Macro Picture

SUDDEN STOP

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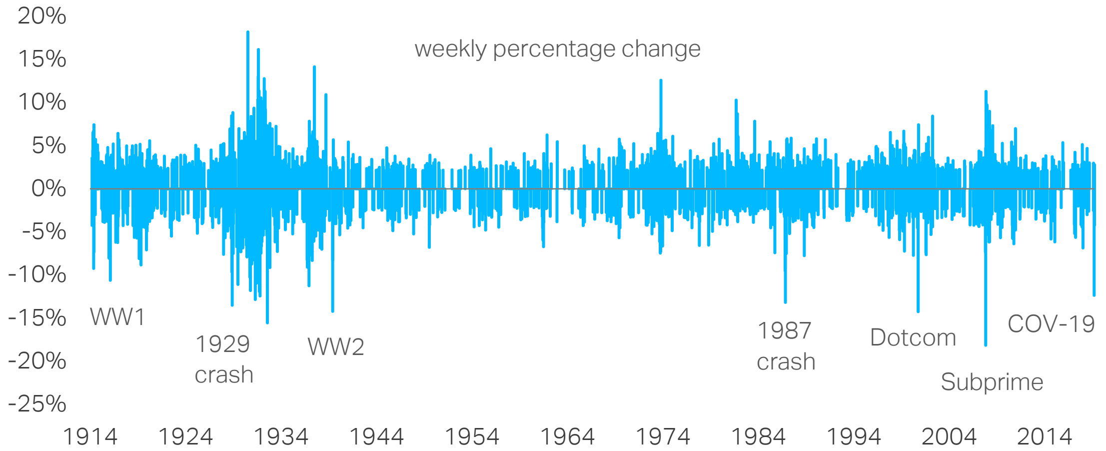
The coronavirus is a serious threat to the global business cycle. Activity in some sectors has plunged and data everywhere are set to deteriorate sharply. The duration of this downturn will depend on the severity of second-round effects in credit and labour markets. Policymakers (especially fiscal) will act quickly to try to limit these spillovers.

Chart 1: Move of historic speed



Source: MacroTrends, TS Lombard, *only absolute moves >3% are shown in the chart

NARRATIVE SHIFT

Once the coronavirus spread outside China, it was no longer just a supply problem for the global economy. The bigger macro threat is now on the demand side, where activity in some sectors – specifically those that rely on social interaction and/or travel – has disappeared. China reopening its factories is no longer sufficient to drive a 'v-shaped' global economic revival.

DEMAND DOMINANCE

SARS gives a template for the short-term hit to GDP. Spending on restaurants, accommodation, retail and travel plunged by 10-25%, delivering an immediate 3 per cent decline in GDP. But the duration of the downturn depends on the potency of second-round effects in credit and labour markets. Rising bankruptcies and higher unemployment would prevent a SARS-style bounce.

POLICY RESPONSE

The authorities can't prevent the short-term economic downturn but they will try to mitigate the second-round effects. Central banks will ease monetary policy to support the credit cycle while governments will use their balance sheets to replace lost income, especially for the hardest-hit sectors. Whether they succeed will depend on how long the economic disruption continues.

SUDDEN STOP

It has been clear for a while that the coronavirus posed a serious risk to the global economy. Yet the nature of this threat has changed dramatically. What looked like a temporary supply shock has morphed into a major deterioration in global demand. And the likely duration of this downturn is largely unknowable because it depends on the characteristics of the virus itself, which remain highly uncertain (will warmer weather slow it down?). The problem now is not so much about the closure of China's factories and the disruption this has caused to global supply chains (the big worry four weeks ago), but rather the impact of the fear (no longer irrational) that has gripped consumers and the health authorities across many parts of the world, causing a plunge in economic activity. The spread of the virus beyond China has also been a game-changer for global financial markets. We warned last month that risk assets have a habit of ignoring these sorts of threats only to react in a 'non-linear' way once the danger becomes imminent. We have now entered the non-linear part of the reaction, with outright panic replacing extreme complacency. While nobody knows how many people the virus will infect, the economic consequences are already profound – the global economy is facing a serious recession.

