

The Diagnosis

As equity markets enter into a tailspin, UK, Germany and Japan have little alternatives to offer. This is primarily due to their near zero or negative interest rates that are now forcing investors to accept unnatural treasury yields or seek protection in foreign economies. But why do investors choose such rates and how has this process impacted their currency during this crisis?

Breaking it Down

The idea of bringing interest rates broadly into negative territory is to encourage the flow of credit and to essentially stimulate risk-taking on the part of consumers and investors. This occurs since there exists a charge for parking money in these assets, rather than receiving interest.

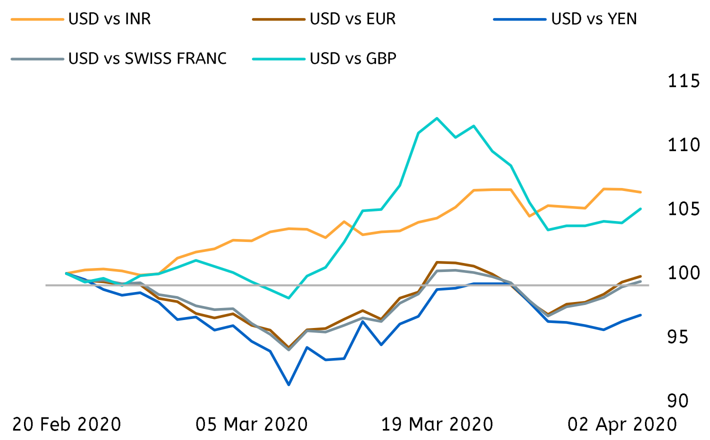
The Take-Away

Unable to pump more liquidity into the economies by reducing interest rates further, the respective central banks have now essentially run out of ammunition. To stop their currencies from depreciating, they will have to resort to asset buy-back plans and other open market operations to provide investors with the protection required to stop the increasing outflow of funds.

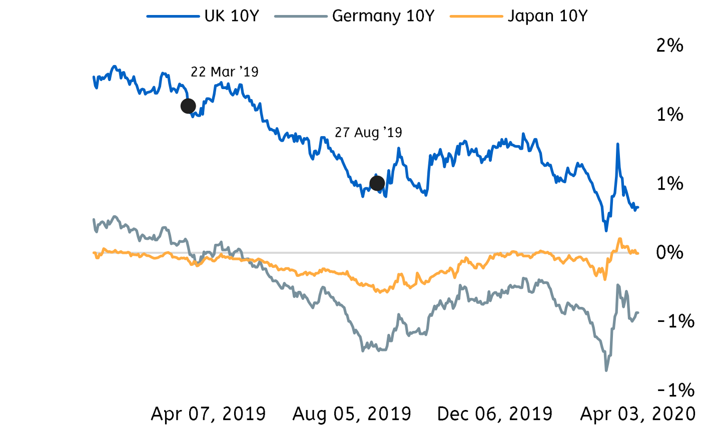
Caveat

While this policy is widely considered valid only for economies in Europe and Japan with persistently low inflation and weak growth, it's still not clear if it worked in the way it was intended.

Will The Dollar Rule this Crisis? (PCI)



Treasury Yields Follow Interest Rates into Negative Zones



Euro's parity status to the Dollar is under utmost scrutiny this crisis.

The European Central Bank doubled down on its negative rate policy to -0.5% in 2019, to help fight against deflation that threatened the Eurozone.

Despite their efforts, the German 10 year yield entered negative territory in March 2019, fuelling speculation that Germany and the Eurozone could be heading for recession.

While the financial rescue and buy-back packages seem to help stabilize the currency, the crisis boosted by COVID-19 remains unaffected.

The British Pound falls to its lowest levels in 35 years, as investors favor safer assets in US Dollars.

This was also largely due to UK's Treasury Yields approaching zero, effectively providing investors with only protection and no returns.

The Bank of England cut interests rates to an all time low of 0.1% and amplified its quantitative easing by increasing its holding of UK government and corporate bonds to stabilize the economy and, in turn, its currency.

For Japan, on the other hand, negative interest rates might be working as the yields rebound from multi-month lows. We further analyse Yen in the next section.

Events

22 Mar '19	10Y & 3M Treasury yield curve inverts
27 Aug '19	10Y & 2Y yield curves inverted

Footnote:
1. PCI- Price Change Index
2. All prices are indexed to 100, base date 20th Feb, 2020.

Source: Investing.com

Yen: Sayonara Safe Haven, Welcome Dollar?

Leveraged Growth

The Diagnosis

Many regard the Yen as the go-to-currency during a crisis, given its returns during the financial crisis of 2008. **But will the fallout from COVID-19 finally lift the curse of the currency safe haven for Japan?**

Breaking it Down

Yen's status of a safe haven is derived from its positive trade balance, decade low interest rates and net foreign assets held. However, Japan has repeatedly been fighting to reduce the Yen's strength as it hurts the world's fourth largest net-exporter.

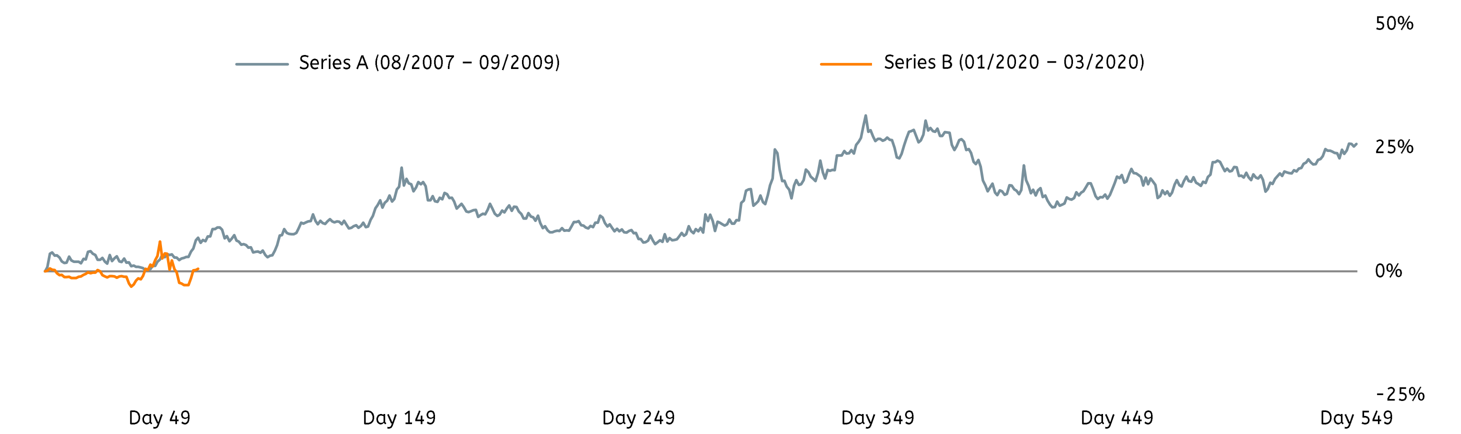
The Take-Away

Japan's policy makers fear that their efforts to cushion the economy from the ongoing pandemic may be undermined, as fiscal laxity could lead to an eventual free fall in the currency.

Caveat

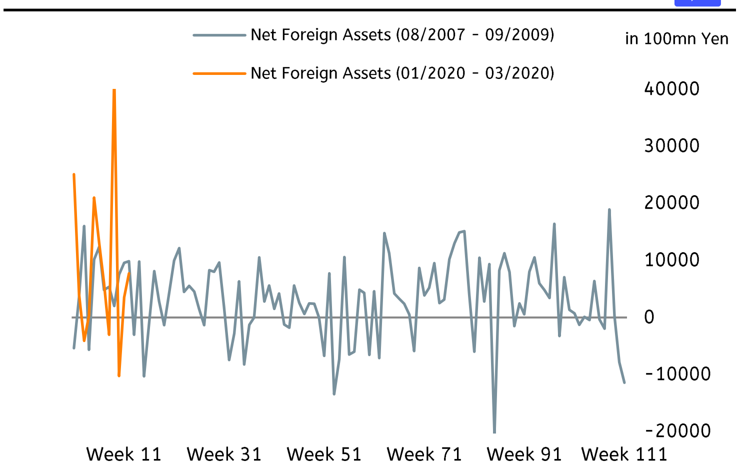
Investors may view Yen as a safe haven currency regardless of the underlying principles and, thereby, help maintain its status.

Will Yen Shine for Investors Once Again? (CRI)



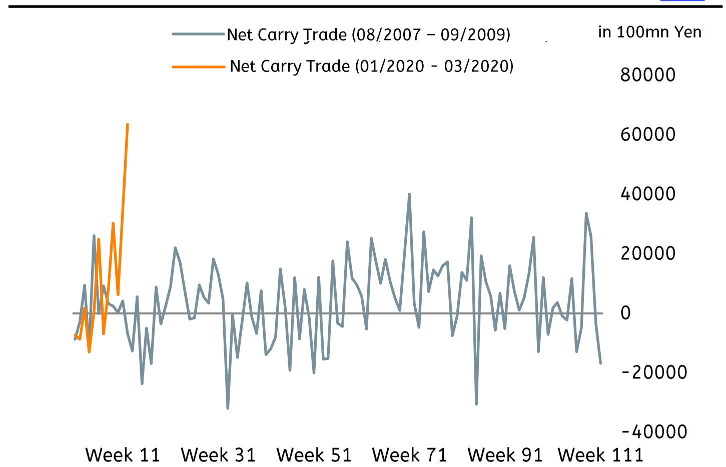
- Back in 2008, Yen pleased investors with at least a 20% return through the crisis.
- The Japanese sold assets to meet liquidity needs back home, creating an inflow of the Dollar
- Furthermore, driven by positive trade balance and benefits of carry trade from low interest rates, the Yen surged against the Dollar.
- While Yen is following a similar return trajectory this time around, the underlying pillars don't seem be.

Japanese Investment Decisions have Changed This Time



- Japan entered negative interest rate territory in 2016 to fend off unwelcome spikes in the Yen.
- Japanese investors are increasingly looking for protection overseas. A weaker Dollar is only encouraging foreign purchases, as the order placed in the first week of March (4.3tn Yen) was equal to the aggregate of orders placed in the two preceding months.

Japan Successful in Encouraging Investment Abroad?



- Purchases were further powered by an increase in Japan's GPIF allocation to foreign assets by over 10%, to help stabilize the Yen.
- Furthermore, Japan's net foreign assets are greater than its net foreign liabilities and continue to rise, removing the benefits of carry trade and putting downward pressure on the Yen.

Footnote:
1. CRI- Cumulative Return Index
2. Series A CRI indexed to 0%, base date 14th Aug, 2007
3. Series B CRI indexed to 0%, base date 1st Jan, 2020

Source: Bank of Japan

The Diagnosis

Investors have diversified views towards metals, treating them as a store of value to either ride out crisis periods or to help meet liquidity needs throughout the crisis. Due to this, each commodity behaves differently, displaying cyclical movements based on the dominant need. **Will the commodities retain their safe haven status through what seems like another liquidity crisis?**

Breaking it Down

The demand for metals is triggered when investors feel the need to hedge against poor government or central bank policies that may result in economic downturns. However, when margin calls arise due to a fall in equity values, some investors choose to sell metals, instead of other assets, to meet liquidity requirements, as metals usually hold up in value. Moreover, the assumption that other asset classes might give greater returns as economies begin to recover, further encourages the sale of metals.

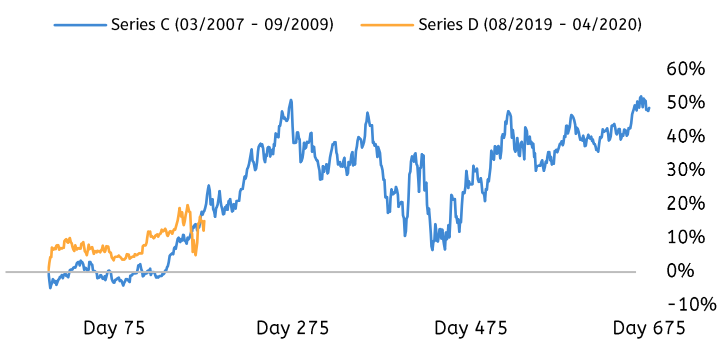
The Take-Away

The COVID-19 crisis has been a continuous hunt for liquidity, as investors prefer cash over all assets. Further, bearish sentiments have triggered panic-selling across asset classes, making an already illiquid market worse. Metals, in particular, might not appreciate in value as they did in the previous crisis. However, it is still too early to say.

Caveat

Metals have been facing a downward trend over the past few years, especially gold and silver, as physical consumption of these assets has been fading across economies.

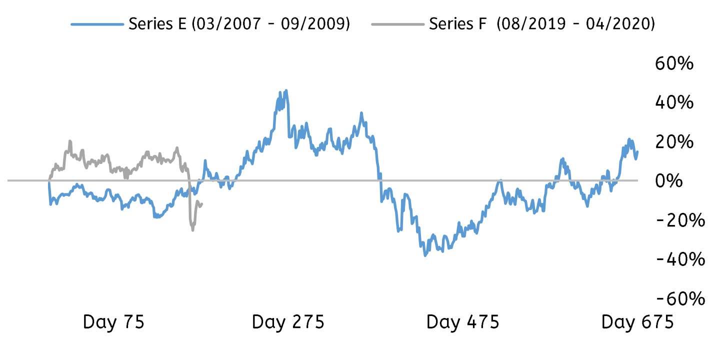
Gold Not Shining Like in '08? (CRI)



- In the quarter leading up to Bear Stearns' bailout in March 2008, the gold rally had begun with the yellow metal rising by nearly 30%, indicating a rise in demand for safe havens. At the climax of the crisis, i.e. up to Lehman Brothers' bankruptcy in September 2008, gold registered a massive fall of over 20%. There were two reasons for this:

  Firstly, investors began to sell their gold to meet margin calls. Secondly, as the interbank lending market began to dry, financial institutions facing an asset-maturity mismatch used the only alternative they had – short sell gold to create Dollar liquidity, amplifying the downward pressure on its prices.
- A similar reaction can be seen this time around. As geopolitical events led to inversion of the US T-yield curves, rapid purchase of gold began. From August 2019 to the weeks preceding the COVID-19 pandemic in the US, gold prices had risen by nearly 18%. In fact, just as equity markets crashed, the gold market also experienced severe volatility, falling nearly 12% in March 2020. Those who weren't caught in the liquidity spiral, utilised this window to buy gold. Prices once again rose by 13% before stabilizing above $1600/t oz. Although uncertainty still looms about gold's movements going forward, a positive trend expects gold to retain its safe haven status.
- As a commodity, gold's consumption has seen substantial fall over the past decade, affecting its prices. Russia, China, Uzbekistan and Kazakhstan account for more than 50% of net purchases, and are losing their buying appetite. Russia's central bank, one of the world's largest gold buyers in recent years, has been halting all purchases of the metal, followed by slowdowns in Uzbekistan and Kazakhstan.

Does Silver Have the Mettle for this Crisis? (CRI)



- Due to silver's immense industrial use, its price behaviour is often linked with the state of an economy. While it shares the safe haven status with other metals, it often hasn't fared well during market crashes. Silver prices increased by 51% from December 2007 to March 2008, only to report a 48% fall by September 2008.
- In the recent past, it has acted more like a precious metal during the uncertainty spurting from global trade war, Brexit and even the Coronavirus pandemic. Silver tends to do well in a stock market crash if it is already in a bull market. Otherwise, it could struggle. Of late, it has been steadily moving higher in line with other base metals like copper.
- With the global economy slowing down, silver prices have witnessed a 17% rise from August 2019 to February 2020, followed by a phase of extreme market volatility and illiquidity resulting in a fall of nearly 36% in March 2020. Eventually, prices climbed 26% and eased above $15/oz.

Footnote:
1. CRI – Cumulative Return Index
2. Series C CRI indexed to 0, base date – 1st March 2007
3. Series D CRI indexed to 0, base date – 1st August 2019
4. Series E CRI indexed to 0, base date – 1st March 2007
5. Series F CRI indexed to 0, base date – 1st August 2019

Source: LMBA; World Gold Council

Trump: Russia and Saudi Arabia "Both Went Crazy"

Leveraged Growth

The Diagnosis

Much has changed since the 2008-09 down cycle, as we witness the second oil crisis this decade. While it's usually due to either a supply or a demand shock, the abnormality this time stems from both sides - a supply shock from the oil suppliers, OPEC, flooding the market; a demand shock from a drastic drop in global consumption due to COVID-19. **So, what has caused a barrel of oil to become cheaper than a pint of beer in Canada?**

Breaking it Down

OPEC and OECD are the two major bodies in the oil market, driving the economics of demand and supply. In 2019, OPEC along with Russia, the second largest oil producer, entered into an OPEC+ alliance and forged an agreement with OECD to improve the fundamentals of the market. However, disagreements soon took center stage within OPEC+, resulting in Russia's exit in 2020 and causing an infuriated Saudi Arabia to disrupt the market.

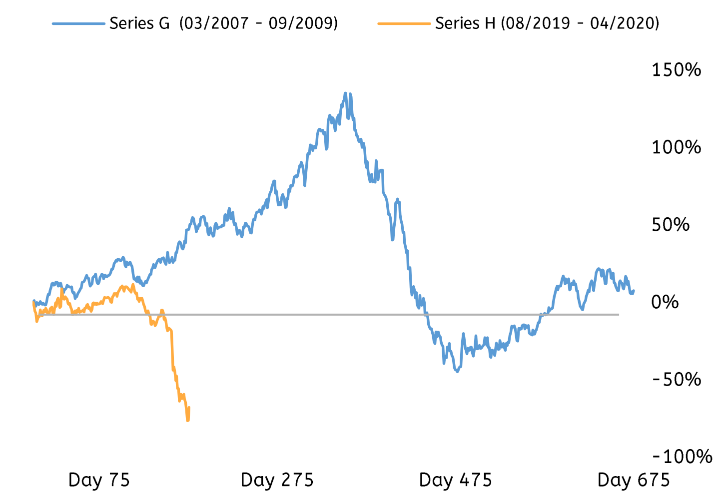
The Take-Away

The collapse of the Saudi-Russian cooperation and the resultant price war will have significant ramifications. If Saudi Arabia agrees to reverse course before Russia, its oil policy suffers the risk of losing credibility. While the Saudi-Russian spat is in the limelight, the US Shale Oil industry may well be the real target, having the most significant economic impact.

Caveat

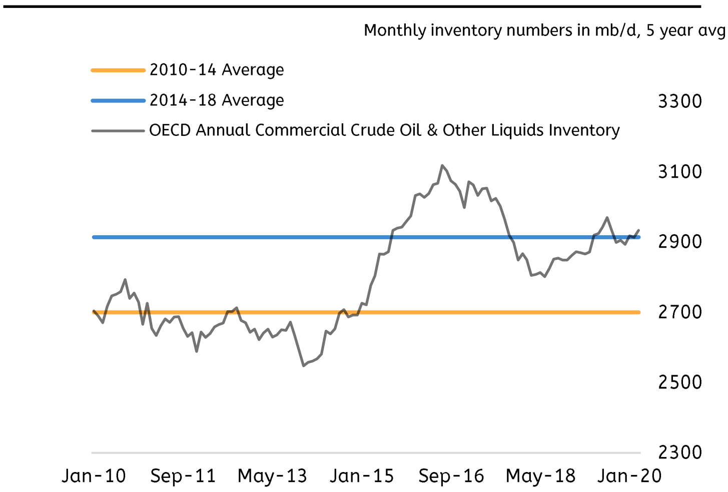
With Qatar having left the OPEC alliance over a year ago followed by Russia's recent exit, the supplier's ability to manage oil markets effectively is under scrutiny.

Oil Prices Squished between Demand and Supply Shocks (CRI)



- The fall in oil prices back in 2008 can be termed as a natural occurrence. The recession, resulting from the crisis, shook the energy sector as demand contracted. Oil plunged for a brief period starting from July 2008, stabilizing in August 2009 as supply adjusted to meet the demand.
- Thus, it is natural for oil to see such crisis swings. However, the rebound in price during this crisis is unlikely to be from an economic view, rather from the prevalence of cool minds.

OPEC+ Alliance Breaks as Saudi Arabia Wants More



- The OPEC+ alliance was formed in July 2019 to reduce the inventory levels held by OECD. The intention was to improve market fundamentals by dropping inventory levels below the 2014-2018 5-year average. This could effectively make up for some of the decimation caused by the oil crisis in 2016.
- Given the success of the above, Saudi Arabia then proposed to bring levels below the 2010-2014 5-year average. Russia rejected the proposal and left the alliance on March 2020.
- It felt that further supply cuts by the OPEC+ would only give USA room to grow its market share and decided to take on the US shale companies alone.
- **Given that the breakeven price for USA Shale industry lies above $48 per barrel, it may seem that Saudi Arabia is forcing a US oil bankruptcy to bring a happy Russia back to the alliance table.**

Footnote:
1. CRI – Cumulative Return Index
2. Series G CRI indexed to 0, base date – 1st March 2007
3. Series H CRI indexed to 0, base date – 1st August 2019

Source: US Energy Information Administration (EIA); OPEC

Heat Map of Sectoral Damage in this Crisis

Leveraged Growth

The Diagnosis

As economies began to close and national lockdowns ensued from fears of COVID-19 transmission, thoughts of a prolonged global recession were triggered.

Breaking it Down

Social distancing led to a collapse of economic activity as manufacturing came to a near halt. The service sector was also hit, as consumer spending behavior shifted to hoarding essentials.

The Take-Away

While the impact on global trade is still unclear, enhanced public spending will be pivotal in restoring confidence in these sectors as consumption outlook remains low.

Worst Hit Sectors in this Crisis (PCI)

Sectors	Name of Index	2020 January	2020 February	2020 March
Energy	Energy	88.08	74.63	48.53
	Energy	92.73	86.34	70.84
	Oil & Gas	90.68	76.57	64.71
	Global Alternative Energy Perform	101.73	97.73	84.29
	Oil & Gas	88.34	77.21	68.23
Industrial Goods & Services	Industrials	97.72	88.34	71.30
	Industrials	103.16	91.34	63.57
	Industrial Goods & Services	94.45	70.13	60.04
	Industrials	96.27	81.50	58.13
	Industrials	99.38	89.37	65.71
Financial Services	Financials	96.30	85.37	67.03
	Finance	97.80	91.91	61.42
	Financial Services	99.87	77.41	68.65
	Financial Services	104.74	99.42	84.97
	Financials	95.00	85.75	59.47

Flag	Country	Index
	USA	S&P 500
	India	S&P BSE Sensex
	UK	FTSE
	Germany	DAX
	France	CAC

Sectors that Saw Mild Bearish Sentiments (PCI)

Sectors	Name of Index	2020 January	2020 February	2020 March
Materials	Materials	94.99	86.77	74.32
	Basic Materials	102.03	94.24	67.62
	All Basic Materials	91.55	81.56	71.77
	Basic Resources	85.48	76.90	64.59
	Basic Materials	96.96	91.23	79.20
Consumer Goods	Consumer Staples	101.03	92.76	87.32
	Consumer Discretionary	99.30	91.67	79.39
	Fast Moving Consumer Goods	101.56	95.65	89.46
	Consumer Discretionary Goods & Services	102.72	95.35	69.26
	All Consumer Goods	101.11	91.73	81.70
	Consumer & Cyclical	99.12	89.11	75.07
	Consumer Goods	94.89	88.12	80.77
Information Technology	Information Technology	102.12	94.52	86.29
	Information Technology	101.94	96.26	82.49
	Technology	106.00	82.63	67.00
	Technology	95.24	88.50	65.51
	Technology	102.62	96.01	82.04

Sectors that Faced the Least Brunt (PCI)

Sectors	Name of Index	2020 January	2020 February	2020 March
Health Care	Health Care	96.93	90.36	86.77
	Health Care	103.66	100.12	90.23
	Health Care	98.28	88.83	88.33
	Pharmaceuticals & Healthcare	99.93	92.22	80.40
	Health Care	97.96	93.58	86.10
Utilities	Utilities	108.11	96.92	87.01
	Utilities	99.25	89.87	71.96
	Utilities	98.20	82.09	74.92
	Utilities	108.99	108.57	92.65
	Utilities	108.19	110.11	71.15
Communication Services	Communication Services	99.35	93.06	81.70
	Telecom	105.93	106.31	87.33
	Telecom	94.41	89.65	76.78
	Telecom	99.96	99.43	80.97
	CAC	-	-	-

Footnote:
1. PCI- Price Change Index
2. January contains price change from 1st January, 2020 to 31st Jan,2020
3. February contains price change from 1st January, 2020 to 29th February, 2020
4. March contains price change from 1st January, 2020 tom 31st March, 2020
5. All prices are indexed to 100, base date 1st Jan, 2020

Source: S&P Global; Investing.com

Have the Markets Begun to Show a V-Shaped Recovery?

Leveraged Growth

The Diagnosis

As the World Bank, IMF, Governments and their Central Banks continue to coordinate and announce relief packages in almost every aspect of the economy, are the markets ready for a 'V-Shaped' Recovery?

Breaking it Down

While COVID-19 is being blamed for the destruction of wealth and GDP the world over, the markets seem to have been caught in a downward liquidity spiral since early March. The spiral may have ensued due to panic-selling, but was fuelled by repetitive margin calls. This phenomenon is not new and occurs quite frequently in a crisis.

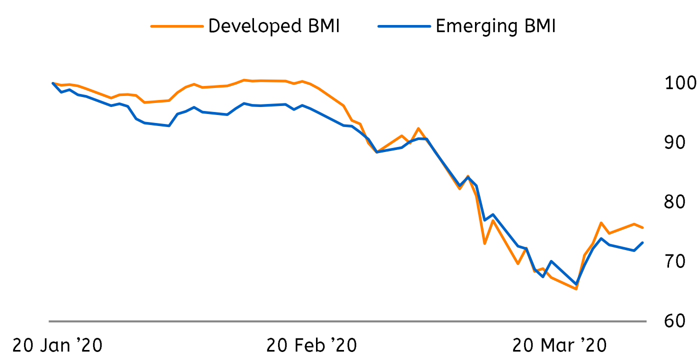
The Take-Away

While investors displayed irrational selling, policy makers continued to revive confidence in the markets. **However, with the stimulus offered to pump liquidity into the markets, it is imperative to track the aftermath closely.**

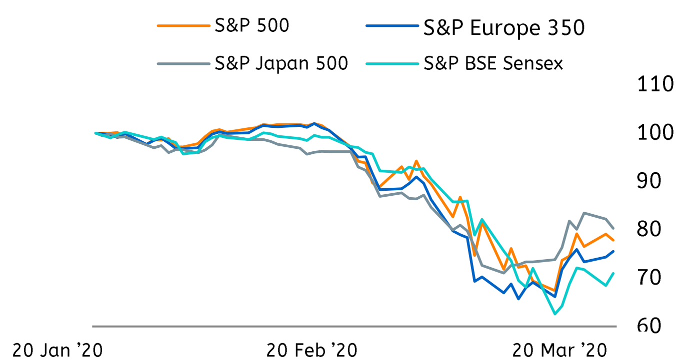
Caveat

Despite signs of recovery, weak earnings and reduced growth forecasts might further drag the markets down.

Developed and Emerging Fall and Rise Together (PCI)



Stimulus Packages Revive Markets Globally (PCI)



Timeline of Spread of COVID-19 and Announcement of Relief Packages

Daily % Price Change

Date(2020)	Events	S&P500	EUR 350	Japan 500	BSE Sensex
24th Feb	Italy reaches 100+ cases & cases in US increased by 200% to 35	-3.35%	-3.79%	-	-1.96%
04th Mar	US reaches 100+ cases	4.22%	1.53%	-0.18%	-0.55%
09th Mar	1. Italy imposes national lockdown. 2. Failed OPEC talks	-7.60%	-7.54%	-5.56%	-5.17%
11th Mar	Italy reaches 10000+ cases	-4.89%	-0.79%	-1.51%	0.18%
12th Mar	1. Fed injects upto $1.5 tn into the financial system. 2. Trump bans European travel of foreigners only - not cargo, that led to confusion & hence the fall in S&P 3. ECB's President Christine Lagarde's remark 'not here to close spreads'	-9.51%	-11.55%	-4.14%	-8.18%
13th Mar	1. RBI to infuse short term liquidity of Rs. 250 bn 2. Trump's speech on - availability of testing kits in abundance, waiving off interest on student loans, relief for borrowers by pausing payments without penalty	9.29%	1.30%	-5.01%	4.04%
16th Mar	1. Fed cuts interest rate to 0% & injects $700bn through Treasury & MBS 2. India reached 100+ cases & COVID-19 cases emerged in 50 states of USA	-11.98%	-4.65%	-2.20%	-7.96%
17th Mar	1. Fed decides to help businesses get funding of upto $1 tn through CPFF & PDCF	6.00%	2.70%	2.26%	-2.58%
18th Mar	The US Govt. announced Phase II stimulus package	-5.18%	-4.52%	0.21%	-5.59%
20th Mar	1. Rs. 300 bn liquidity infusion through OMOs by RBI 2. US reaches 10000+ cases	-4.34%	1.63%	-	5.75%
23th Mar	Fed came up with 3 programs - SMCCF + PMCCF + TALF = $300 bn	-2.93%	-4.29%	0.58%	-13.15%
24th Mar	1. Indian FM Nirmala Sitharaman extended deadlines & raised insolvency threshold 2. Optimism in the market that majority leaders were nearing a deal on a $2 tn Coronavirus relief package	9.38%	8.49%	3.43%	2.67%
25th Mar	Govt stimulus package Phase III signed by Trump & the Senate	1.15%	3.31%	7.16%	6.98%
26th Mar	Indian FM announced the Economic Relief Package of Rs. 1.70 tn	6.24%	2.41%	-2.09%	4.94%
27th Mar	MPC (India) came up with various measures including repo rate cut to 4.4% & reverse repo rate cut to 4%	-3.37%	-3.36%	4.26%	-0.44%
30th Mar	Italy reaches 100000+ cases	3.35%	1.32%	-1.55%	-4.61%

Footnote:
1. BMI- Broad Market Index
2. PCI- Price Change Index
3. All prices are indexed to 100, base date 20th Jan, 2020

Source: S&P Global

Leveraged Growth

STIMULUS MEASURES

An Economy on Steroids

Fed: A Decade Spent on Recovery

Leveraged Growth

The Diagnosis

Being forced into crisis management mode, the Fed displayed sheer power in managing the crisis. The massive stimulus injected was unprecedented, arousing curiosity about the Fed's true strength. Since then the Fed has run many successive sprints in its marathon to reviving the US economy.

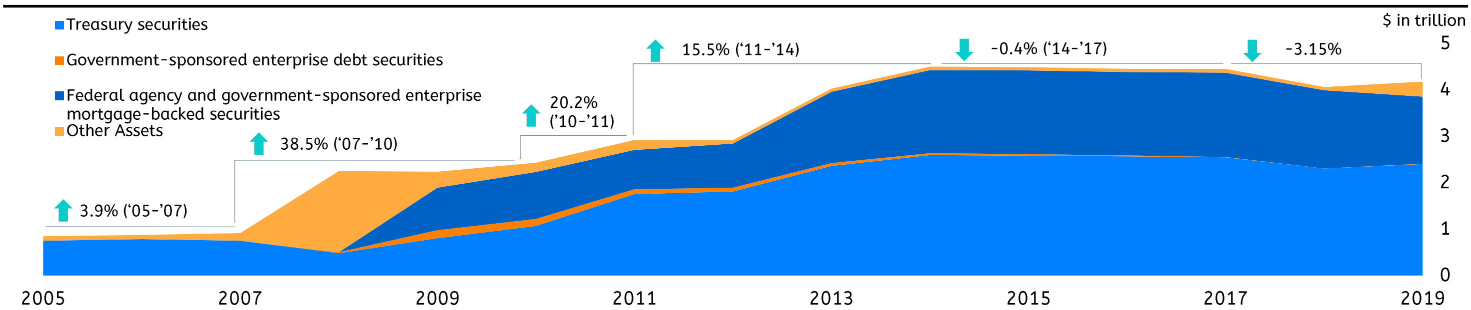
Breaking it Down

Early on in the credit crisis the Fed had run out of its traditional ammunition to increase the quality of money – cutting interest rates. Having to revive a contracting economy, the Fed embarked on increasing the quantity of money. It conducted three rounds of large-scale asset purchases from 2008 to 2014, only to continue holding these assets through late 2017. Moreover, the jury is still out on whether it made the correct policy actions.

The Take-Away

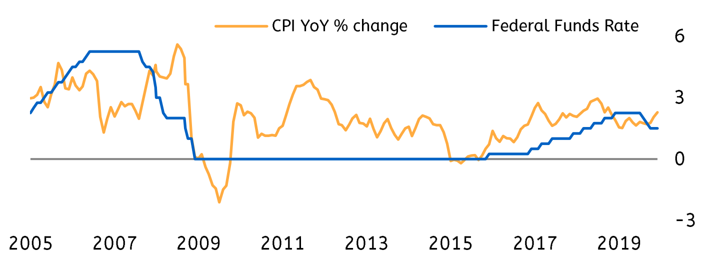
Having spent nearly a decade in recovery, the Fed has to battle the COVID-19 crisis with a ballooned balance sheet. Moreover, bazooka stimulus packages won't end the battle against COVID-19, considering its comparative disruption to previous crises. While there's no upper limit to the Fed's balance sheet size yet, too much QE will lead to price instability, thereby amplifying the problem.

Timeline of Fed's Ballooning Balance Sheet at ~13% CAGR (2005-19)



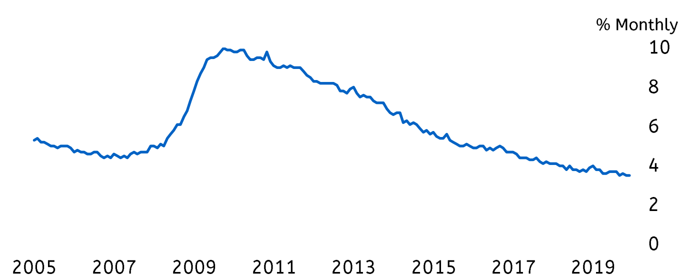
Pre-Crisis	Credit Crisis of 2008-10	Recovery Pace	Third Round of Asset Purchases	Normalisation Intent	Normalisation Policy
Outright purchases or sales of Treasury securities were used historically as a tool to manage the supply of bank reserves to maintain conditions consistent with the federal funds target rate set by the FOMC.	The Fed began its large scale asset purchases program in Nov, 2008 pumping massive liquidity into the system. It gradually slowed the pace from Sept,2009 and ended the program in March 2010. The purchases included $1.25tn in agency MBS, $175bn in agency debt and $300bn in longer term Treasury Securities. The Fed intended to maintain its asset level and reinvest maturing securities.	In Nov 2010, the FOMC began expanding its holding of longer term Treasury Securities to promote a stronger pace of economic recovery. Aiming to complete the process by June,2011 it would purchase at a pace of $75bn per month, a total increase of $600bn. It will maintain its portfolio size at ~$2.6tn.	From 2011-12, the Fed purchased another $667bn but sold equivalent $667bn in Treasury Securities. A net effect of zero, it was a slight alteration to its reinvestment policy. From 2012-13, it conducted total purchases of $790bn in Treasury Securities and $823bn in Agency MBS in gradually descending paces. This was done to strengthen growth and progress towards maximum employment while maintaining price stability.	In 2014, the Fed announced its intention to reduce securities held in SOMA by ceasing out reinvestments in a gradual and predictable manner. In the longer run, it intended to hold no more securities than necessary to implement monetary policy but continue to hold Treasury Securities.	In June 2017, FOMC announced quantitative tightening wherein: • Cap principal received from treasury securities at $30bn per month in gradually increasing steps. • Similarly retire MBS and agency debt at $20bn per month, in gradually increasing steps. These caps are expected to stay in place till further notice.

Fed Rate Movements to Manage USA Urban CPI



Credit Crisis	Recovery and Purchases	Normalisation

USA Unemployment Rate



Credit Crisis	Recovery and Purchases	Normalisation

Footnote:
1. MBS – Mortgage Backed Securities
2. SOMA – System Open Market Account
3. Rates in Timeline are CAGR and approximate percentages

Source: Federal Reserve Bank of New York, Federal Reserve Bank, U.S. Bureau of Labor Statistics

ECB: A Decade Spent on Battling Crises

Leveraged Growth

The Diagnosis

Failure by the Euro Summit and the Eurozone to set adequate policy and responses to the after-shocks of the Lehman failure and the sovereign debt crisis placed the burden to stabilize financial markets almost entirely on the ECB. But can ECB remain the lender of last resort while maintaining price stability once again?

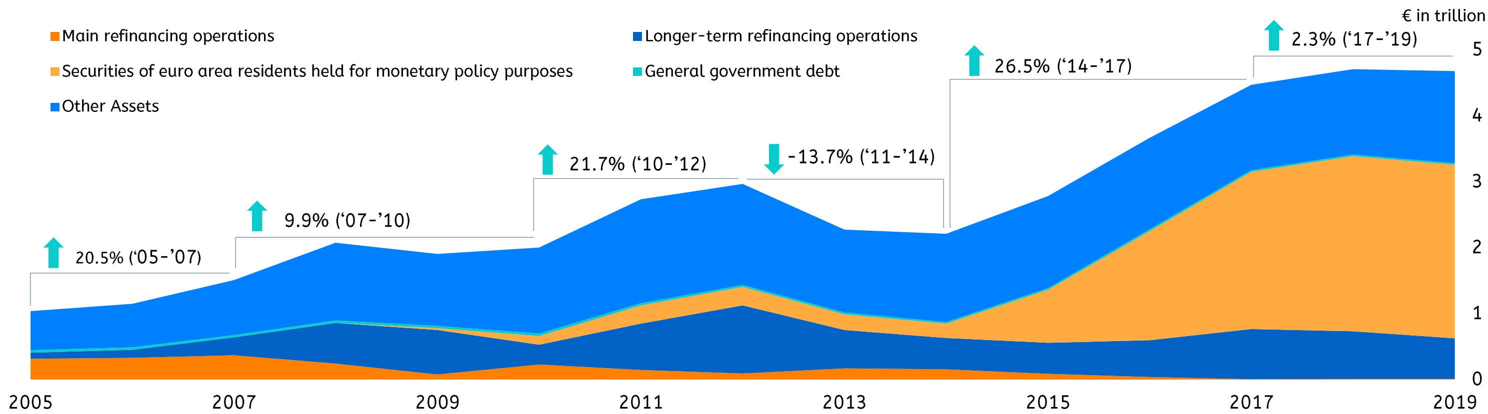
Breaking it Down

ECB's monetary policy has evolved through the previous crises. Starting from the changeover to full allotment in 2008, adopting the two pillar approach of economic and monetary analysis in 2015 and ultimately implementing quantitative easing in early 2015. The ECB has been managing the crises while delivering as per its mandate to maintain price stability in the euro area.

The Take-Away

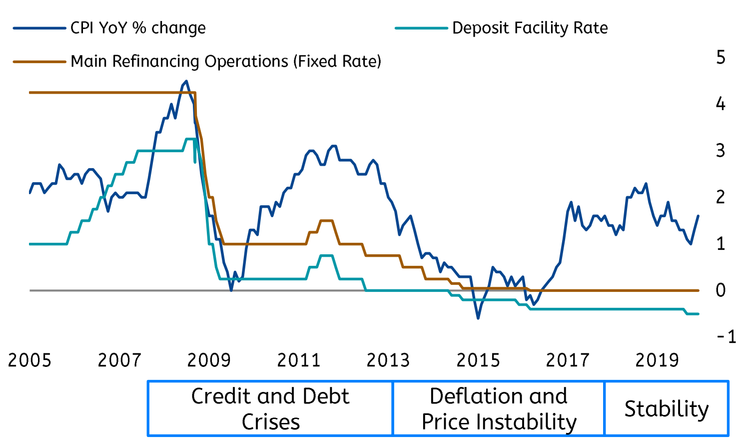
ECB's balance sheet is still ballooned from the assets of the previous crises, leaving more money – liquidity – in the banking system than strictly needed. This will now be further amplified by ECB's COVID-19 QE program. Moreover, with COVID-19 pushing Italy over the edge of bankruptcy, will this decade be a deja-vu for ECB, only worse?

Timeline of ECB's Ballooning Balance Sheet at ~12% CAGR (2005-19)

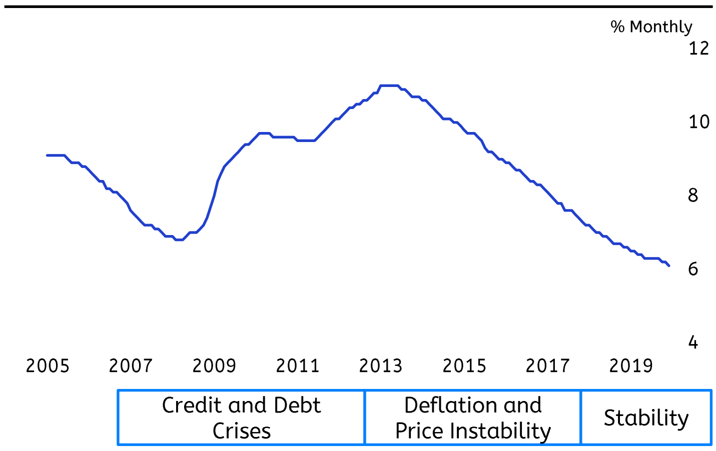


Pre-Crisis	Credit Crisis of 2008-10	Sovereign Debt Crisis	Risk of Deflation	Battling Price Instability	Sustaining Stability
Monetary Policy was guided by monetary developments in the 'core' countries, leading to highly pro-cyclical money and credit conditions in the Euro Zone periphery..	Implemented SLTROs worth €772bn from 2008-2009 to help address liquidity constraints and improve money market conditions. Introduced CBPP1 of €60bn to improve liquidity constraints by purchasing covered bonds in primary and secondary markets.	The Primary reason for the rise was due to VLTROs of nearly €1tn from '11-'12. This was conducted to address the illiquidity in the Euro Area. The SMP purchased nearly €220bn sovereign bonds of stressed countries from '10-'12 to relieve tensions on sovereign rates. Also conducted CBPP2 of €40bn.	The sharp decline resulted from the repayment of VLTROs, which stood at €210bn at the end of 2014. Significant non-standard measures were not conducted.	Mid 2014, ECB introduced TLTRO worth €400bn to provide cheap credit to small companies. In early 2015, it announced APP aimed at purchasing the corporate and public sector securities to restore price stability. The program holdings grew to €228bn by the end of 2017, at an average purchase of €68bn bonds per month from 2015-17.	The ECB continues to hold: SMP at €42bn CBPP1 at €0.083bn CBPP2 at €0.235bn which contributed a near €1.3bn fall to the balance sheet. The APP program rose to €250bn in 2018, staying relatively the same in 2019. This was largely since ECB stopped purchases, resuming them only at the end of 2019.