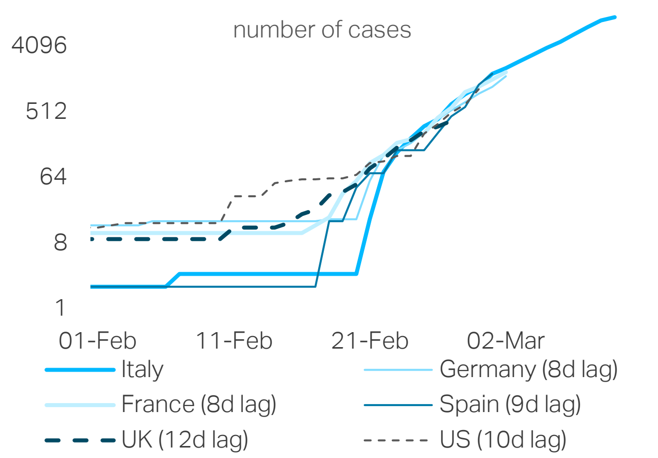
Though China's factories are gradually reopening and supply chains are returning, it will prove much harder to ease the fear that has gripped the rest of the world – especially as the number of new coronavirus cases can only accelerate in the coming weeks. Infection rates outside of China continue to grow at exponential rates and the United States has only recently started to test for the illness on a meaningful scale, which means further scary headlines are inevitable. For now, of course, we do not have any hard data to evaluate the impact this crisis is having on consumer demand. But anecdotal evidence suggests it is severe, especially in those sectors that involve 'social' consumption – travel, tourism, restaurants, accommodation and certain professional services. We can get a rough idea of the scope and magnitude of these short-term effects by looking at what happened during the SARS outbreak in 2003. Data for Hong Kong show an immediate plunge in activity of 10-25% in 'social' sectors, which produced a 3 per cent quarterly decline in GDP (not annualized). It is likely we will see a shock of similar magnitude in other major economies – which will show up in business surveys etc. over the coming weeks.

The impact of SARS was temporary, with activity bouncing back after just one quarter. The question now is whether the coronavirus demand hit will prove more persistent, perhaps even bringing the 'end of the cycle' people have been talking about for years. The persistence of the demand shock is likely to depend, not only on how the virus evolves, but also on the potential for second-round effects via labour and credit markets. If any near-term reduction in demand leads to widespread defaults or job losses it is unlikely to prove temporary. On this basis there are some obvious vulnerabilities in the global financial system, including historically high corporate debt levels in a number of countries (especially among SMEs) and a dangerous international reliance on dollar funding. While policymakers can do little to cushion the short-term hit to the economy, they will try to mitigate these second-round effects. Central banks have room to cut interest rates modestly and channel liquidity into stressed sectors of the economy, but a prompt fiscal response is also inevitable. Ultimately, governments will need to use their balance sheets, either by cutting taxes or increasing their spending, in order to replace the income that will be lost. But if the virus lingers, even this might not be sufficient to produce a quick rebound.