ECB Rate Movements to Manage CPI in the Euro Zone



Euro Zone Unemployment Rate



Footnote:
1. CBPP – Covered Bond Purchase Programme
2. SMP – Securities Markets Programme
3. APP – Asset Purchase Programme
4. Rates in Timeline are CAGR and approximate percentages

Source: European Central Bank, Organisation for Economic Co-operation and Development (OECD), Eurostat

RBI: A Decade of Qualitative Policies and Reforms

Leveraged Growth

The Diagnosis

India, like most other EMEs, faces challenges associated with volatile capital flows and is highly susceptible to external shocks. Moreover, contrary to developed countries, it has the monetary tools to increase the quality of money to meet crises. However, India has grim internal worries of its own, especially since India had its own "Lehman moment" and credit crisis a decade later in 2018.

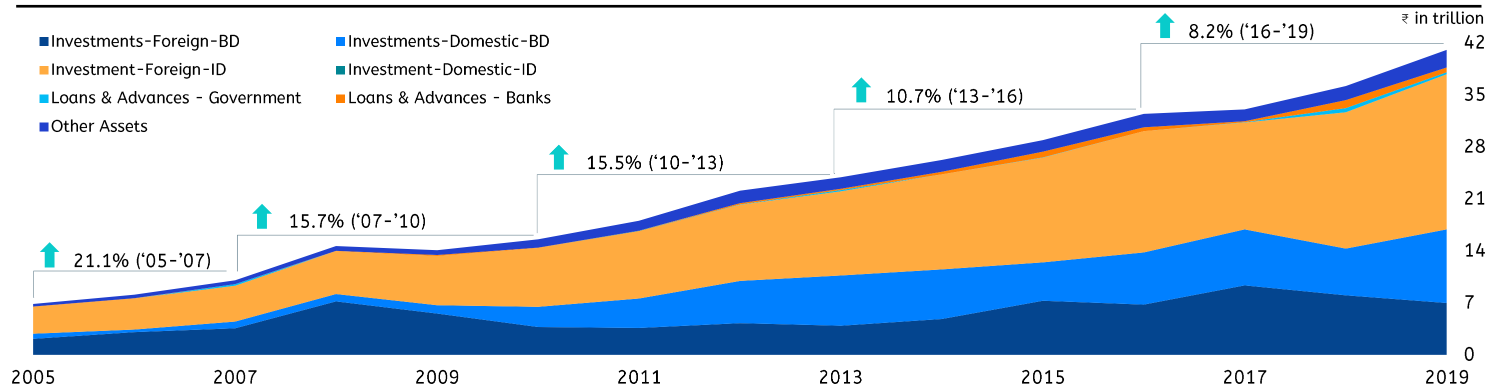
Breaking it Down

The credit crisis in 2018 was rooted in the shadow banking system, or NBFCs, and started when one of the sector's biggest companies, IL&FS, unexpectedly defaulted on loans. RBI has since employed quantitative measures – reducing repo rates – and implemented the necessary frameworks – PCA - to clean the balance sheet mess of banks. GoI has also injected billions of dollars into the sector while enacting reforms like the IBC among others.

The Take-Away

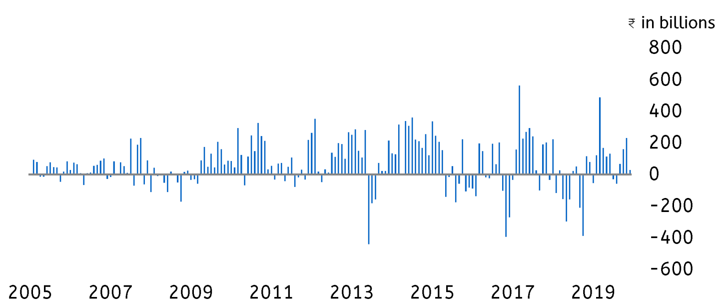
COVID-19 puts RBI is in a tough spot to provide liquidity through qualitative policies. It might allow banks to raise their lending ceiling to keep credit flow in the economy intact. It might also ease NPA classification norms, undoing the recovery since 2018. Moreover, banking reforms may probably become a distant goal again, with NPAs likely to explode in the aftermath of the COVID-19 crisis.

Timeline of RBI's Rising Balance Sheet at ~14% CAGR (2005-19)



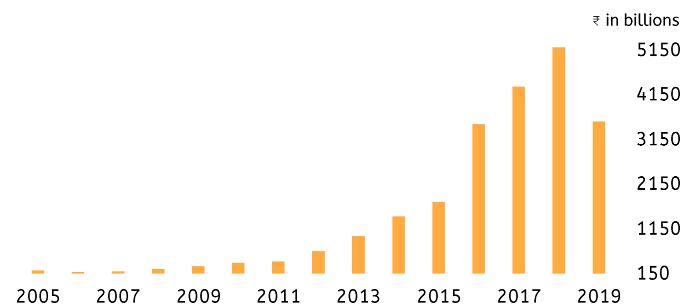
Pre-Crisis	Credit Crisis of 2008-10	The Fragile Five	Taper Tantrum	Indian Credit Crisis
Economic activity remained buoyant.	RBI drew down reserves to finance the shortfall in the foreign exchange market. It expanded NDA through conventional OMOs involving outright purchase of government securities in the secondary market and pumped liquidity through repos under the LAF. The unwinding of MSS also helped amplify liquidity without inflating RBI's balance sheet too much.	RBI's purchase of GoI securities through 2011-13 explain nearly half the increase in the balance sheet. This was primarily done to inject liquidity. The increase in foreign assets was a valuation effect simply due to depreciation of the currency. Similarly, Gold reserves fell due to decline in international gold prices.	In order to stem the sharp and excessive depreciation of the rupee, RBI resorted to a mix of policy measures including forex market intervention, monetary tightening through reduction in banks' access to overnight LAF, increase in MSF rate and increase in daily minimum CRR. Largely, the increase in Foreign Currency Assets caused the rise in RBI's assets, which rose by 21.50% in FY15 alone and 51% from 2013 through 2016.	RBI's balance sheet continued to grow at a moderate rate of 10% annually mainly due to increase in foreign investments and loans and advances.

FPI/FII Net Investments (Monthly)



Credit Crisis	Fragile Five	Taper Tantrum	Indian Credit Crisis

Non-Performing Assets in India (Annual)



Credit Crisis	Fragile Five	Taper Tantrum	Indian Credit Crisis

Footnote:
OMO – Open Market Operation
LAF – Liquidity Adjustment Facility
EME – Emerging Market Economy
CRR – Cash Reserve Ratio
MSS – Market Stabilization Scheme
IBC – Insolvency and Bankruptcy Code
PCA – Prompt Corrective Action
NDA – Net Domestic Assets
Rates in Timeline are CAGR and approximate percentages
Source: Reserve Bank of India, National Securities Depository Limited (NSDL)

COVID-19: A Test of Central Bank Mandates

Leveraged Growth

The Diagnosis

Faced with familiar challenges of preventing the evolution of liquidity crunch into a solvency crisis, Fed and ECB have drawn a leaf from the financial crisis of 2008-10. The Fed has clearly adopted an aggressive – whatever it takes – stance, announcing unlimited quantitative easing. ECB seems to have learnt from mistakes of the past as it attempts to deal with the COVID-19 crisis. While India escaped the crisis of 2008-10 largely unscathed, it might need to look beyond qualitative measures in tackling this crisis. The quantity of monetary stimulus provided clearly establishes the unprecedented nature of this crisis. Central banks will clearly be put to the test of maintaining their mandates as they aim to revive their respective economies.

Breaking it Down

Fed has taken on the pandemic with all guns blazing, launching bazooka relief packages in almost all sections of the economy. It has also received criticism of bailing out irresponsible companies to avoid the wave of bankruptcies and mass unemployment.

ECB has largely learnt the counter-productiveness of temporary and unpredictable non-standard relief measures. While it has adopted permanent quantitative easing, it seems to be repeating the mistake of partial policy response.

RBI has used monetary measures to improve the quality of money, however, given its own credit crisis, it might need to increase the quantity of Rupee in the economy as well.

The Take-Away

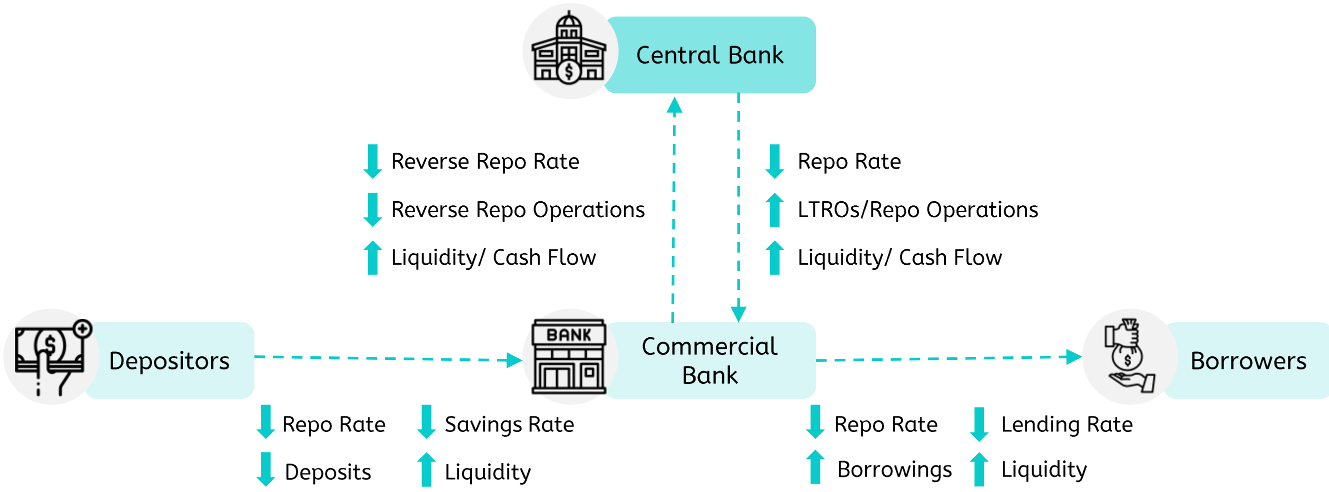
Both Fed and ECB have tried to unwind assets purchased during the '08 crisis, but have largely failed because of recessionary conditions. Given conditions are likely to worsen, the over-supply of money might de-stabilize prices thereby amplifying the problem. RBI, too, needs to have an exit plan if it expands its balance sheet by 25-30% of GDP. Currently balance sheet normalization is unchartered territory for all central banks.

The threats of recession clearly state that battle has only begun and the monetary support provided so far is merely a sprint in what will be a long marathon.

Monetary Measures	Federal Reserve Bank	European Central Bank	Reserve Bank of India
Open Market Operations			
Rate cut	✔	✘	✔
Reverse Repo rate cut	✘	✘	✔
LTROs	✘	✔	✔
Repo Operations	✔	✘	✔
Temporary Relief Measures			
Reserve Requirements Reduced	✔	✔	✔
Financing for Banks for Small and Mid-Sized Businesses	✔	✔	✔
Asset Purchase Program			
Commercial Paper	✔	✔	✔
Investment Grade Bonds	✔	✔	✔
Asset Backed Securities	✔	✔	✘
Agency Backed Mortgage Securities	✔	✔	✘
Government Securities	✔	✔	✔
Financing for Local Governments	✔	✘	✔

Source: Federal Reserve Bank, European Central Bank, Reserve Bank of India

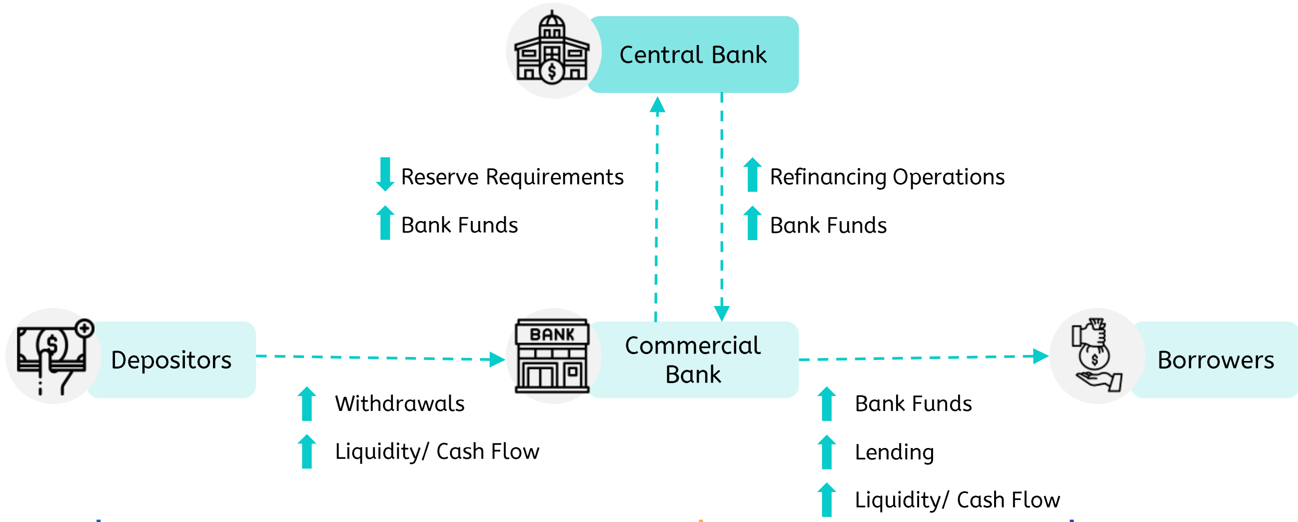
Break Down of Relief Packages: Open Market Operations



Open Market Operations	Federal Reserve Bank	European Central Bank	Reserve Bank of India
Rate cut	To 1% - 1.25% by 50 bps (as on 03 Mar' 20) To 0% - 0.25% by 100 bps (as on 15 Mar' 20)		To 4.4% by 75 bps (as on 27 Mar' 20)
	Considering FOMC's goal to protect employment levels and maintain moderate inflation rates, the Fed decided to cut rates twice. By drastically reducing borrowing costs, it would provide businesses with the capital needed to survive the crisis and hopefully save jobs.		Maintaining its accommodative stance to revive the falling consumer demand, amplified by the COVID-19 pandemic, MPC voted to reduce rates. While this puts pressure on inflation targets, the resultant fall in interest on deposits and borrowings could help spur consumption and corporate investments.
Reverse Repo rate cut			To 4% by 90 bps (as on 27 Mar' 20) To 3.75% by 25 bps (as on 17 Apr' 20)
			RBI initially reduced the rate below the average CPI rate of 2019, and then again when bank deposits with RBI rose by ₹6.9 tn. Banks, as a result, would have to pursue riskier lending to receive the required returns to meet nominal value of funds. The pursuit of profits, thus pumps liquidity into the economy.
LTROs		Additional Long-Term Refinancing Operations maturing on June 24, 2020 (as on 12 Mar' 20)	Additional ₹1 tn Long-Term Repo Operations with maturity up to 3 years (as on 16 Mar' 20)
		To provide an effective backstop in Europe and stabilize any stress in money markets or liquidity shortage in the banking system, ECB decided to conduct additional LTROs.	LTROs help to improve the monetary transmission of rate cuts. The RBI hence decided to conduct LTROs of up to ₹1 tn in multiple tranches at the present policy rate on March 16. These were in addition to ₹1 tn LTROs already announced by RBI on February 6 policy review.
Repo Operations	Up to $770 bn with maturity up to 3 months (in Mar' 20)		Up to ₹1.5 tn with maturity up to 16 days (in Mar' 20)
	NY Fed had to increase the limit of its overnight operations twice in 2 days to $175 bn. As per the announcement, Fed claimed that it won't compromise on liquidity provided to overnight lenders & will do everything it can to ensure the smooth running of money markets amid fears tied to the coronavirus & increasing demand for loans. Limits of repo operations with maturities of 2-week, 1-month & 3-month were also increased.		As a pre-emptive measure to tide over any frictional liquidity requirements on account of the dislocations due to COVID-19, the RBI decided to conduct the variable repo operations in two tranches. Thus ensuring normal functioning of markets, promote staff welfare and preserve financial stability.

Source: Federal Reserve Bank, European Central Bank, Reserve Bank of India

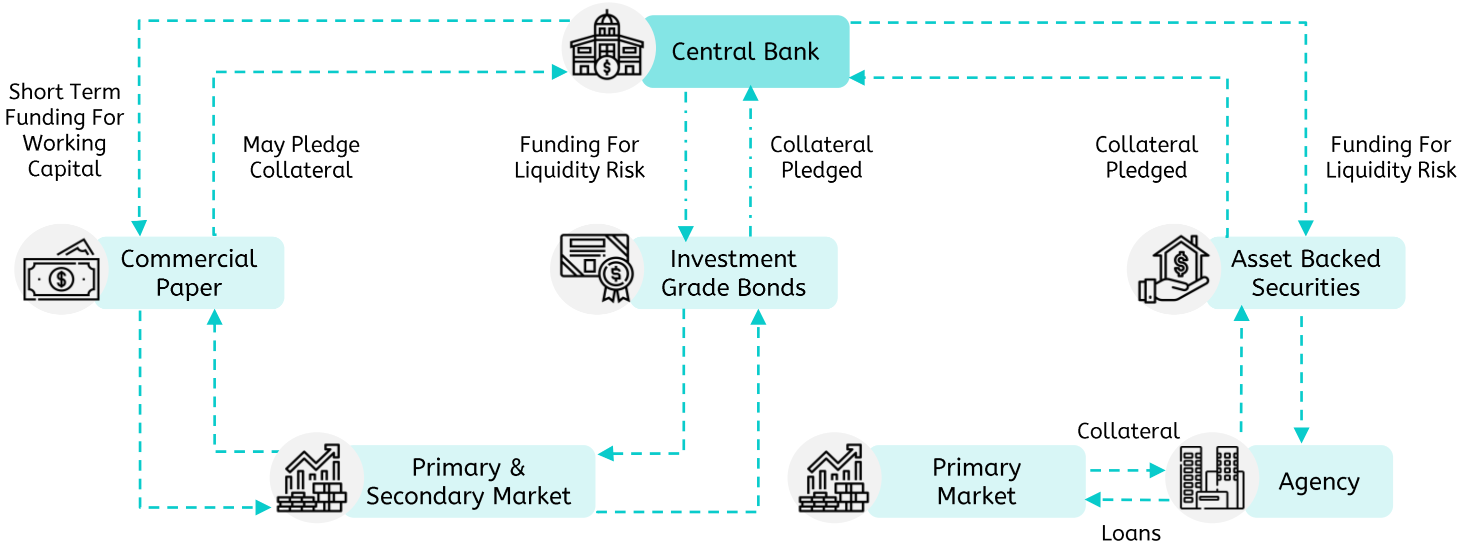
Break Down of Relief Packages: Temporary Relief Measures



Temporary Relief Measures	Federal Reserve Bank	European Central Bank	Reserve Bank of India
Reserve Requirements	Cut to 0 (as on 15 Mar' 20)	Capital relief for banks (as on 12 Mar' 20)	CRR reduced to 3% by 100 bps (as on 27 Mar' 20)
	Reserve requirements were eliminated to encourage banks to make use of their capital and liquidity buffers as they support lending to households and businesses. Moreover, to avoid bank credit risk that could lead to a run on banks, the Fed introduced a special discount window to facilitate emergency lending at a low rate of 0.25% without collateral requirements.	ECB decided to support banks by temporarily allowing them to operate below the level of capital defined by the Pillar 2 Guidance (P2G), the capital conservation buffer (CCB) and the liquidity coverage ratio (LCR). The banks are expected to use the positive effects from these measures to finance households & corporates experiencing temporary difficulties and not increase dividend distributions or variable remunerations.	Despite ample infusion of liquidity in the system, the distribution of the same has been highly asymmetrical across financial markets & in the banking system. Hence, RBI had to reduce the cash reserve ratio (CRR) that would infuse primary liquidity of around ₹1.37 tn uniformly across the banking system. These funds could further be used for lending purposes by banks.
Financing for Banks for Small and Mid-Sized Businesses	Main Street Business Lending Program (as on 09 Apr' 20) Loans given by banks to be purchased by MSNLF & MSELF Fed limit: $600 bn Treasury backstop: $75 bn	TLTRO III at 25 basis points below average rate applied in Euro System's main refinancing operations. Tenure: June' 20 to June' zz21 (as on 12 Mar' 20)	Towards NABARD, SIDBI & NHB - ₹0.5 tn program (as on 17 Apr' 20)
	Under this program, Fed will be encouraging banks to issue new loans or further extend loans to small and mid-sized businesses that were in good financial standing before the crisis. As conditions to these four year maturity loans with deferred payments, businesses must commit to make reasonable efforts to maintain payrolls and retain workers as well as exercise restrictions on benefits to stockholders. To ensure this, the Fed will be purchasing 95% participation in these loans originated by eligible banks.	These operations will support bank lending to those affected most by the spread of the coronavirus, in particular small and medium-sized enterprises. Moreover, under TLTRO III counterparties i.e. eligible central banks of each European country, can now borrow at most 50% of their stock of eligible loans, compared to 30% before, from the ECB.	These institutions play a big role in meeting financial requirements in small and agriculture businesses and low-income housing. They were therefore provided with special liquidity packages to ensure smooth working of the sector.
	Paycheck Purchase Program Lending Facility (as on 09 Apr' 20) PPP loans given by banks to be purchased by PPPLF Fed limit: $350 bn		
	The Paycheck Protection Program was established under the CARES Act, to help small businesses pay their employees during the COVID-19 crisis. However to enhance its effectiveness, the Fed announced the establishment of the Paycheck Protection Program Lending Facility, to extend credit to eligible financial institutions that originate PPP loans, taking their issued loans as collateral at face value.		

Source: Federal Reserve Bank, European Central Bank, Reserve Bank of India

Break Down of Relief Packages: Asset Purchase Programs(1)



Asset Purchase Programs	Markets	Federal Reserve Bank	Reserve Bank of India
Commercial Paper	Primary and Secondary	Through CPFF & PDCF (as on 17 Mar' 20), and MMLF (as on 18 Mar' 20) with disclosed amount being: Fed limit: $1.8 tn Treasury backstop: $20 bn	Through 3 year TLTROs - Part of ₹1 tn relief (as on 27 Mar' 20) & Part of TLTRO 2.0 - ₹0.5 tn (as on 17 Apr' 20)
		Commonly used as unsecured debt to finance short term working capital needs, they often lead to asset-liability mismatch during times of stress, given the failure to roll over these debts. To diffuse the situation, the Fed purchased the papers thereby restoring the flow of credit to ensure smooth functioning of this market.	Commercial papers work in a similar fundamental manner in India. They also faced roll over issues due to the large selloffs in the financial market requiring RBI intervention. It provided the funds to banks via TLTROs by ordering banks to purchase these securities from the market.
Investment Grade Bonds	Primary	Through PMCCF (as on 23 Mar' 20, expanded on 09 Apr'20) and PDCF (as on 17 Mar' 20) with disclosed amount being: Fed limit: $500 bn Treasury backstop: $50 bn	Through 3 year TLTROs - Part of ₹1 tn relief (as on 27 Mar' 20) & Part of TLTRO 2.0 - ₹0.5 tn (as on 17 Apr' 20)
		In an aim to ensure uninterrupted access to credit for businesses, the Fed will provide bridge financing by purchasing new investment grade bonds from eligible issuers with a maturity of four years. This will help provide liquidity to businesses, ensure survival, maintain employment & investments as the nation continues to fight the outbreak.	TLTRO 1.0 - Large sell offs in the financial markets & slowdown in bank credit has made access to working capital through this instrument difficult for corporates. The RBI through TLTROs is providing banks with funds needed to purchase these instruments as collateral and restore credit to businesses. RBI also included non-convertible debentures as collateral for credit. TLTRO 2.0 - In an aim to enhance monetary transmission to small Non-banking Finance Company (NBFCs) & Microfinance Institutions (MFIs), RBI decided to conduct TLTRO 2.0, wherein banks will have to invest 50% of the funds availed, in investment grade bonds, commercial paper, and non-convertible debentures of small & mid-sized NBFCs & MFIs. In return, banks will be eligible to special reporting requirements that will make achieving targets easier for them.
	Secondary	Through SMCCF (as on 23 Mar' 20, expanded on 09 Apr'20) with disclosed amount being: Fed limit: $250 bn Treasury backstop: $25 bn	
		The dramatic drop in prices of corporate bonds ETFs implied that investors were severely bearish or crunched for liquidity. Hence, the Fed decided to purchase these instruments from the secondary market to stabilize prices and restore consumer confidence while also easing liquidity tensions.	
Asset Backed Securities	Primary	Through TALF (as on 23 Mar' 20) with disclosed amount being: Fed limit: $100 bn Treasury backstop: $10 bn	
		Given the similarity of the credit crisis, Fed revived the Term Asset-Backed Securities Loan Facility (TALF). The TALF enabled the issuance of ABS backed by consumer and business loans, given by Small Business Administration (SBA). The Fed, using the ABS as collateral, will in turn lend an equal amount less a haircut to SBAs, thereby ensuring the flow of credit.	

Footnote:
1. CPFF – Commercial Paper Funding Facility
2. PDCF – Primary Dealer Credit Facility
3. MMLF – Money Market Mutual Fund Liquidity Facility
4. PMCCF – Primary Market Corporate Credit Facility
5. SMCCF – Secondary Market Corporate Credit Facility
6. For ECB please refer to the next page

Source: Federal Reserve Bank , Reserve Bank of India

Break Down of Relief Packages: Asset Purchase Programs(2)

Leveraged Growth

Asset Purchase Programs	Markets	Federal Reserve Bank	Reserve Bank of India
Agency backed Mortgage securities	Secondary	Purchase of securities tied to real estate ($200 bn as on 15 Mar' 20, expanded to unlimited QE as on 23 Mar' 20)	
		The mortgage market came under severe stress prompting urgent relief. The unforeseen significant drop in demand during the spring-home-buying season brought leveraged home sellers under pressure, increasing default and bankruptcy risks. Hence, to stabilize mortgage rates and restore normalcy in the market, the Fed purchased these securities.	
Government securities	Primary and Secondary	Treasury purchases ($500 bn as on 15 Mar' 20, expanded to unlimited QE as on 23 Mar' 20)	OMOs - ₹400 bn (in Mar' 20)
		The Treasury market is considered to be the most liquid of all markets & serves as the valuation benchmark for other financial assets. Presence of impaired liquidity & stress in the US Treasury market can reverberate through the entire financial system. Hence to prevent this, the Fed initially announced purchase of $500 bn of Treasury securities. Given the failure in market response it extended to open ended purchasing.	In response to large sell offs from foreign investors, RBI decided to conduct Open Market Operations (OMOs) of ₹100 bn. The purchase would also help to ensure that other market segments continue to function normally. RBI expanded the program to conduct another ₹300 bn OMO purchase in two tranches of ₹150 bn each.
Financing for Local Governments	Primary	Through Municipal Liquidity Facility (09 Apr' 20) and MMLF (as on 20 Mar' 20) with disclosed amount being: Fed limit: $500 bn Treasury backstop: $35 bn	WMA Limit increased by 30% (as on 01 Apr' 20) revised to 60% (as on 17 Apr' 20)
		In an aim to help state & local governments better manage cash flow pressures & continue to serve businesses & households in their communities, Fed established a special facility that will be purchasing short term notes up to $500 bn directly from these governments.	Under WMA mechanism, the state government and union territories can avail immediate cash from the RBI, if required. Initially RBI had increased the Ways and Means Advances (WMA) limit for states to provide greater comfort to the states for undertaking COVID-19 containment and mitigation efforts, and to plan their market borrowing programmes better. The increased limit will be available till September 30,2020.

ECB Relief Programs for Primary and Secondary Market

Asset Purchase Programmes	Markets	European Central Bank
Private Asset Purchase Programme	Primary and Secondary	€120 bn (as on 12 Mar' 20)
		• ECB announced an additional net asset purchases of €120 bn to ensure a strong contribution from private sector purchase programmes, with an aim to support favourable financial conditions for the real economy in times of heightened uncertainty. • This programme will work along with the existing APP. • Net asset purchases are expected to continue for as long as its necessary to reinforce the accommodative impact of its policy rates, and will be ended shortly before it starts raising the key ECB interest rates.
Pandemic Emergency Purchase Programme (PEPP)	Primary and Secondary	€750 bn (as on 18 Mar'20)
		• ECB announced this asset purchase programme of public & private sector securities to counter the serious risks to the monetary transmission mechanism & escalate the diffusion of the impact of coronavirus. • Eligible assets under the corporate sector purchase programme (CSPP) to include non-financial commercial paper. • Eligibility requirements for securities issued by the Greek government will be waived off. • Further the collateral standards have been eased to ensure that counterparties can make full use of the refinancing operations. • The Governor Council claimed that it is willing to increase the size of its asset purchase programmes if needed for as long as necessary.

Disclaimer: Due to lack of clear information, ECB has been shown separately.
Source: Federal Reserve Bank, European Central Bank, Reserve Bank of India

Dollar- the World's Money, and Fed - the World's Central Bank?

Leveraged Growth

The Diagnosis

Drawing another parallel in crisis management policies of 2008 and now, the Fed once again established international swap lines to relieve stress on currencies world over.

But how does sending billions of dollars all over the world help?

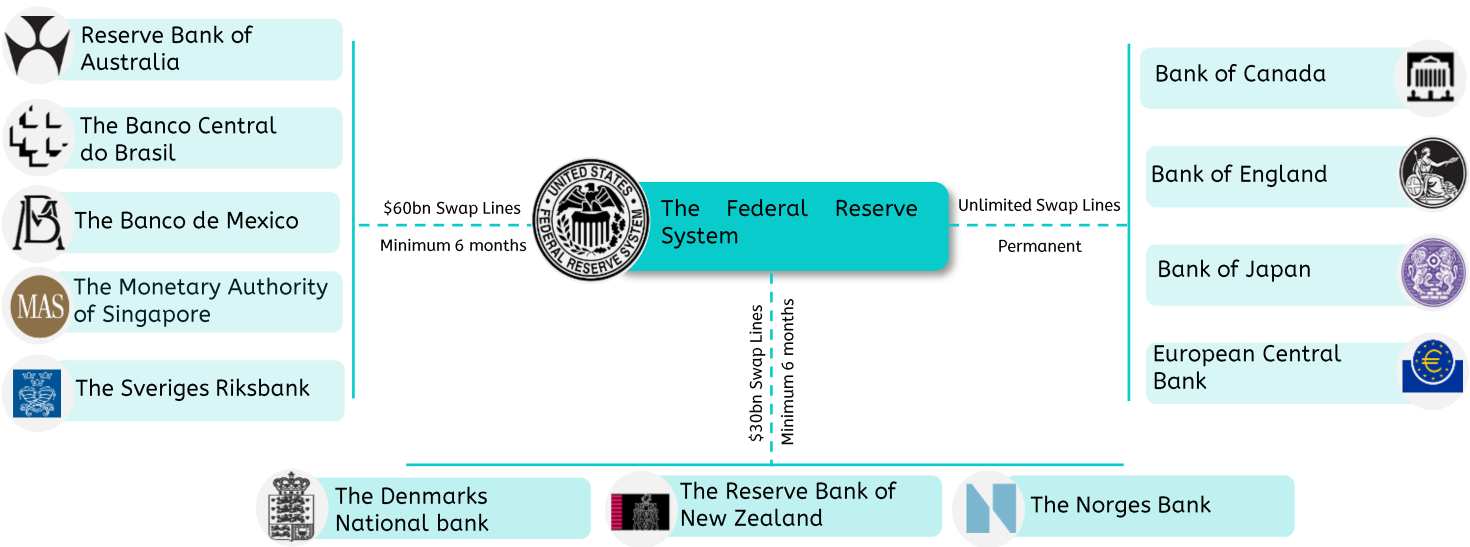
Breaking it Down

Dollar is the lynchpin of global trade. During crises, foreign withdrawal of funds rise drastically, thereby increasing demand for dollar. This puts pressure on the local central bank's dollar reserves and can eventually depreciate the local currency. COVID-19 resulted in global panic selling as investors searched for safe havens across the globe, leading to the spike in demand for dollars.

The Take-Away

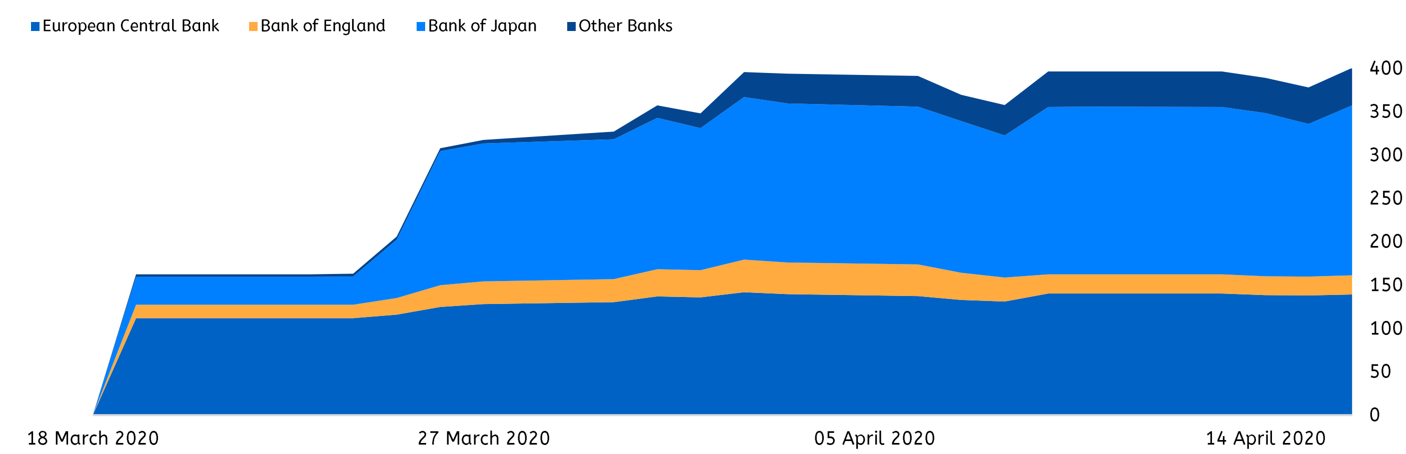
These currency swaps allow central banks to borrow funds from the Fed with no exchange rate risk or credit risk. It thereby locks in the exchange rate for the tenure of the swap. This helps stabilize the currency rates by providing increased liquidity of dollar, relieving pressure on dollar reserves of the local central bank.

Network of Central Bank Swap Lines to Tackle Global Dollar Liquidity Crunch



- The Fed retains the power to extend swap lines to other central banks based on various eligibility criteria.
- The central banks' network response to currency-specific liquidity shortage did help stabilize currency movements as witnessed at the end of March.

US dollar Liquidity Swap Outstanding (Daily, in $ bn)



- Both ECB and BoJ are conduits of dollar for countries not accepted by Fed. RBI, for example, maintains a $75bn Dollar Swap Line with BoJ. With unlimited swap lines, they are clearly lending dollars freely.
- These swaps have also relieved pressure off US Treasuries and other US assets, that were being sold to meet dollar requirements back home.
- Given the rapidly evolving impact of COVID-19, international swap lines are being entered into at maturities of 7 days and 84 days. This is a replacement of the 28 day maturity swaps to the 2008 financial crisis., while 84 days is in common.

Source: Federal Reserve Bank

Ripples from The Great Lockdown

Leveraged Growth

The Diagnosis

Prolonged trade disputes and wide-ranging policy uncertainties led to broad-based deterioration in GDP over the past year. **Even after an assumption of the lockdown lifting in H2 FY20, a GDP contraction of 3% is being projected.** However, the economic fallout will be acute in specific sectors.

Breaking it Down

Most economies are dealing with the crisis in 2 phases- a containment phase followed by a recovery phase. Recovery would require substantial targeted stimulus and liquidity measures to keep the economic infrastructure of society intact, reduce systemic stress and prevent an even deeper contraction.

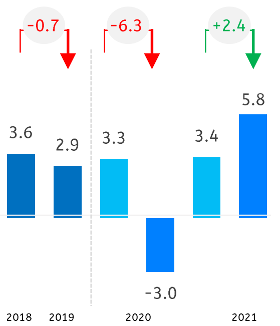
The Take-Away

Despite dire circumstances there are many reasons for optimism - the number of new cases came down in the worst affected areas, there is an unprecedented pace of work on treatments and vaccines, and substantial economic policy actions taken in many countries will help prevent severe economic pain and aid recovery.

GDP Growth Forecasts for 2020 & 2021 (% YoY)

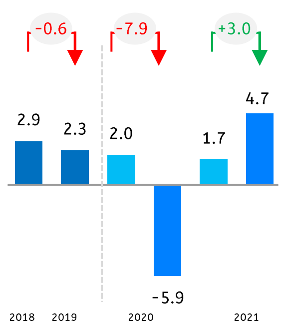
Actual | Forecasts Pre COVID-19 | Forecasts Post COVID-19

Global



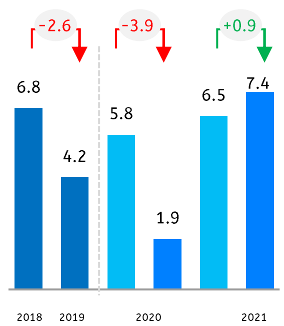
- Estimated economic loss of $9 tn, greater than the economies of Japan and Germany combined.
- “Every month of lockdown costs us 2-3% of our GDP” said Christine Lagarde, President of the European Central Bank.

USA



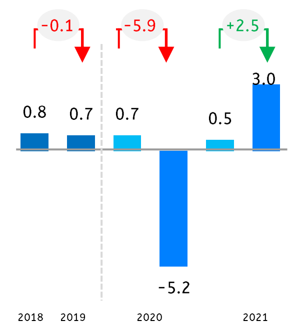
- The U.S. is expected to account for 31% of this year’s decline in Global GDP and IMF is sceptical about a V-shaped recovery.
- USA general government debt is anticipated to rise from 109% to 131.1% by 2020 and unemployment could increase to 32%.

India



- Estimated GDP growth for India is the highest among the G-20 nations.
- "Assuming 80% production is lost, and 20% of the economy constituting the essential services still functions, ₹35-40000 cr of GDP will be lost every day” said CARE.

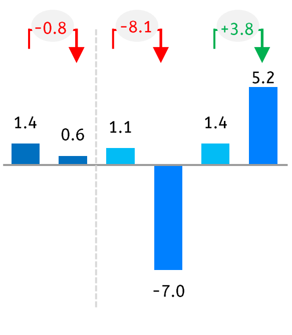
Japan



- Delay in the 2020 Tokyo Olympics has a negative impact in the economy and BoJ is now thinking about delaying the planned hike in consumption taxes.
- 13 mn households, representing a quarter of the total, will be greatly affected by shutdown.

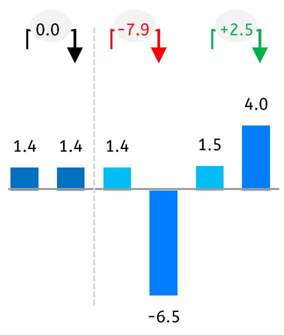
Euro Countries GDP Growth Forecasts for 2020 & 2021 (% YoY)

Germany



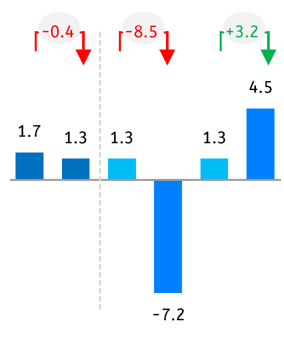
- Germany’s economy will face headwinds from US-China trade dispute and Brexit.
- Its PMI fell from 52.5 to 31.7, and the auto sector was the worst hit.

UK



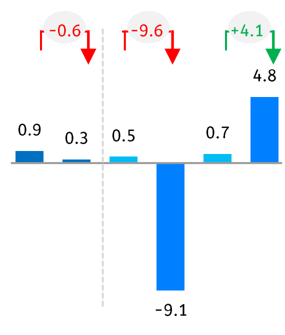
- According to KPMG, 36% of 13 mn jobs will be affected and disposable income earned by households will be 17% lower than previous quarter in 2020.
- UK’s PMI index fell by 35.15% to record lows in March.

France



- IMF forecasted an increase in debt of around 17%, going from 98.5% last year to 115.4% this year.
- Economy is operating 35% below normal and 2 months of lockdown in France is expected to cost 120 euro bn loss in revenue.

Italy



- Italy is among the worst hit countries and will contract by 9.1% this year - the steepest drop of any large European country.
- Its PMI also fell to 17.4, the lowest in all of Eurozone, indicating a sharp decline in the services activity.

Disclaimer: Data and forecasts for India are presented on a fiscal year basis, and GDP from 2011 onwards is based on GDP at market prices with fiscal year 2011/12 as a base year.
Footnote:
1. PMI: Purchasing Managers' Index
Source: IMF

Leveraged Growth

INDIA STORY

Navigating Tough Waters

The Great Indian Policy Conundrum

Leveraged Growth

The Diagnosis

India entered COVID-19 crisis with limited fiscal space, having breached the previous budget deficit target of 3.3% and raising it by 0.5%. With a dwindling fiscal outlook, any further fiscal easing will put pressure on India's sovereign rating. But with industry associations and economists highlighting the need for large fiscal support, what option does GoI have?

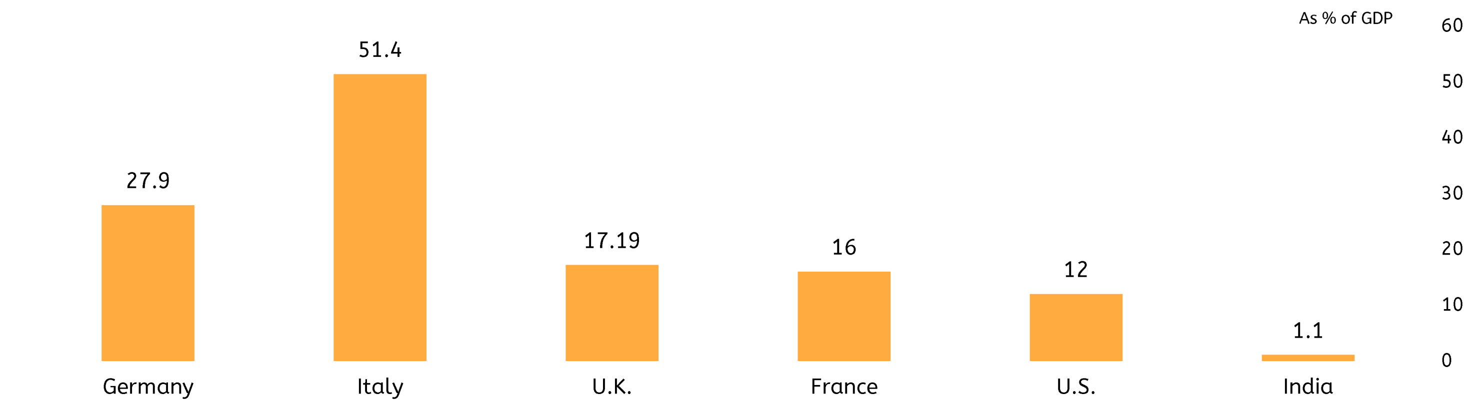
Breaking it Down

India's lockdown measures seem to be at par with developed countries. But while they are firing fiscal bazookas to stimulate the economy, India's fiscal packages seem to be more like water pistols – reaching barely 5% of its GDP.