1. NARRATIVE SHIFT

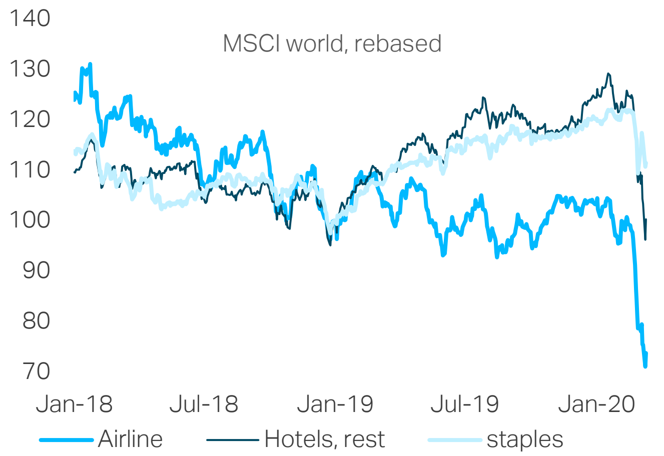
Four weeks ago we published our first Macro Picture on the coronavirus. Back then, large parts of China's economy were shut down but there was limited evidence of the virus spreading to the rest of the world. Financial markets were remarkably calm about the situation, verging on complacent. Stock markets kept hitting new highs, with investors apparently looking through the short-term supply disruption that would come from a critical part of the world's manufacturing base being temporarily closed. As long as China contained the virus and reopened its factories soon, any slowdown would be temporary – plus China's powerful policy stimulus would ensure a vigorous recovery during the second half of the year. Unfortunately, as we pointed out at the time, the situation was much more uncertain that this comfortable consensus acknowledged. Investors' relaxed attitude hinged on a really important assumption – the virus would not spread to other major economies. Once Italy started to record high numbers of coronavirus cases, the whole market narrative changed – as did the nature of the economic shock we faced.

Chart 2: Following Italy?



Source: Bloomberg, TS Lombard

Chart 3: Hardest hit equity sectors



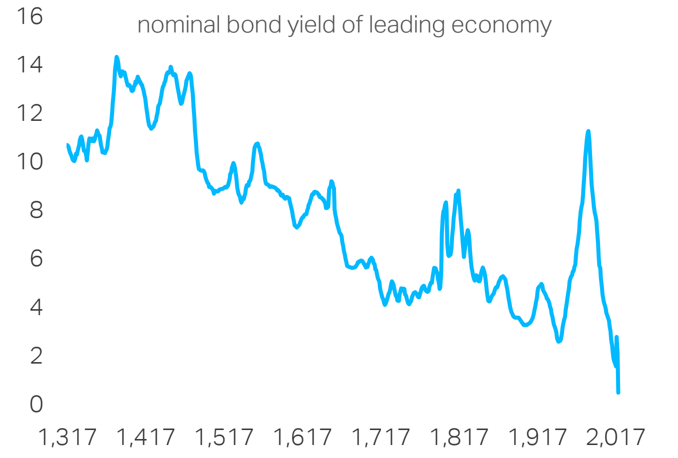
Source: Datastream

From supply to demand

The situation in China is actually close to where we thought it would be one month ago. The authorities' aggressive response halted the spread of the disease and the number of new coronavirus cases has steadily declined. The country's factories have started to reopen, even if the economy in aggregate is operating far below capacity (see the latest PMI surveys, which plunged to recession levels in February). Our estimates suggest around 75 per cent of China's factories are now open, up from around 20 per cent one month ago. As the lockdown has eased and China's migrant population has returned to the major cities, we should expect any residual supply-chain pressures from this region to diminish. Remember, China produces huge quantities of intermediate goods, essential to production processes all over the world. If China had remained closed, extreme bottlenecks would have emerged. International car producers, in particular, warned they would soon have to halt some of their operations elsewhere.