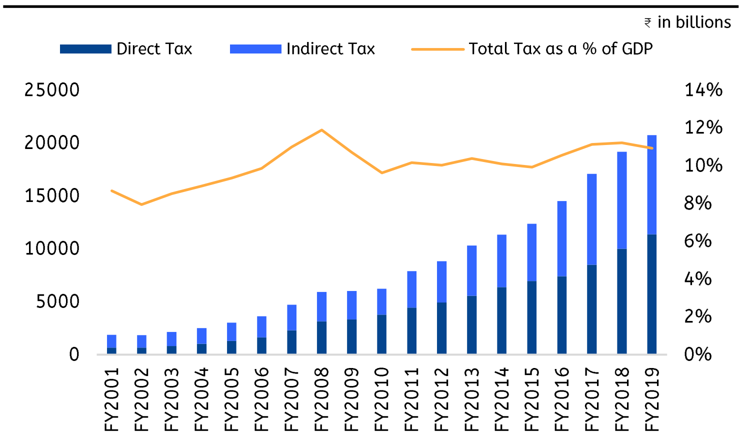
The Take-Away

Alternative to bazookas, India can take a measured approach to deal with the impact. It needs to ensure three critical objectives – assistance to labor, ensuring market liquidity and stimulating demand and investments. **But with the absence of fiscal space to increase spending, will GoI invoke the 'Escape Clause'?**

Governments Dedicate More than $8 tn to Fight COVID-19 Pandemic

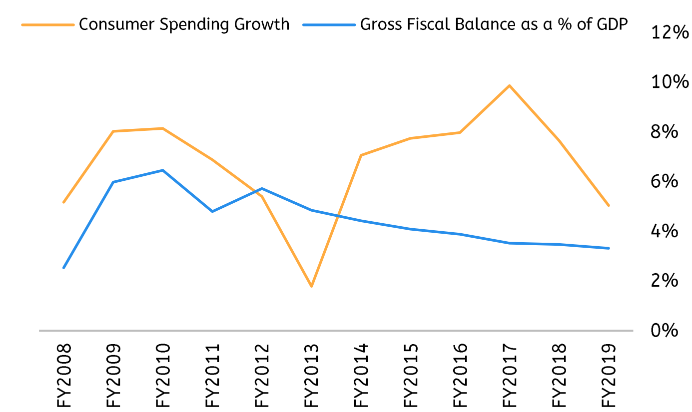


Taxes form a small part of India's GDP



The prolonged slowdown in consumer demand even before the COVID-19 outbreak had already kept the government's revenue targets on edge. Moreover, the government is likely to defer taxes for some industries like aviation, hospitality and small companies, which have been hurt the most by the lockdown. However, with only 11% of the GDP coming in as tax revenue, **GoI is in a fix - should it offer tax sops and further reduce revenue flows, or keep tax rates intact and pressurize already stressed cash flows of the corporate sector?**

Fiscal Deficit has fallen, but will need to rise again



ASSOCHAM has recommended at least a $200-$300 bn stimulus package will be necessary for India. However, that will blow out India's deficit to above 10% of GDP, given revenue shortages. This is forcing the government's hand to borrow more and one way to do it is by monetizing the deficit. GoI could invoke the 'Escape Clause,' allowing RBI to participate directly in primary auctions for sovereign debt. However, the move could lead to a downgrade in India's credit rating to junk.

Source: Reserve Bank of India, Ministry of Statistics and Programme Implementation, International Monetary Fund

Corporate India on the Credit Ventilator

Leveraged Growth

The Diagnosis

A credit rating cut is a blow for a company in any circumstance, making it more expensive to raise fresh debt. But it can become devastating when cash flows are also shrinking. Even after RBI's measures, credit growth looks ready to dive off a cliff with ICRA projecting a double-digit fall to multi-decade lows. **In a barely functioning economy, will credit starved MSMEs succumb to a slow death?**

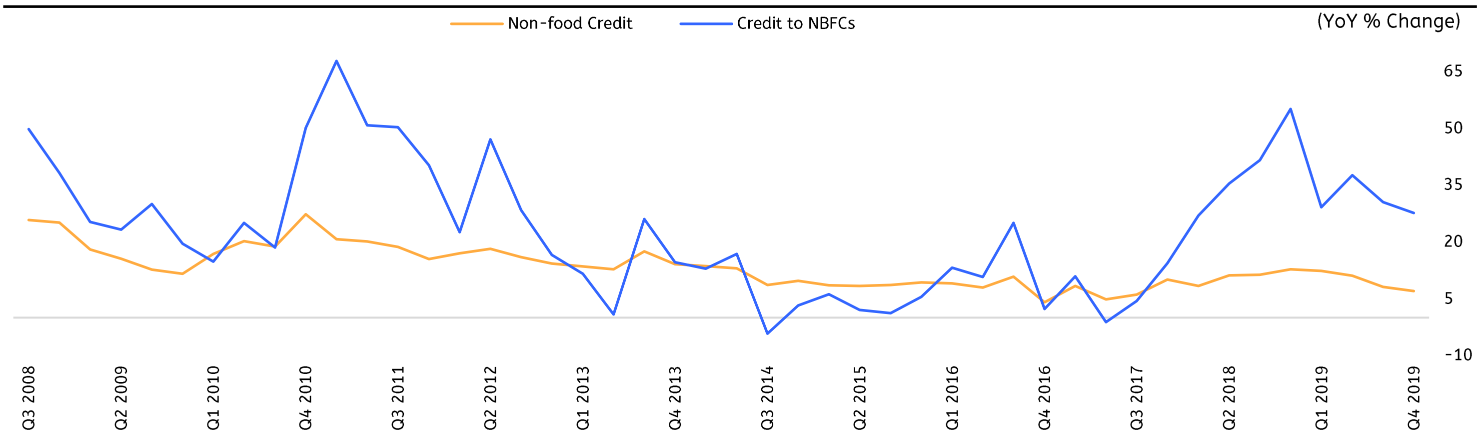
Breaking it Down

Banks have been exceptionally cautious about lending, as they grapple with the world's steepest NPA ratio, falling consumer demand and low private capex. In a bid to boost lending in an economy that's set for its weakest expansion in 11 years due to the crisis, RBI has already introduced a Rs.1 tn facility of cheap funds for banks and relaxed lending rules for MSMEs, allowing some delays in loan servicing not be treated as bad debt.

The Take-Away

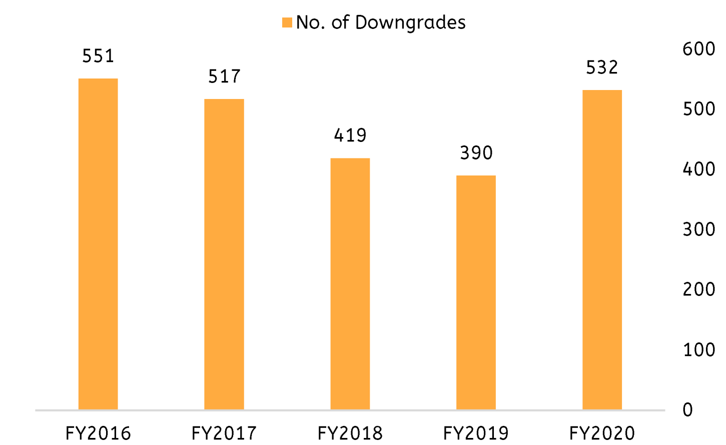
The economy has just recovered from the liquidity shocks due to a painful cleaning of banks' balance sheets and bloated NPAs. To increase credit flow in the system, RBI needs to ease bad loan classification norms further. **However, can it really afford to undo all progress made in the past 2 years to** offer a new lease of life to the beaten down corporate sector.

Structural Issues at Play – Over-exposed Banks and Under-served Credit Market

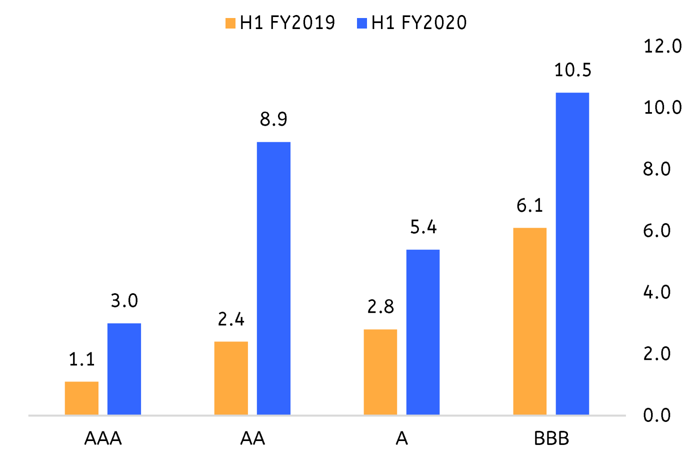


A shift of large borrowers such as NBFCs to the banking system for their funding requirements, had boosted bank credit growth in FY2019. However, factors such as muted economic growth, lower working capital requirements, and risk aversion among lenders after the IL&FS, DHFL and Yes Bank debacles, compressed the incremental credit growth in FY2019. RBI data shows loan growth sunk to a more than two-year low in February 2020, despite the RBI lowering borrowing costs five times last year.

Trend in Rating Downgrades by ICRA



Downgrades as % of Opening Entities in Corresponding Investment Grade



- ICRA Ratings projects a 40-45% Y-o-Y decline in incremental net bank credit to Rs. 6.3-6.8 tn during FY2020 from Rs. 11.9 tn during FY2019. This will translate to a deceleration of bank credit growth to 6.5-7.0% during FY2020 from 13.3% during FY2019.
- Downgrades are outpacing upgrades at the biggest credit rating firms by 3 to 1, which is the highest pace seen since the depths of the 2008 financial crisis. This is also putting the investors in risk-off mode as debt funds are seeing record levels of outflows. ICRA downgraded around Rs.7 tn worth of debt whereas Ind-Ra downgraded Rs.1.5 tn worth of debt in this quarter citing unprecedented strains on cash flows due to COVID-19.

Footnotes:
1) Quarterly growth rates after Q4FY2019 could not be readily sourced.
Source: Investment Information and Credit Rating Agency

The Clock is Ticking for Exporters

The Diagnosis

Merchandise exports in March 2020 plunged a record 34.6% YoY due to large scale disruptions in supply chain and demand resulting in cancellation of orders. Exports of major agricultural produce have been the worst hit due to worsening conditions in the EU & Middle-East. Demand is likely to fall sharply in coming months as importing countries reduce orders and bargain for a better price. **India had just started taking advantage of the US-China trade war, but will this advantage be disrupted beyond repair due to COVID-19?**

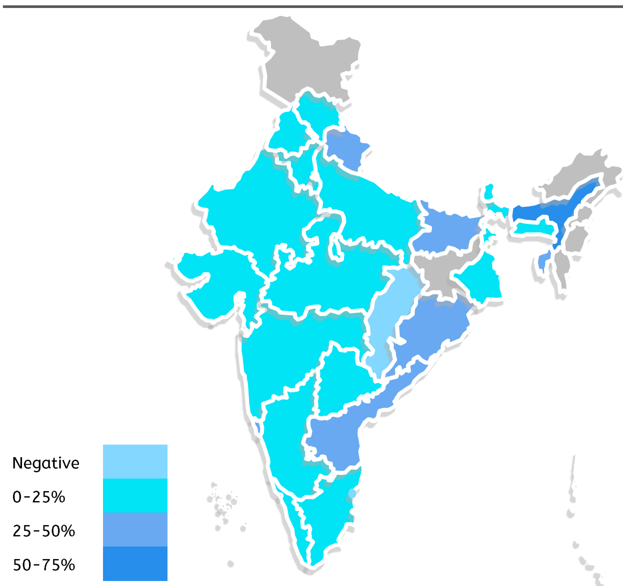
Breaking it Down

It is feared that MNCs may quickly shift orders for critical inputs to countries which have resumed normal industrial production, such as Taiwan, South Korea and Vietnam. China raised tax rebates on exports of nearly 1,500 products and Bangladesh announced a $600 mn stimulus package, including cheap loans, for export-oriented sectors. However, GoI is yet to announce substantial measures apart from extending the Foreign Trade Policy by 1 year and providing relaxations and extensions in deadlines for exporters.

The Take-Away

New order offtake will be a significant metric to monitor over the coming months. The time is ripe for the government to boost the sector through proper policies and help India capture some of the investments diversifying away from China. This will help India replicate the V-Shaped recovery seen after the '08 crisis. **But will India be able to overcome policy challenges to emerge as the favored antidote to China?**

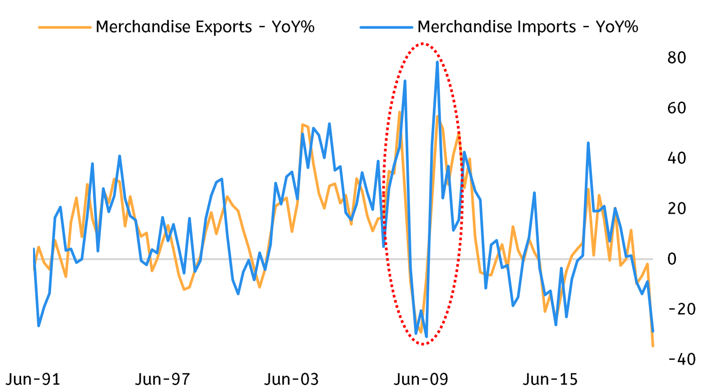
State-wise Export Growth in India



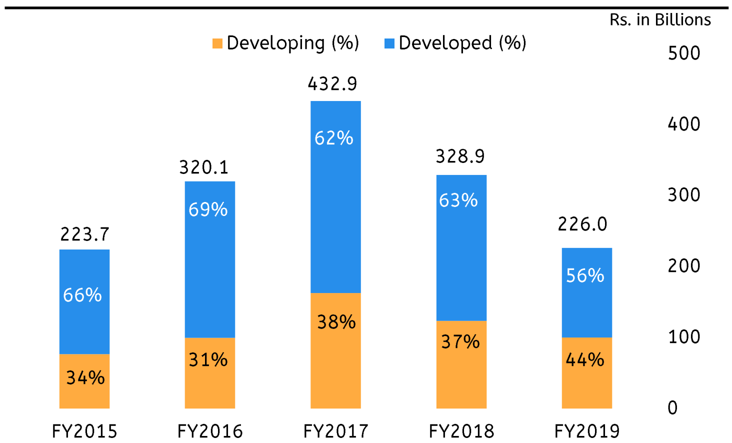
Top 10 Exporting States	CAGR % (FY11-19)
Haryana	19%
Andhra Pradesh	29%
Bihar	31%
Telangana	19%
Madhya Pradesh	22%
Odisha	43%
Uttarakhand	33%
Goa	34%
Assam	55%
Tripura	49%

Export units have been hit by multiple blows in the past 2 months. There is a severe shortage of shipping containers, even for essentials, as goods have remained stranded in ports due to the lockdown. The export-import chain is broken as agencies involved in customs, freight forwarders, transporters, shipping lines, courier companies, certificate of origin issuing agencies are not functioning. The volatility in exchange rates has added another blow to those who are able to export goods.

Import vs Export Growth



Share of Exports to Developed vs Developing Economies



- During the global financial crisis of 2008 too, Indian exports largely suffered owing to subdued overseas demand. As seen clearly in the figure above, it took around 12 months for Indian exports to attain a level equivalent to the pre-crisis months, and around 18 months to attain a similar trajectory of growth in terms of month-over-month growth rate.
- A majority of India's exports go to the developed world, however this share has been reducing over time.

Source: ICRA

Analyzing Investor Portfolio Movements During COVID-19

Leveraged Growth

The Diagnosis

The S&P BSE Sensex started the year in the red with a decline of 1.3% driven down by financial services and commodity related firms locally. From then to March end, S&P BSE has witnessed a combined net investments of nearly Rs 75K cr from DIIs while -108K cr from FIIs with large changes occurring in the month of March.

To analyze the effect of COVID-19 on investment decisions, we use the Cahart methodology on S&P BSE AllCap Index.

Breaking it Down

The Cahart methodology provides a broad range of factors to analyze investor behavior based on their portfolio rebalancing measures. Size classes provide a perspective of investor confidence levels by testing their risk appetite. Value classes provide a perspective of investor outlook by testing their portfolio exposure to growth vs value stocks. Lastly, momentum classes provide a perspective of investor's belief of market level based on how they punish the winners and losers in their portfolio.

The Take-Away

The index has witnessed a mix of crisis-intuitive and non-intuitive movements across the respective classes. Investors seem bearish towards global exposure of companies. Moreover, they may be favoring growth companies despite the prolonged downturn expected. Meanwhile investor preferences remain unperturbed as they continue to prefer stocks that rallied over the previous year.

It although remains unclear when FII confidence will return in the Indian markets.

Size Classes	Number of Firms	MCAP December 2019 (Rs. bn)	MCAP March 2020 (Rs. bn)	% ∆ MCAP
Smallest	78	3.01	1.54	-48.99%
2nd Decile	79	4.62	3.22	-30.26%
3rd Decile	78	8.48	3.93	-53.71%
4th Decile	79	15.98	12.73	-20.33%
5th Decile	78	18.04	7.44	-58.79%
6th Decile	79	40.35	22.89	-43.27%
7th Decile	78	57.31	37.94	-33.80%
8th Decile	79	131.68	136.38	3.57%
9th Decile	78	189.78	172.34	-9.19%
Biggest	78	9597.87	7060.36	-26.44%

In flight to safety, money broadly flows out of smaller companies and into larger companies. This follows the conventional wisdom that smaller companies are riskier than larger companies. However, the results this crisis are rather inconsistent, with the 4th – medium sized - decile seemingly performing better than the 10th - largest - decile. While the 8th decile has performed the best. This could be due to idiosyncratic risk of individual stocks – one such being, larger companies have greater global exposure than smaller ones, thereby justifying the larger fall.

Value Classes	Number of Firms	MCAP December 2019 (Rs. bn)	MCAP March 2020 (Rs. bn)	% ∆ MCAP
Highest	78	18.57	13.79	-25.73%
2nd Decile	79	249.07	152.03	-38.96%
3rd Decile	78	38.23	19.97	-47.77%
4th Decile	79	20.37	14.45	-29.08%
5th Decile	78	336.15	180.56	-46.28%
6th Decile	79	59.25	24.86	-58.04%
7th Decile	78	3.42	2.19	-36.02%
8th Decile	79	8.42	3.20	-62.02%
9th Decile	78	15.49	7.69	-50.35%
Lowest	78	15.86	15.71	-0.98%

Factoring the recession outlook, investors would prefer a value stock over a growth stock. A value stock benefits from large capital and greater economies of scale allowing it to wear out the downturn. However, investor behaviour has been rather inconsistent here as well. The bottom most decile, representative of stocks with the highest growth potential, has displayed the least drop in market cap. A clear analysis of investor sentiments cannot be drawn, although a broad bearish tone is visible.

Momentum Classes	Number of Firms	MCAP December 2019 (Rs. bn)	MCAP March 2020 (Rs. bn)	% ∆ MCAP
Best Performers	78	91.52	71.95	-21.38%
2nd Decile	79	161.35	144.02	-10.74%
3rd Decile	78	58.50	39.54	-32.40%
4th Decile	79	13.84	7.89	-43.00%
5th Decile	78	8.71	5.32	-38.90%
6th Decile	79	11.89	8.11	-31.79%
7th Decile	78	122.73	55.77	-54.56%
8th Decile	79	1.96	0.83	-57.64%
9th Decile	78	6.32	2.80	-55.62%
Worst Performers	78	0.49	0.21	-56.99%

Assuming there was a bubble, investors would've punished the stocks that showed the most rise more than others. Therefore, the top decile should've shown the largest drop. However, the best performers of last year have collectively continued to do better than the collective performance of worse performers. This is a partial reason that momentum has not reversed, while there exists a bearish tone among the investors.

Footnote:
1) Check Appendix 2 for details on methodology used and data base sourcing.
2) Check Appendix for S&P BSE sector wise stock analysis.

The Reign of Bears

Leveraged Growth

The Diagnosis

Entering January 2020, most of the weakness in macro conditions had been priced in. The free-fall in the Index due to the rapid spread of coronavirus took everyone by surprise. Add to that the failure of Yes Bank, India's 4th largest bank stoking fears of a systemic crash, and you get the recipe for the perfect storm raging in our markets.

Breaking it Down

As is usual during periods of stress, Volatility Index shot up from mid-20s to 80+ levels. However, falling oil prices, low number of COVID-19 cases and hopes of a bumper relief package have put a halt to the bloodbath for now. As India hopes to take advantage of China's precarious situation, market participants, especially DIIs are hopeful of a bull run ahead.

The Take-Away

India's slowdown fears are bottoming out and with the announcement of revival measures, could a major revival of demand be expected in the coming quarters, or will bears continue to reign?

Company	Sectors	Position in SMB	Position in HML	Position in WML	% Δ MCAP
Reliance Industries	Energy	50	37	5	-26.4%
Tata Consultancy	IT	49	7	18	-15.5%
HDFC Bank	Finance & Banking	48	10	14	-32.2%
Hindustan Unilever	FMCG & Retail	47	2	22	19.5%
Housing Development Finance Corp	Finance & Banking	46	19	11	-21.6%
Infosys Ltd	IT	45	16	20	-12.3%
ITC Ltd	FMCG & Retail	44	14	45	-27.7%
Kotak Mahindra	Finance & Banking	43	12	7	-23.0%
ICICI Bank	Finance & Banking	42	34	3	-39.9%
State Bank	Finance & Banking	41	42	19	-41.0%
Bajaj Finance	Finance & Banking	40	11	1	-47.7%
Bharti Airtel	Telecom	39	43	2	2.8%
Axis Bank	Finance & Banking	38	35	13	-49.7%
Larsen & Toubro Ltd	Construction & Engineering	37	27	40	-37.7%
Maruti Suzuki	Automobile	36	21	29	-41.8%
Oil & Natural Gas Corp	Energy	35	48	44	-47.0%
Asian Paints	Others	34	5	9	-6.6%
HCL Technologies	IT	33	18	15	-23.2%
Wipro Ltd	IT	32	31	27	-20.0%
Indian Oil	Energy	31	45	37	-35.0%
Nestle India	FMCG & Retail	30	1	8	4.8%
Coal India	Energy	29	8	43	-33.7%
Bajaj Finserv	Finance & Banking	28	3	4	-51.1%
NTPC Ltd	Energy	27	46	25	-29.3%
Titan Co	FMCG & Retail	26	6	10	-21.4%
UltraTech Cement	Construction & Engineering	25	22	26	-19.8%
Power Grid Corporation of India	Energy	24	40	34	-16.4%
Sun Pharmaceutical	Pharmaceuticals	23	20	28	-18.6%
Bharat Petroleum	Energy	22	36	6	-35.5%
IndusInd Bank	Finance & Banking	21	24	35	-76.7%
Bajaj Auto	Automobile	20	25	16	-36.5%
Adani Ports	Others	19	26	36	-31.3%
Tech Mahindra	IT	18	29	24	-25.8%
Britannia Industries	FMCG & Retail	17	4	31	-11.2%
Shree Cement	Construction & Engineering	16	13	12	-13.8%
Mahindra & Mahindra Ltd	Automobile	15	30	49	-46.4%
Gail India	Energy	14	41	48	-36.8%
Vedanta Ltd	Others	13	49	47	-57.6%
JSW Steel	Metals	12	39	42	-45.8%
Eicher Motors	Automobile	11	9	32	-41.8%
Bharti Infratel	Telecom	10	32	30	-36.6%
Hero MotoCorp	Automobile	9	23	46	-34.7%
Dr Reddy's Laboratories	Pharmaceuticals	8	28	21	8.6%
Grasim Industries	Construction & Engineering	7	44	41	-36.0%
UPL Ltd	Others	6	15	17	-44.1%
Tata Steel Ltd	Metals	5	50	39	-42.9%
Hindalco Industries	Metals	4	47	33	-55.7%
Tata Motors Ltd	Automobile	3	38	23	-58.9%
Cipla Ltd	Pharmaceuticals	2	33	38	-11.6%
Zee Entertainment	Media & Entertainment	1	17	50	-57.6%

Source: bseindia.com, Capitaline

Leveraged Growth

Curious Musings

Can RBI print notes to monetize government deficit:

1) Will providing these new funds to banks revive risky lending and enhance the credit crisis?
2) What will the impact be on foreign investments if India sees a ratings downgrade?
3) Will RBI revise its inflation target yet again to accommodate the expected rise?

Will there be a phased change in geo political stance to China:

Can Germany and Australia reduce their export dependency to China?

Can India reduce its import dependency to China?

Will USA need to raise sovereign debt at higher rates if it rejects Chinese investments?

Will Dollar be the new safe currency:

1) Will Japanese policy makers succeed in stabilizing the currency?
2) Can Euro maintain its parity status?
3) Will China continue to peg Yuan to the Dollar?

Will Companies look beyond the Chinese Carrot:

1) Can India's welcome offer of land entice companies to 'Make In India'?
2) Will Japan's funds to shift production out of China be enough?
3) Will Trump use greater ammunition to restore American Manufacturing?

Will Companies look beyond the Chinese Carrot:

1) Can India's welcome offer of land entice companies to 'Make In India'?
2) Will Japan's funds to shift production out of China be enough?
3) Will Trump use greater ammunition to restore American Manufacturing?

The answers extend beyond the ambit of this research report. If you require a customized report of topics covered through this research report or otherwise, please reach out to us. Our co-ordinates and the research team behind this report are mentioned in the next slide. Or write to us at info@leveragedgrowth.in

About Us

Leveraged Growth

Leveraged Growth is a niche Finance-based Business Consultancy firm. We capitalize on our forte in Finance across 4 business verticals –

Research Advisory + Consulting + Corporate Training + Learning and Development

OUR CEO

Aswini Bajaj

Education: B.Com (St. Xavier's College, Kolkata), CA, CS, CFA, FRM, CAIA, CIPM, CCRA, CIIB, CIRA, AIM

Guest Lecturer: Various Stock Exchanges, Colleges and B-Schools in India, including all major IITs & IIMs

Corporate Coach: TATA Interactive Systems, Volvo-Eicher Motors, Century Ply, Grasim, GRSE, Quaker Chemicals

Finance Trainer: Training thousands of professionals globally for CFA, FRM, CA, Financial Modelling

Awards: Best Finance Trainer in India - India Education Awards, 2019

OUR TEAM

Aditya Bhatia
| Analyst

Rajul Jain
| Analyst

Ritwik Bhawsinghka
| Associate

Muskaan Jain
| Associate

Sonia Keswani
| Associate

Racheta Chaudhary
| Associate

Sudaskhina Saha
| Associate

Priyanka Dugar
| Business Manager

OUR CO-ORDINATES

www.leveragedgrowth.in info@leveragedgrowth.in 9831079737 LinkedIn

Registered Office: 78, Bentinck Street, Shree Krishna Chambers Block A, 1st Floor, Flat 1A,Kolkata - 700001
Corporate Office: Diamond Heritage, Suite 525, 16, Strand Rd, Fairley Place, B.B.D. Bagh, Kolkata - 700001
Training Office: 1, Crooked Lane, Near Esplanade, Kolkata 700069

APPENDIX

1. For calculation of cumulative returns, we have used the following methodology:

Step	Name of Method	Used to Calculate	Formula
1	Arithmetic Mean	Daily percentage changes in price	$r_t = \frac{(P_1 - P_0)}{P_0}$
2	Cumulative Return Index (CRI)	Cumulative asset returns	$i_t = (1 + r_t) * i_{t-1}$

Where –
r_t = Daily Percentage Change in Price
P_1 = Today's Price
P_0 = Yesterday's Price
i_t = Today's Cumulative Return
i_{t-1} = Yesterday's Cumulative Return

while assuming $1 was invested in the respective assets on the following dates for these justifications:

Page No.	Asset/Security Type	Invested On	Justification
08	Fixed Income – Bond ETFs	23rd January 2020	WHO Director-General convened an Emergency Committee (EC) to assess whether the outbreak constituted a public health emergency of international concern
10	Currencies – Series A	14th August 2007	BNP Paribas blocked withdrawals from three of its hedge funds
10	Currencies – Series B	1st January 2020	WHO set up the Incident Management Support Team (IMST) and put the organization on an emergency footing for dealing with the outbreak
11 & 12	Commodities – Series C, E & G	1st March 2007	Alan Greenspan warns of a recession - results in widespread stock market crashes from 27/02/2007 to 06/03/2007
11 & 12	Commodities – Series D, F & H	1st August 2019	US Treasury yield curve showed signs of inversion; Italian political crisis starts; China is labelled as a currency manipulator

– xxxxxxx –

2. **Methodology for Carhart (Four-Factor) Analysis**

2.a. Time period
The time period for this report is between 01.01.2019 to 31.03.2020. Because, the analysis of the four-factor model is very time consuming, the research is limited to only this period.

2.b. Sample
The dataset consists of 784 companies and to be included in the dataset the companies in question must have been traded on the BSE All Cap Index or the Nifty50 Index under the selected time period of 2019-2020. Companies that had a negative book value during the selected time period were also included in the dataset.

2.c. Data
The database of Capitaline has mainly been used to collect the book value. The market capitalization and shares outstanding have been used from data collected from NSE, and the daily prices have been extracted using Quandl. We have considered 784 out of the total 877 companies in the BSE All Cap Index due to restrictions in collection of relevant data for the remaining 93 companies. Daily average returns have been calculated using the methodology mentioned previously in Appendix 1. Once the historical daily prices were gathered, the cumprod function from the NumPy library of the Python programming language was used to calculate the daily cumulative returns.

2.d. Small Minus Big (SMB)
The size factor is constructed by sorting the companies from small to big (based on their market capitalization) and then dividing the dataset into deciles. The change in market capitalization has been calculated for each decile using the respective position values.

2.e. High Minus Low (HML)
All companies are ranked by their P/BV ratio from highest to lowest, and then divided into deciles. We have used the trailing twelve months book-value and the average price for the period for this calculation. The change in market capitalization has been calculated for each decile using the respective position values.

2.f. Winners Minus Losers (WML)
The companies are divided into deciles (based on their average return performance from 01.01.2019 to 31.03.2020) from highest to lowest. The change in market capitalization has been calculated for each decile using the respective position values.

Automobile: Revenue Impact ↑

- Market Risk ↑
  Low consumer spending. Sector was already facing a cyclical slow-down.
- Credit Risk ↑
  Sector under pressure since more than a year. Only those with strong balance sheets will be able to survive without government intervention.
- Liquidity Risk ↑
  Liquidity shortfall in the sector due to NBFC and Banking sector leading to impact on sales
- Operational Risk ↑
  Availability of labor post lockdown

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Maruti Suzuki India Ltd.	770	167	228	-41.80%
Bajaj Auto Limited	751	201	120	-36.50%
Mahindra & Mahindra Ltd	745	239	531	-46.39%
Eicher Motors Ltd	737	77	246	-41.83%
Hero Motocorp Limited	734	179	426	-34.65%
Bosch Limited	729	132	419	-38.89%
Tata Motors Ltd	724	415	175	-58.95%
Motherson Sumi Systems Ltd	710	105	329	-58.34%
Mrf Ltd	691	354	225	-12.31%
Ashok Leyland Ltd	668	288	414	-47.18%
Tvs Motor Company Ltd	664	102	377	-36.48%
Exide Industries Ltd	643	284	521	-29.44%
Balkrishna Ind. Ltd	637	240	179	-20.08%
Wabco India Limited	620	98	283	-5.24%
Amara Raja Batteries Ltd.	619	233	243	-34.00%
Sundram Fasteners Ltd	599	129	312	-41.51%
Apollo Tyres Ltd	595	515	515	-51.56%
Minda Industries Ltd.	581	74	161	-31.68%
Escorts India Ltd	562	325	338	5.24%
Beml Limited	481	452	163	-54.10%
Tata Motors Ltd Dvr	479	614	384	-43.17%
Ceat Limited	476	499	445	-19.81%
Federal-mogul Goetze (Ind	457	176	71	-51.02%
Minda Corporation Ltd	394	369	534	-42.50%
Jtekt India Limited	359	190	336	-55.87%
Gabriel India Ltd	352	270	347	-56.60%
Force Motors Ltd	346	631	540	-16.87%
Jamna Auto Ind Ltd	345	204	505	-48.93%
Jk Tyre & Industries Ltd	333	613	491	-45.79%
Tvs Srichakra Limited	322	411	555	-45.93%
Subros Limited	319	356	311	-48.47%
Automotive Axles Limited	297	292	616	-54.01%
Rane Holdings Limited	285	247	635	-58.53%
Lumax Industries Ltd	274	232	471	-31.79%
Lg Balakrishnan & Bros	253	465	599	-38.16%
Sml Isuzu Limited	233	367	357	-46.63%
Jbm Auto Limited	221	172	267	-43.39%
Banco Products (I) Ltd	208	523	623	-39.71%
Sterling Tools Limited	189	290	578	-38.89%
Rico Auto Industries Ltd	177	545	558	-56.88%
Lumax Auto Tech Ltd	174	285	653	-51.32%
Gna Axles Limited	158	500	455	-47.59%
Munjal Showa Ltd	153	618	548	-53.20%
Fiem Industries Limited	147	561	326	-44.20%
Atul Auto Limited	134	357	481	-44.77%
Rane Brake Lining Ltd	110	391	78	-51.84%

(Cont.)

Munjal Auto Ind. Ltd.	98	487	460	-44.11%
Jay Bharat Maruti Ltd	95	563	465	-57.35%
Rane (Madras) Limited	62	542	544	-57.30%
Ppap Automotive Limited	47	577	681	-26.27%
Shivam Auto.Ltd	44	458	684	-58.08%
Setco Automotive Ltd	32	570	724	-59.86%

Aviation & Tourism: Revenue Impact ↑

- Market Risk ↑
  Travel and tourism is most likely to remain muted, majorly international travel, due to fears of further waves of the disease.
- Credit Risk ↑
  Will face long term crisis situation as cash flows might be irreparably impacted.
- Liquidity Risk ↑
  Difficult for aviation sector to survive during the lockdown period, due to low cash reserves which keep them afloat for just a few months.
- Operational Risk ↑
  Restrictions on travel and social gatherings has impacted all the employees.

Company	Position In SMB	Position In HML	Position In WML	% ∆ MCAP (Mar - Dec)
Interglobe Aviation Ltd	744	71	138	-20.05%
The Indian Hotels Co. Ltd	661	200	249	-48.28%
Eih Limited	608	238	498	-53.87%
Gmr Infrastructure Ltd.	601	641	87	-22.14%
Spicejet Ltd	578	782	92	-53.04%
Mahindra Holidays Ltd	451	127	176	-38.52%
India Tour. Dev. Co. Ltd.	403	99	306	-58.79%
Wonderla Holidays Ltd.	351	432	314	-43.00%
Hlv Ltd	139	371	731	-45.72%
Royal Orchid Hotels Ltd	35	568	667	-41.81%

Capital Goods & Consumer Durables: Revenue Impact ↑

- Market Risk ↑
  Consumers will postpone discretionary spending and be cash conservative due to uncertainty of duration of the crisis.
- Credit Risk ↔
  Fall in imports could severely impact some consumer durables companies. Lower order inflow will capital intensive.
- Liquidity Risk ↑
  Slow cash rotation across all categories.
- Operational Risk ↔
  Labour might have to be aligned towards production of more essential products. Might have to adopt to new D2C distribution channels.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Siemens Ltd	738	147	53	-25.61%
Isgec Heavy Engineering Ltd	706	11	519	-26.22%
Bharat Electronics Ltd	694	308	137	-25.59%
Whirlpool Of India Ltd	692	53	13	-23.37%
Voltas Ltd	679	128	112	-27.67%
Cummins India Ltd	649	162	570	-40.69%
Crompt Greaves Consumer Electric Ltd	640	29	202	-12.95%
V-guard Ind Ltd.	598	48	302	-27.02%
Ttk Prestige Ltd	589	76	303	-14.85%
Blue Star Limited	573	85	70	-45.36%
Kec Intl. Limited	564	282	226	-38.59%
Johnson Controls Hitachi	531	72	196	11.57%
Graphite India Ltd	530	471	722	-58.04%
Bajaj Electricals Ltd	515	242	516	-16.79%
Greaves Cotton Ltd.	478	256	152	-48.04%
Ifb Industries Ltd	434	145	427	-60.16%
Kennametal India Ltd	412	163	290	-20.16%
Kirloskar Oil Eng Ltd	408	516	511	-40.03%
Ksb Limited	407	272	350	-37.01%
Praj Industries Ltd	399	262	289	-46.32%
Gmm Pfaudler Limited	391	63	26	34.26%
Ingersoll-rand India Ltd	385	159	187	-5.49%
Esab India Ltd	377	109	52	-15.83%
Schneider Electric Infra	375	784	538	-0.98%
Olectra Greentech Limited	332	359	454	-71.89%
Swaraj Engines Ltd	324	101	482	-19.17%
Kirloskar Brothers Ltd	294	534	253	-41.37%
Ador Welding Ltd	106	463	446	-37.10%
Elecon Eng. Co. Ltd	102	674	671	-48.37%
Sanghvi Movers Ltd	97	701	476	-44.43%
Butterfly Gandhi Appl Ltd	67	449	588	-51.80%
Walchandnagar Industries	51	642	647	-56.17%
Mirc Electronics Ltd	50	483	755	-47.33%
A2z Infra Engineering Ltd	17	745	638	-58.28%

Construction & Engineering: Revenue Impact ↑

- Market Risk ↑
  Weakened sales both on residential and commercial front. Decline in initiation of new projects, due to delay in completion of ongoing projects.
- Credit Risk ↔
  Weakened sales both on residential and commercial front. Decline in initiation of new projects, due to delay in completion of ongoing projects.
- Liquidity Risk ↑
  Restricted travel will impact cashflows in residential, hospitality and retail segments..
- Operational Risk ↑
  Labour Intensive.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Larsen & Toubro Ltd.	771	218	319	-37.71%
Oberoi Realty Limited	667	264	126	-37.48%
Sunteck Realty Limited	561	236	113	-49.53%
Dilip Buildcon Limited	525	427	270	-47.58%
Pnc Infratech Ltd.	521	397	84	-50.95%
Delta Corp Limited	517	287	423	-67.00%
Ratnamani Met & Tub Ltd.	512	293	134	-17.05%
Redington (India) Ltd.	502	342	69	-41.77%
Knr Constru Ltd.	475	349	125	-21.24%
Indiabulls Real Est. Ltd	453	702	492	-37.49%
Ashoka Buildcon Ltd	448	497	395	-59.64%
Maharashtra Seamless Ltd	427	636	444	-48.80%
Sadbhav Engineering Ltd	415	485	679	-74.83%
Gayatri Projects Ltd	406	425	711	-89.28%
Jmc Projects (I) Ltd.	392	414	182	-65.43%
Welspun Enterprises Ltd.	321	617	559	-47.90%
Hindustan Construction Co	315	539	483	-60.70%
Itd Cementation India Ltd	287	488	702	-46.30%
Ashiana Housing Ltd	281	509	382	-51.18%
Jkumar Infr.Ltd.	254	689	186	-46.59%
Anant Raj Limited	245	764	301	-41.76%
Electrosteel Castings Ltd	183	754	657	-23.46%
Man Infra Ltd	167	638	582	-34.71%
Jaiprakash Associates Ltd	162	773	758	-46.15%
Patel Engineering Ltd.	148	759	700	-37.50%
Skipper Limited	138	626	636	-63.71%
Ajmera Realty & Inf I Ltd	137	621	537	-45.15%
Pokarna Limited	127	250	650	-45.77%
Ramky Infra Ltd	83	582	765	-27.48%
Simplex Infrastructures Ltd	77	751	771	-44.36%
Prozone Intu Proprtis Ltd	65	742	591	-57.56%
Rpp Infra Projects Ltd	38	576	670	-51.53%
Nila Infrastructures Ltd	29	429	675	-40.48%
D B Realty Limited	27	772	734	-53.88%
Ganesh Housing Corp Ltd	21	750	710	-45.55%
Emami Realty Limited	12	507	745	-39.35%
Peninsula Land Limited	11	748	729	-38.75%

Energy: Revenue Impact ↔ Credit Quality

- Market Risk ↑
  Demand slowdown due to travel restrictions and reduced consumption.
- Credit Risk ↑
  Falling crude prices will need to passed on to the consumers and might even make production unviable, resulting on no cash flows.
- Liquidity Risk ↑
  Lower collections, delayed payments from distribution companies.
- Operational Risk ↔
  Supply chain disruption and low energy prices will be key factors to monitor.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Reliance Industries Ltd	784	406	64	-26.44%
Oil And Natural Gas Corp.	769	635	356	-46.97%
Indian Oil Corp Ltd	765	553	304	-34.97%
Coal India Ltd	763	54	346	-33.74%
Ntpc Ltd	761	580	209	-29.27%
Power Grid Corp. Ltd.	758	451	254	-16.37%
Bharat Petroleum Corp Lt	755	353	65	-35.53%
Gail (India) Ltd	741	512	518	-36.76%
Havells India Limited	728	49	284	-25.76%
Hindustan Petroleum Corp	725	501	190	-28.13%
Petronet Lng Limited	722	222	115	-25.47%
Nmdc Ltd.	712	559	66	-37.94%
Adani Transmission Ltd	698	137	16	-42.95%
Indraprastha Gas Ltd	695	123	24	-9.39%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Reliance Industries Ltd	784	406	64	-26.44%
Oil And Natural Gas Corp.	769	635	356	-46.97%
Indian Oil Corp Ltd	765	553	304	-34.97%
Coal India Ltd	763	54	346	-33.74%
Ntpc Ltd	761	580	209	-29.27%
Power Grid Corp. Ltd.	758	451	254	-16.37%
Bharat Petroleum Corp Lt	755	353	65	-35.53%
Gail (India) Ltd	741	512	518	-36.76%
Havells India Limited	728	49	284	-25.76%
Hindustan Petroleum Corp	725	501	190	-28.13%
Petronet Lng Limited	722	222	115	-25.47%
Nmdc Ltd.	712	559	66	-37.94%
Adani Transmission Ltd	698	137	16	-42.95%
Indraprastha Gas Ltd	695	123	24	-9.39%
Nhpc Ltd	689	649	299	-16.70%
Oil India Ltd	657	687	348	-46.00%
Tata Power Co Ltd	647	552	484	-41.86%
Torrent Power Ltd	633	506	165	-1.74%
Castrol India Limited	632	51	361	-23.09%
Gujarat State Petro Ltd	626	593	95	-21.44%
Jsw Energy Limited	616	581	217	-38.43%
Cesc Ltd	612	607	160	-44.55%
Sjvn Ltd	594	644	229	-18.47%
Mangalore Refinery & Petrochemicals Ltd	593	619	631	-28.93%
Mahanagar Gas Ltd.	592	209	122	-23.16%
Nlc India Limited	584	680	391	-23.18%
Kalpataru Power Trans. Ltd	570	381	191	-55.49%
Aegis Logistics Limited	555	69	274	-27.91%
Ge Power India Limited	528	110	334	-36.27%
Gulf Oil Lub. Ind. Ltd.	519	87	219	-36.07%
Ge T&d India Limited	518	185	687	-51.15%
Gujarat Gas Limited	514	111	735	-2.82%
Moil Limited	483	574	359	-35.57%
Triveni Turbine Limited	466	73	363	-37.80%
Chennai Petroleum Corp Ltd	422	633	716	-50.99%
Gujarat Mineral Dev Corp	400	710	528	-48.74%
Suzlon Energy Limited	360	781	739	5.41%
Nava Bharat Ventures Limi	328	706	585	-54.09%
Hindustan Oil Exploration	311	294	448	-61.69%
Honda Siel Power Prod Ltd	280	399	164	-31.36%
Guj Ind Pow Co. Ltd	268	731	307	-30.69%
Reliance Infrastructu Ltd	258	767	776	-65.31%
Reliance Power Ltd.	246	765	774	-64.29%
Inox Wind Limited	242	694	706	-48.24%
Jaiprakash Power Ven. Ltd	238	771	443	-55.84%
Confidence Petro Ind Ltd.	224	315	503	-48.52%
Hbl Power Systems Ltd.	215	664	666	-30.60%
Bf Utilities Limited	212	108	50	-54.40%
Igarashi Motors India Ltd	199	379	547	-49.91%
Gvk Pow. & Infra Ltd.	194	716	686	-43.75%
Genus Power Infrastru Ltd	188	648	403	-44.31%
Sandur Manganese & Iron Ores Ltd	186	602	533	-21.83%
Bharat Bijlee Ltd	157	669	517	-30.26%
Td Power Systems Ltd.	142	624	167	-38.54%
Indian Metals & Ferro Alloys Ltd	131	720	472	-41.41%
Rattanindia Power Limited	128	755	648	9.83%
Panama Petrochem Ltd	108	489	682	-58.05%
Reliance Industrial Infra	105	538	362	-30.66%
Selan Explo. Tech Ltd	49	666	409	-57.96%
Aban Offshore Ltd.	19	776	736	-45.53%
Alphageo (India) Limited	16	646	733	-27.79%

Finance & Banking: Revenue Impact ↑

- Market Risk ↑
  Demand for loans have been seen at record low levels, which might take few quarters to recover.
- Credit Risk ↑
  Loan exposure toward industries like travel and tourism, automobile, real estate might lead to higher defaults.
- Liquidity Risk ↔
  Liquidity issues might be offset by Central Bank's policies..
- Operational Risk ↓
  The sector has adopted to digital modes quite well. Operations are unlikely to get effected.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Hdfc Bank Ltd	782	80	109	-32.17%
Housing Development Finance Corp Ltd	780	156	99	-21.56%
Kotak Mahindra Bank Ltd	777	100	67	-22.98%
Icici Bank Ltd.	776	317	34	-39.88%
State Bank Of India	775	520	148	-41.02%
Bajaj Finance Limited	774	90	20	-47.68%
Axis Bank Limited	772	330	104	-49.72%
Bajaj Finserv Ltd.	762	6	47	-51.12%
Indusind Bank Limited	753	195	258	-76.72%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% Δ MCAP (Dec'19-Mar'20)
Mahindra & Mahindra Financial Services Ltd	743	392	532	-46.39%
Bajaj Holdings & Invs Ltd	718	244	132	-47.20%
Power Fin Corp Ltd.	704	679	166	-22.01%
Rec Limited	703	657	116	-37.98%
Bank Of Baroda	696	658	375	-38.82%
Muthoot Finance Limited	693	327	36	-19.48%
Punjab National Bank	687	560	402	-49.73%
Shriram Transport Fin Co.	678	479	269	-43.59%
Lic Housing Finance Ltd	677	502	322	-45.80%
Idbi Bank Limited	673	610	615	-47.84%
Idfc First Bank Limited	671	564	194	-53.06%
L&t Finance Holdings Ltd	665	271	440	-56.73%
Federal Bank Ltd	655	524	268	-53.31%
Rbl Bank Limited	652	334	622	-59.10%
City Union Bank Ltd	645	265	106	-44.84%
Canara Bank	644	620	418	-59.11%
Indiabulls Hsg Fin Ltd	641	521	727	-69.11%
Bank Of India	629	696	550	-54.19%
Manappuram Finance Ltd	618	331	6	-46.59%
Cholamandalam In & Fin Co	617	40	604	-49.97%
Max Financial Serv Ltd	611	115	103	-28.04%
Edelweiss Fin Serv Ltd	606	184	620	-64.84%
Crisil Ltd	602	24	114	-34.25%
Shriram Cityuni Fin.Ltd.	596	486	343	-46.62%
Cholamandalam Fin Hol Ltd	591	67	273	-41.96%
Motilal Oswal Fin Ltd	588	227	136	-34.55%
Indian Bank	574	565	720	-57.31%
Union Bank Of India	568	567	587	-47.63%
Indian Overseas Bank	560	639	461	-37.61%
Dcb Bank Limited	557	387	213	-44.85%
Jm Financial Limited	553	297	222	-31.26%
Uco Bank	551	668	475	-45.81%
Central Bank Of India	540	671	698	-31.56%
Idfc Limited	539	695	324	-62.17%
Multi Commodity Exchange Of India Ltd	537	269	23	-3.46%
Maharashtra Scooters Ltd	527	733	60	-53.91%
Can Fin Homes Ltd	526	313	58	-29.00%
Tata Investment Corp Ltd	520	708	325	-17.92%
Iifl Finance Limited	497	65	754	-47.02%
Equitas Holdings Limited	492	372	355	-60.07%
Ujjivan Fin. Servc. Ltd.	487	403	88	-57.27%
Capri Global Capital Ltd	472	373	25	-15.74%
Bank Of Maharashtra	468	640	373	-31.01%
Jsw Holdings Limited	456	739	266	-33.99%
Karnataka Bank Limited	431	705	554	-35.80%
J & K Bank Ltd.	405	727	437	-58.29%
Repco Home Finance Ltd	383	498	415	-63.01%
The South Indian Bank Ltd	379	725	566	-43.56%
Magma Fincorp Limited	361	622	697	-68.43%
Satin Credit Net Ltd	326	547	342	-70.99%
Ifci Ltd	300	735	714	-38.64%
Taj Gvk Hotels & Resorts	277	296	296	-36.72%
Bf Investment Limited	265	670	98	-29.00%
Gic Housing Finance Ltd	263	628	626	-62.02%
Centrum Capital Limited	260	388	674	-53.83%
Dolat Investment Ltd	259	97	263	-40.07%
Muthoot Cap Serv Ltd	256	361	660	-53.50%
Lakshmi Vilas Bank Ltd	239	625	767	-36.52%
Dewan Housing Fin Corp Ltd	231	743	778	-48.51%
Technocraft Ind Ltd	228	519	696	-37.41%
Reliance Capital Ltd	225	758	781	-69.49%
Religare Enter. Ltd.	207	726	55	-46.48%
Tourism Finance Corp. Of	195	588	595	-55.40%
Geojit Financial Ser L	179	428	598	-34.77%
Max Ventures And Inds Ltd	173	663	149	-44.73%
Thirumalai Chemicals Ltd	170	532	561	-50.59%
Pnb Gilts Limited	168	688	408	-15.22%
Srei Infrastructure Finan	152	746	764	-54.43%
Dhanlaxmi Bank Limited	99	709	341	-44.29%
Aditya Birla Money Ltd	28	39	593	-45.17%

FMCG & Retail: Revenue Impact

- Market Risk
  Consumers are expected to stock up essential items where demand for non-essential items are low.
- Credit Risk
  Weakened sales both on discretionary and non-discretionary front
- Liquidity Risk
  Manufacturing facilities should start operating to ensure meeting the surge in demand
- Operational Risk
  Supply chain disruption could be a key factor.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Hindustan Unilever Ltd.	781	3	174	19.53%
Itc Ltd	778	120	370	-27.75%
Nestle India Ltd	764	2	68	4.82%
Avenue Supermarts Limited	756	50	129	22.94%
Dabur India Ltd	752	13	170	-1.82%
Britannia Industries Ltd	748	16	234	-11.19%
Godrej Consumer Products	742	22	365	-23.91%
Marico Limited	735	27	310	-19.54%
Procter & Gamble Hygiene & Health Care Ltd	717	12	128	-12.68%
Colgate Palmolive Ltd.	716	10	162	-14.37%
Gillette India Ltd	690	9	207	-16.82%
Bata India Ltd	672	47	28	-29.71%
Aditya Birla Fashion & Rt	650	36	142	-34.01%
Emami Limited	635	75	486	-45.16%
Relaxo Foot Ltd.	627	52	15	-2.73%
Fut Lifestyle Fash Ltd	590	164	250	-70.69%
Zydus Wellness Limited	556	336	168	-11.63%
Vst Industries Ltd	552	68	80	-34.23%
Jyothy Labs Limited	549	84	522	-37.28%
Krbl Limited	545	344	208	-52.76%
Future Consumer Limited	543	146	691	-67.48%
Godfrey Phillips India Lt	538	299	46	-26.06%
Radico Khaitan Ltd	509	241	421	-14.45%
Vmart Retail Ltd	498	56	581	-14.01%
Bajaj Consumer Care Ltd	496	61	583	-43.90%
Shoppers Stop Limited	488	192	526	-48.54%
Vaibhav Global Limited	432	168	143	-6.68%
Tasty Bite Eatables Ltd	409	1	288	7.92%
S H Kelkar And Co. Ltd.	376	252	574	-31.01%
Tv Today Network Ltd	369	384	575	-31.10%
Heritage Foods Ltd	357	348	543	-41.40%
Tata Coffee Limited	327	468	277	-39.03%
Parag Milk Foods Ltd.	320	402	665	-52.33%
Dfm Foods Limited	316	59	72	-36.40%
Future Enterprises Ltd	290	741	642	-60.23%
Lt Foods Limited	211	587	664	-11.73%
G M Breweries Ltd	190	351	621	-31.39%
Adf Foods Limited	169	326	145	-44.60%
Prabhat Dairy Limited	154	554	321	-34.29%
Waterbase Ltd	133	268	397	-21.46%
V2 Retail Limited	122	374	725	-50.48%
Cantabil Retail Ltd	109	260	5	-28.53%
Som Dist & Brew Ltd	96	527	529	-45.05%
Associated Alcohols And Breweries Ltd	91	319	584	-14.48%
Globus Spirits Ltd	84	627	345	-40.44%
Coastal Corporation Ltd	52	363	500	-31.15%
Sanwaria Consumer Limited	43	677	772	-40.00%
Liberty Shoes Ltd	24	549	410	-25.49%
Future Enterprises Ltd Dvr	5	744	643	-30.06%
Asian Paints Limited	768	18	77	-6.64%
Titan Company Limited	760	19	83	-21.40%

IT: Revenue Impact

- Market Risk
  Companies will loose out on new deals, but demand is expected to resurface.
- Credit Risk
  Weakened sales both on residential and commercial front. Decline in initiation of new projects, due to delay in completion of ongoing projects.
- Liquidity Risk
  Companies will have to continue investing in new age technologies to execute the work despite of poor revenue.
- Operational Risk
  Cost and productive gains from work from home culture.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Tata Consultancy Serv Ltd	783	45	139	-15.52%
Infosys Limited	779	136	156	-12.25%
Hcl Technologies Ltd	767	153	111	-23.18%
Wipro Ltd	766	255	216	-19.97%
Tech Mahindra Limited	749	237	178	-25.77%
United Breweries Ltd	715	38	280	-27.65%
Oracle Fin Serv Soft Ltd.	701	86	480	-26.13%
Mphasis Limited	670	130	317	-27.95%
Mindtree Limited	628	177	295	3.57%
Hexaware Technologies Ltd	621	131	215	-32.27%
Niit Technologies Ltd	597	144	59	-27.81%
Symphony Limited	587	32	236	-33.01%
Cyient Limited	536	321	552	-44.11%
Persistent Systems Ltd	533	395	172	-18.27%
Zensar Technologies Ltd	524	248	473	-49.60%
Tata Elxsi Limited	506	154	412	-23.83%
Sonata Software Ltd	484	104	204	-46.90%
Firstsource Solu. Ltd.	480	505	371	-33.21%
Infibeam Avenues Limited	426	583	131	-38.03%
Intellect Design Arena	410	279	611	-60.68%
Birlasoft Limited	398	383	741	-13.72%
Eclerx Services Ltd	389	377	676	-35.67%
Take Solutions Ltd	350	148	549	-60.27%
Niit Limited	348	418	169	-26.28%
Uflex Limited	341	667	506	-31.50%
Accelya Soln India Ltd	314	91	153	-20.33%
Hinduja Global Sols. Ltd.	301	650	308	-13.28%
Majesco Limited	299	335	479	-33.12%
Voltamp Transformers Ltd	275	469	159	-27.05%
Sasken Technologies Ltd	262	530	376	-33.64%
Nucleus Software Exports	243	409	466	-36.66%
Quick Heal Tech Ltd	241	533	617	-36.49%
Mastek Ltd	240	206	309	-54.64%
Cigniti Technologies Ltd	229	216	425	-34.81%
Tanla Solutions Limited	222	615	2	-31.28%
Uniply Industries Limited	219	548	773	-46.78%
Mold-tek Packaging Ltd	201	197	183	-38.61%
Zee Learn Limited	182	423	678	-34.85%
Aptech Limited	165	302	369	-48.30%
Nelco Ltd	159	23	262	-44.08%
63 Moons Technologies Ltd	151	766	203	-54.76%
Ramco Systems Ltd.	141	665	603	-56.69%
Zen Technologies Limited	130	221	488	-59.70%
Datamatics Global Ser Ltd	117	585	569	-43.65%
Zuari Agro Chemicals Ltd	113	518	728	-31.77%
3i Infotech Ltd.	90	475	668	-33.33%
Alankit Limited	87	150	701	-13.01%
Subex Limited	81	722	230	-47.90%
D-link India Ltd	80	484	49	-41.26%
Expleo Solutions Limited	79	225	601	-48.06%
Cerebra Int Tech Ltd	68	531	405	-26.11%
Hcl Infosystems Ltd	61	478	753	-48.23%
Tvs Electronics Ltd	48	253	677	-49.28%
Axiscades Engg Tech Ltd	42	589	579	-46.89%
Kellton Tech Sol Ltd	23	337	708	-60.66%
Mt Educare Ltd	22	493	762	-49.64%
Trigyn Technologies Ltd	15	603	680	-50.65%

Media & Entertainment: Revenue Impact ↑

- Market Risk ↔
  Fall in demand for outdoor entertainment options and increase in demand for televisions, new content and online subscription.
- Credit Risk ↔
  Adverse Impact as the ad-spend across sectors will fall. Outdoor events, theaters and box office collections are facing cash flow constraints.
- Liquidity Risk ↑
  Restricted social gathering, lower footfalls and low ticket sales for outdoor entertainment sources.
- Operational Risk ↑
  Newer ways of working will have to be established to protect labor.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Zee Entertainment Ent Ltd	700	151	594	-57.58%
Sun Tv Network Limited	662	212	493	-35.28%
Tv18 Broadcast Limited	489	459	658	-26.24%
Inox Leisure Limited	482	249	27	-31.29%
D.B.Corp Ltd	444	474	430	-40.66%
Dish Tv India Ltd.	435	630	737	-69.08%
Network18 Media & Inv Ltd	411	448	619	-24.02%
Hathway Cable & Datacom	401	604	563	-33.25%
Unichem Laboratories Ltd	309	721	378	-2.56%
Den Networks Ltd	292	595	535	-37.40%
Saregama India Limited	209	310	507	-54.69%
Jump Networks Ltd	187	215	1	-9.56%
Shemaroo Enter. Ltd.	185	510	740	-64.37%
Balaji Telefilms Limited.	175	683	645	-26.91%
Ufo Moviez India Ltd.	112	591	695	-39.19%
Zee Media Corporation Ltd	76	616	759	-40.00%
Eros Intl Media Ltd	14	760	770	-40.56%

Metals: Revenue Impact ↔

- Market Risk ↑
  Reduction in demand from constructions and automobile industry – two biggest consumers.
- Credit Risk ↑
  Highly leveraged industry. Cash flows are constrained due to manufacturing lockdowns.
- Liquidity Risk ↑
  Cash flow constraints like lack of raw materials and high labor intensity.
- Operational Risk ↔
  Shortage of contract workers and migrant laborers might pose further problems.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Hindustan Zinc Limited	754	273	458	-25.88%
Shree Cement Limited	746	118	100	-13.84%
Jsw Steel Limited	739	445	335	-45.84%
Grasim Industries Ltd	732	546	332	-35.98%
Tata Steel Ltd	727	678	313	-42.89%
Hindalco Industries Ltd	726	632	248	-55.72%
Ambuja Cements Ltd	723	435	340	-20.66%
Acc Limited	705	332	252	-33.01%
The Ramco Cements Limited	659	199	118	-32.04%
Steel Authority Of India	639	717	442	-46.27%
Jindal Steel & Power Ltd	614	690	201	-50.98%
National Aluminium Co Ltd	583	643	542	-33.33%
Jk Cement Limited	582	323	17	-19.96%
Avanti Feeds Limited	535	143	37	-49.61%
Heidelbergcement (I) Ltd	513	234	135	-18.92%
Birla Corporation Ltd	504	544	205	-31.98%
Jk Lakshmi Cement Ltd	495	333	318	-29.99%
Prism Johnson Limited	491	224	514	-51.83%
Apl Apollo Tubes Ltd	474	274	21	-33.61%
Hindustan Copper Ltd	467	355	469	-45.73%
Rain Industries Limited	464	214	494	-43.36%
Trident Limited	454	43	238	-36.57%
Welspun Corp Limited	449	405	197	-56.98%
Jindal Saw Limited	440	732	352	-37.30%
India Cements Ltd	430	711	474	48.25%
Tata Steel Long Products Ltd	393	651	662	-53.02%
Jindal Stainless Ltd	390	707	150	-47.59%
Orient Cement Ltd.	368	454	393	-35.50%
Jindal Stainless (H) Ltd	344	562	407	-47.59%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Ramco Industries Limited	338	365	367	-40.16%
Jai Corp Limited	336	460	428	-44.54%
Tata Metaliks Ltd	331	380	227	-45.84%
Sanghi Industries Ltd	308	647	624	-47.57%
Indian Hume Pipe Co. Ltd.	306	320	618	-41.24%
Steel Strips Wheels Ltd.	293	416	400	-53.65%
Surya Roshni Ltd	261	612	524	-60.35%
Kirloskar Ferrous Industries Ltd	251	470	510	-11.37%
Hil Limited	249	447	632	-48.38%
Srikalahasthi Pipes Ltd	232	681	255	-37.95%
Kalyani Steels Limited	230	606	154	-48.74%
Prakash Industries Ltd	223	738	602	-61.73%
Mangalam Cement Ltd	202	528	101	-47.10%
Sarda Energy & Min Ltd	181	714	380	-47.00%
Godawari Pow & Isp Ltd	172	685	404	-54.88%
Everest Industries Ltd	149	541	690	-47.25%
Sunflag Iron And Steel Co	144	672	562	-35.98%
Tata Steel Bsl Ltd	135	777	467	-44.89%
Ncl Industries Limited	123	596	597	-37.36%
Mukand Ltd.	118	703	693	-54.84%
Visaka Industries Limited	116	594	659	-44.13%
Pennar Industries Ltd	85	676	527	-44.38%
Tamilnadu Petroproducts L	74	661	259	-32.33%
Kamdhenu Limited	64	419	652	-46.33%
Gravita India Limited	63	309	557	-30.75%
Man Industries (I) Ltd.	53	730	613	-5.53%
Shiva Cement Ltd	40	66	389	-42.23%
Electrotherm (I) Ltd.	37	780	411	-27.98%
Usha Martin Edu & Sol Ltd	1	182	464	-14.29%

Pharmaceuticals: Revenue Impact ↓

- Market Risk ↓
  Demand for essential medicines have increased. Increase in exports of essential medicines and testing kits.
- Credit Risk ↓
  Fall in imports could severely impact some consumer durables companies. Lower order inflow and revenue might impact capital goods, since it is capital intensive.
- Liquidity Risk ↔
  Cash flows for smaller organizations have been large organizations others are impacted
- Operational Risk ↔
  Online delivery of medicines, production shutdowns are affected due to lack of manpower.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Sun Pharmaceutical Industries	757	166	221	-18.55%
Dr. Reddy's Laboratories	733	229	158	8.58%
Divi's Laboratories Ltd	730	106	94	7.76%
Piramal Enterprises Ltd	721	466	553	-38.33%
Cipla Ltd	720	316	305	-11.57%
Lupin Limited	714	410	316	-22.77%
Aurobindo Pharma Ltd	711	254	590	-9.57%
Biocon Limited	707	158	279	-7.88%
Glaxosmithkline Pharma Ltd	685	44	173	-21.92%
Cadila Healthcare Limited	683	263	490	5.09%
Alkem Laboratories Ltd.	680	181	192	15.49%
Apollo Hospitals Enter. Ltd.	674	152	140	-21.01%
Pfizer Ltd	656	141	41	-4.77%
Sanofi India Limited	642	121	157	-10.74%
Abbott India Ltd	638	55	11	12.66%
Ipca Laboratories Ltd	625	208	54	22.53%
Dr. Lal Path Labs Ltd.	623	46	19	-6.17%
Natco Pharma Ltd.	610	283	358	-14.81%
Glenmark Pharmaceuticals	607	573	688	-40.75%
Alembic Pharma Ltd	605	213	237	-6.49%
Fortis Healthcare Ltd	603	558	271	-4.36%
Ajanta Pharma Limited	579	178	399	40.20%
Jubilant Life Science Ltd	577	191	470	-53.59%
Procter & Gamble Health Ltd	575	70	61	-16.80%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Astrazeneca Pharma Ind Lt	548	17	7	-8.13%
Narayana Hrudayalaya Ltd.	529	180	22	-19.46%
Sun Pharma Adv.Res.Co.Ltd	477	25	390	-38.25%
J B Chemicals And Pharmaceuticals Ltd	470	438	57	19.58%
Strides Pharma Sci Ltd	463	575	432	-11.00%
Caplin Point Lab Ltd.	452	95	431	-6.13%
Fdc Limited	450	404	97	-7.93%
Wockhardt Limited	447	257	712	-26.20%
Thyrocare Tech Ltd	438	113	212	-9.58%
Granules India Limited	436	437	63	16.69%
Shilpa Medicare Ltd	417	396	508	-13.28%
Fermenta Biotech Ltd	414	5	501	-68.53%
Sequent Scientific Ltd.	386	424	193	10.04%
Advanced Enzyme Tech Ltd	378	112	285	-13.90%
Hikal Limited	372	338	487	-39.06%
Supreme Petrochemicals Lt	371	286	457	-16.50%
Novartis India Ltd	358	378	300	-27.45%
Hester Biosciences Ltd	353	81	93	-36.52%
Indoco Remedies Ltd.	305	347	331	9.84%
Bliss Gvs Pharma Ltd	304	328	293	-33.15%
Aarti Drugs Ltd.	289	341	218	-13.29%
Iol Chem And Pharma Ltd	284	366	185	1.03%
Neuland Lab Ltd.	255	605	330	-50.16%
Panacea Biotec Ltd	227	364	388	-16.79%
Morepen Lab. Ltd	213	289	512	-38.59%
Marksans Pharma Limited	184	450	629	-16.77%
Gufic Biosciences Ltd.	146	78	560	-20.78%
Medicamen Biotech Ltd	140	165	449	-31.22%
Rpg Life Sciences Ltd	89	346	76	-45.36%
Nectar Lifesciences Ltd.	71	747	627	-19.34%
Lincoln Pharma Ltd	70	535	298	-36.98%
Albert David Limited	36	597	231	-22.00%
Kilitch Drugs India Ltd	30	476	396	-35.75%
Opto Circuits (I) Ltd.	10	768	746	-42.11%
Vivimed Labs Limited	8	753	738	-41.77%

Telecom: Revenue Impact ↓

- Market Risk ↑
  Demand for handsets and new subscriptions are expected to slowdown. Demand for bandwidth is expected to rise from existing customers
- Credit Risk ↔
  Fall in imports could severely impact some consumer durables companies. Lower order inflow and revenue might impact capital goods, since it is capital intensive.
- Liquidity Risk ↑
  Financial reliefs and long term moratorium must be provided to expand network roll outs and expansions.
- Operational Risk ↔
  Internet connectivity facing a lot of pressure due to work from home culture.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Bharti Airtel Limited	773	525	30	2.83%
Bharti Infratel Ltd.	736	258	232	-36.63%
Vodafone Idea Limited	669	734	756	-49.59%
Trent Ltd	648	122	38	-8.12%
Iti Ltd	576	231	240	-32.16%
Sterlite Technologies Ltd	534	160	723	-46.18%
Hfcl Limited	419	446	386	-48.43%
Vindhya Telelinks Ltd	271	426	685	-54.80%
Astra Microwave Ltd	200	511	180	-37.47%
Gtl Infra.Ltd	198	712	694	-37.50%
Mahanagar Telephone Nigam	107	779	683	-35.98%
Optiemus Infracom Ltd	103	430	763	-41.68%
Onmobile Global Ltd.	86	715	392	-53.85%
Reliance Communications L	57	774	783	-27.78%

Textiles: Revenue Impact

- Market Risk
  Low risk for domestic market. High for international.
- Credit Risk
  Sector reeling under severe financial stress. Lucrative loans for MSMEs and longer moratoriums will be needed.
- Liquidity Risk
  The sector needs an immediate capital-infusion as it is also a labor intensive industry.
- Operational Risk
  Labor intensive industry – will need to restructure itself.

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Page Industries Ltd	686	7	261	-27.49%
Welspun India Ltd	541	375	417	-55.00%
Kpr Mill Ltd.	511	307	123	-48.64%
Lakshmi Machines Ltd	507	275	644	-30.06%
Raymond Ltd	494	276	424	-64.88%
Lux Industries Limited	446	79	278	-26.44%
Swan Energy Limited	429	311	188	-6.75%
Garware Tech Fibres Ltd	425	203	210	-10.74%
Bombay Dyeing & Mfg. Co Ltd	364	34	539	-42.28%
Vishal Fabrics Ltd	347	103	463	-37.59%
Himatsingka Seide Ltd	323	571	639	-52.01%
Arvind Limited	313	692	721	-50.81%
Jindal Worldwide Ltd	307	194	281	-51.03%
Siyaram Silk Mills Ltd	286	441	565	-36.22%
Mayur Uniquoters Ltd	266	340	673	-28.29%
Filatex India Ltd	234	412	609	-54.35%
Indo Count Industries Ltd	218	637	383	-49.04%
Kitex Garments Ltd	178	590	292	-15.80%
Monte Carlo Fashions Ltd.	171	543	420	-55.34%
Ambika Cotton Mill Ltd.	163	555	447	-39.05%
Century Enka Ltd	104	718	546	-33.69%
Nitin Spinners Limited	72	659	672	-45.05%
Rswm Limited	58	728	726	-18.60%
Sintex Industries Ltd	7	775	779	-23.53%

Transport & Logistics: Revenue Impact

- Market Risk
  Restricted movement led to reduction in demand and might lead to reduced discretionary spending.
- Credit Risk
  Movement restriction are having a direct impact on this industry and future cash flows also seem uncertain.
- Liquidity Risk
  Cash flow, labor and working capital challenges along with debt servicing.
- Operational Risk
  Unavailability of daily wagers will pose problems

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Container Corp Of Ind Ltd	713	266	184	-42.01%
Adani Power Ltd	682	551	105	-55.10%
Blue Dart Express Ltd	546	58	568	0.69%
Vrl Logistics Limited	423	211	265	-43.84%
Allcargo Logistics Ltd	421	436	320	-40.02%
Gateway Distriparks Ltd.	272	467	247	-22.54%
Action Const Equip Ltd	237	370	434	-53.87%
Gati Limited	176	623	545	-15.38%
Snowman Logistics Ltd.	164	540	102	-25.94%
Arshiya Limited	124	740	689	-58.02%
Navkar Corporation Ltd.	120	752	699	-34.50%
Adani Port & Sez Ltd	750	205	272	-31.34%

Others

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Pidilite Industries Ltd	747	20	91	-2.20%
Vedanta Limited	740	662	451	-57.56%
Vikas Ecotech Limited	9	492	760	-62.71%
Mcleod Russel India Ltd.	6	749	784	-56.99%
Ballarpur Industries Ltd	4	196	777	-22.22%
Kridhan Infra Limited	3	526	780	-57.14%
Mercator Limited	2	729	782	-14.29%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% Δ MCAP (Dec'19-Mar'20)
Aia Engineering Limited	646	139	241	-15.54%
Upl Limited	731	124	124	-44.14%
Berger Paints (I) Ltd	719	21	29	-3.41%
Info Edge (I) Ltd	709	42	9	-19.56%
Dlf Limited	708	482	82	-40.47%
Torrent Pharmaceuticals L	702	116	189	6.64%
Tata Consumer Products Ltd	699	134	42	-6.44%
Kansai Nerolac Paints Ltd	697	83	195	-25.73%
3m India Limited	688	30	199	-11.63%
Honeywell Automation Ind	684	33	96	-5.21%
Godrej Properties Ltd	681	157	39	-38.96%
Rajesh Exports Ltd	676	170	117	-18.18%
Bharat Forge Ltd	675	187	264	-51.37%
Bharat Heavy Electricals Ltd	666	682	633	-52.13%
Jubilant Foodworks Ltd	663	28	73	-10.95%
Bayer Cropscience Ltd	660	64	372	4.91%
Pi Industries Ltd	658	93	12	-19.08%
Astral Poly Tech Ltd	654	31	79	-20.40%
Srf Ltd	653	189	10	-19.00%
Adani Enterprises Limited	651	133	75	-33.96%
Godrej Industries Ltd	636	57	438	-33.31%
Supreme Industries Ltd	634	92	223	-24.76%
Syngene International Ltd	631	107	130	-24.99%
Thermax Ltd	630	161	275	-31.60%
Coromandel Interntl. Ltd	624	217	127	2.65%
Atul Ltd	622	174	121	-1.54%
The Phoenix Mills Ltd	615	219	44	-31.51%
Vinati Organics Ltd	613	14	108	-21.91%
Skf India Ltd	609	117	144	-32.45%
Prestige Estate Ltd	604	398	48	-46.86%
Solar Industries (I) Ltd	600	41	242	-13.78%
Akzo Nobel India Limited	586	89	155	12.27%
Kajaria Ceramics Ltd	585	126	181	-28.44%
Pvr Limited	580	140	110	-37.64%
Nbcc (India) Limited	572	125	608	-53.23%
Chambal Fertilizers Ltd	571	407	198	-28.77%
Bombay Burmah Trading Cor	569	8	422	-29.50%
Schaeffler India Limited	567	138	394	-20.95%
Finolex Industries Ltd	566	318	220	-28.09%
Dcm Shriram Limited	565	440	141	-45.51%
Engineers India Ltd	563	267	433	-39.34%
Mahindra Cie Auto Ltd	559	413	567	-58.27%
Grindwell Norton Limited	558	114	171	-24.21%
Vip Industries Ltd	554	35	374	-44.36%
Carborundum Universal Ltd	550	142	333	-30.71%
Timken India Ltd.	547	202	33	-16.79%
Finolex Cables Ltd	544	322	401	-45.10%
Vardhman Textiles Limited	542	584	328	-37.02%
Westlife Development Ltd	532	37	327	2.26%
Teamlease Services Ltd.	523	60	344	-34.39%
Sobha Limited	522	376	339	-66.66%
Justdial Ltd.	516	183	133	-48.64%
Deepak Nitrite Ltd	510	220	14	3.20%
Basf India Ltd	508	223	577	13.86%
Kei Industries Ltd.	505	261	86	-34.07%
The Ge Shpg.Ltd	503	653	260	-31.16%
Brigade Enter. Ltd	501	491	35	-40.43%
Nesco Ltd.	500	259	32	-25.96%
Essel Propack Ltd	499	119	18	-12.47%
Gujarat Pipavav Port Ltd	493	408	366	-31.73%
Omaxe Limited	490	368	496	-1.52%
Ncc Limited	486	608	586	-66.52%
Navin Fluorine Int. Ltd	485	245	51	21.32%
Linde India Limited	473	382	244	-26.63%
Balrampur Chini Mills Ltd	471	495	8	-43.27%
Cera Sanitaryware Ltd	469	149	151	-14.31%
Gujarat Alkalies & Chem	465	655	441	-46.71%
Century Plyboards (I) Ltd	462	210	315	-30.92%

(Cont.)

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Ccl Products (I) Ltd	461	135	477	-11.87%
Heg Ltd	460	461	751	-54.59%
Himadri Speciality Chem L	459	352	704	-51.44%
Rallis India Ltd	458	329	287	4.46%
Guj Nar Val Fer & Chem L	455	660	703	-30.02%
Sadhana Nitro Chem Ltd	445	4	744	7.35%
Guj State Fert & Chem Ltd	443	719	612	-47.82%
Eid Parry India Ltd	442	434	235	-31.01%
Irb Infra Dev Ltd.	441	517	713	-28.52%
Mmtc Limited	439	358	600	-34.40%
Rashtriya Chemicals & Fer	437	611	489	-39.29%
Sharda Cropchem Ltd.	433	350	497	-50.14%
Responsive Industries Ltd	428	207	206	-12.65%
Venky's (India) Ltd.	424	278	478	-52.01%
Sudarshan Chemical Inds L	420	186	107	-8.55%
Navneet Education Ltd	418	303	354	-29.95%
Suprajit Engineering Ltd	416	193	364	-42.90%
Orient Refractories Ltd	413	94	214	-50.47%
Transport Corpn Of India	404	314	286	-29.08%
Ghcl Ltd.	402	586	462	-51.63%
Fairchem Speciality Ltd	397	15	62	-13.81%
Apar Industries Ltd.	396	421	637	-26.06%
Mahindra Lifespace Dev ltd	395	569	224	-51.90%
Balmer Lawrie & Co Ltd	388	490	239	-36.36%
Jk Paper Limited	387	578	413	-40.02%
Jagran Prakashan Ltd.	384	439	663	-27.29%
Philips Carbon Black Ltd	382	504	646	-47.07%
La Opala Rg Limited	381	198	556	0.99%
Kolte Patil Dev. Ltd.	380	360	276	-51.79%
Max India Limited	374	592	256	-25.34%
Care Ratings Limited	373	175	580	-48.77%
Shipping Corp Of India Lt	370	757	81	-39.52%
Hawkins Cookers Ltd	367	26	85	14.92%
Huhtamaki Ppl Limited	366	339	90	-20.79%
Nilkamal Limited	365	400	323	-23.48%
Alkyl Amines Chem. Ltd	363	155	56	10.90%
Dhanuka Agritech Ltd	362	304	291	-19.81%
Gujarat Ambuja Exports Lt	356	462	651	-21.27%
Andhra Paper Ltd	355	393	576	-40.06%
Ptc India Ltd	354	697	614	-31.48%
Nocil Limited	349	455	596	-35.17%
West Coast Paper Mills Lt	343	503	523	-40.01%
Rupa & Company Ltd	342	235	655	-40.89%
Polyplex Corporation Ltd	340	291	245	-41.18%
Time Technoplast Ltd.	339	537	661	-55.25%
Puravankara Limited	337	609	452	-38.25%
Va Tech Wabag Ltd	335	473	520	-54.88%
Shree Renuka Sugars Ltd	334	295	439	-44.97%
Triveni Engg. & Inds. Ltd	330	522	43	-48.84%
National Fert. Ltd	329	673	502	-29.42%
Dalmia Bharat Ltd.	325	713	146	-38.70%
Meghmani Organics Ltd.	318	453	251	-35.17%
Safari Ind (India) Ltd	317	88	429	-35.16%
Kiri Industries Ltd.	312	345	297	-32.10%
Pc Jeweller Ltd	310	700	752	-52.98%
Seamec Ltd.	303	281	3	-42.05%
Insecticides (I) Ltd	302	433	381	-35.03%
Dhampur Sugar Mills Ltd.	298	599	45	-64.59%
Agro Tech Foods Ltd.	296	228	200	-39.25%
The Tinplate Co. (I) Ltd	295	420	257	-46.73%
Tamilnadu Newsprt & Paper	291	654	564	-47.21%
Seshasayee Paper & Boards	288	96	436	-38.17%
Ramkrishna Forgings Ltd	283	481	513	-59.94%
Somany Ceramics Limited	282	251	572	-57.00%
Texmaco Rail & Eng. Ltd.	279	724	649	-41.18%
Oriental Carbn & Chem Ltd	278	306	337	-46.01%
Excel Industries Ltd	276	390	634	-48.64%
Power Mech Projects Ltd.	273	480	592	-46.39%
National Peroxide Ltd	270	386	718	-14.98%
Grauer & Weil (I) Ltd	269	301	233	-19.15%
Vst Tillers Tractors Ltd	267	442	536	-38.72%
Nrb Bearing Limited	264	277	705	-38.63%
Jain Irrigation Ltd	257	736	775	-58.49% (Cont.)

Company	Position in SMB	Position in HML	Position in WML	% ∆ MCAP (Dec'19-Mar'20)
Dredging Corp Of India	252	686	495	-56.33%
Balaji Amines Limited	250	394	349	-36.99%
Bodal Chemicals Ltd	248	529	551	-42.19%
Apcotex Industries Limite	247	62	468	-50.87%
Jain Irrigation Ltd Dvr	244	756	769	-58.49%
Mm Forgings Ltd	236	324	630	-56.34%
Indiabulls Integr Ser Ltd	235	598	761	-50.55%
Bhansali Eng. Polymers Lt	226	230	606	-44.52%
Ptc India Financial Services Ltd	220	770	450	-41.04%
Traspeck Industry Ltd	217	343	406	27.98%
Deepak Fertilizers & Petr	216	691	571	-22.69%
Astec Lifesciences Ltd	214	173	368	-14.72%
Asian Granito Ind. Ltd.	210	457	89	-26.15%
Camlin Fine Sciences Ltd	206	431	31	-53.60%
Apollo Tricoat Tubes Ltd	205	226	4	25.22%
Bajaj Hindusthan Sugar Ltd.	204	761	485	-59.54%
Wpil Ltd	203	417	456	-42.17%
Clariant Chemicals (India	197	556	294	-41.12%
Mirza International Limit	196	566	530	-34.89%
Yuken India Ltd	193	188	353	-29.85%
Nath Bio-genes (I) Ltd	192	508	385	-60.85%
Punjab Chem & Crop Prot Ltd.	191	82	525	-37.62%
India Glycols Ltd	180	675	509	-2.67%
Mangalam Organics Ltd	166	298	607	-46.23%
Shakti Pumps (I) Ltd	161	362	709	-40.15%
Mep Infra. Developers Ltd	160	652	379	-67.62%
Universal Cables Ltd	156	477	640	-47.49%
Bhageria Industries Ltd	155	496	360	-35.26%
Kaya Limite	150	171	707	-67.90%
Orient Paper And Inds Ltd	145	723	625	-44.87%
Apollo Pipes Limited	143	464	387	-29.19%
Eveready Inds. Ind. Ltd.	136	389	748	-7.85%
Vadilal Industries Ltd	132	243	74	-37.34%
Titagarh Wagons Ltd.	129	656	610	-49.29%
The State Trading Corpn	126	783	743	-34.08%
Dwarikesh Sugar Ind Ltd	125	600	40	-50.45%
Vipul Limited	121	601	656	-32.80%
I G Petrochemicals Ltd	119	572	717	-43.32%
Shalim Paints Ltd	115	514	147	-40.79%
Jayant Agro Organics Ltd	114	472	669	-53.05%
Cosmo Films Ltd	111	699	177	-10.21%
Uttam Sugar Mills Ltd.	101	444	119	-52.58%
Gokaldas Exports Ltd.	100	494	282	-54.70%
Speciality Rest Ltd	94	456	398	-64.71%
N R Agarwal Inds Ltd	93	513	692	-28.41%
Nelcast Limited	92	550	573	-41.43%
Arvind Smartspaces Ltd	88	557	541	-21.41%
Fineotex Chemical Limited	82	312	459	-45.35%
Dcw Ltd	78	693	416	-49.83%
Manali Petrochemicals Lt	75	645	605	-47.40%
Vidhi Spclty F Ingrdnts L	73	246	453	-28.17%
Shre Push Chem & Fert Ltd	69	536	589	-29.52%
Soril Infra Resources Ltd	66	300	749	-63.88%
Bgr Energy Systems Ltd	60	762	641	-40.99%
Trib Bhimji Zaveri Ltd	59	684	654	-45.68%
Tgv Sraac Ltd	56	698	504	-35.51%
Everest Kanto Cylinderltd	55	579	351	-62.74%
Vimta Labs Limited	54	401	750	-35.63%
Goa Carbon Limited	46	280	730	-41.36%
Sakuma Exports Limited	45	385	766	-50.38%
Vascon Engineers Ltd	41	737	435	-47.69%
Rushil Decor Limited	39	305	768	-37.68%
Ruchira Papers Limited	34	629	628	-57.64%
B.L.Kashyap & Son Ltd	33	704	719	-44.71%
Reliance Naval & Engg Ltd	31	778	742	-66.67%
Zuari Global Limited	26	769	715	-45.25%
Birla Cable Limited	25	443	747	-46.46%
Nitco Limited	20	422	499	-58.93%
Jaypee Infratech Ltd	18	763	732	-56.67%
Windsor Machines Limited	13	634	757	-48.20%

Leveraged Growth

THANK YOU!