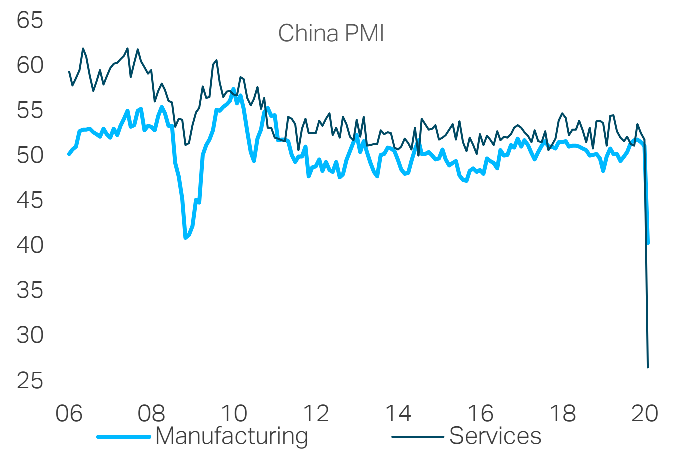
Unfortunately, the reopening of China's factories is where the good news ends. With the virus spreading elsewhere, the bigger risk is now on the demand side. It won't matter if the likes of Fiat find it easier to source the parts they need if customers are too afraid to show up in their showrooms. Of course, the exact nature of the virus remains uncertain. We do not know how far it will spread or the associated mortality rate. But the evidence we have so far is scary enough to prompt big changes in behaviour. Even if the coronavirus is not as lethal as past pandemics, it could put huge pressure on public health services. Northern Italy, one of the wealthiest parts of Europe, is struggling to cope. To contain the disease, the Italian authorities have placed increasingly stringent restrictions on citizens. We could be days away from similar measures in other countries. And it is hard to see the news flow improving quickly. Incidence of the disease outside China is growing at an exponential rate, while the United States is finally stepping up its testing for the disease, which will surely cause the number of reported cases to balloon.

Chart 4: Unprecedented bond yields



Source: Bank of England, TS Lombard

Chart 5: Chinese data crash

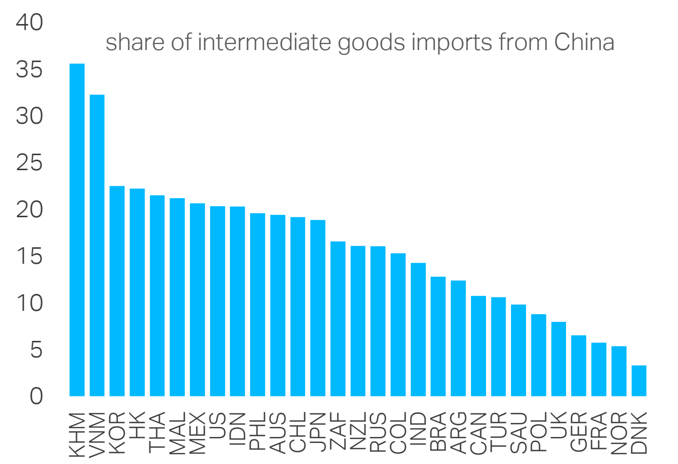


Source: Markit, TS Lombard

Market panic

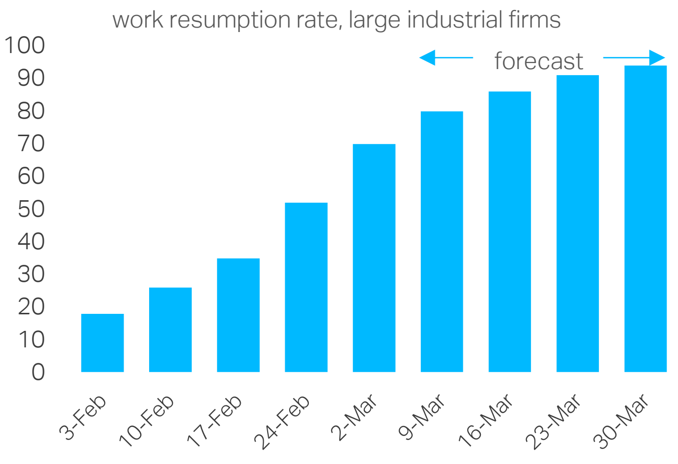
Back in February we pointed out that markets often struggle to price extreme risks in an efficient way, especially where the odds of disaster are low or highly uncertain. Investors typically ignore the accumulation of bad news and then react in a sudden or 'non-linear' way, with complacency giving way to panic. This is exactly how the response to the coronavirus has played out. After shrugging off an accumulation of bad news from China, Japan and South Korea, a spike in the number of cases reported in Italy caused a sudden shift in the perceived market risk. Global stock markets dropped precipitously, hitting a technical bear market in record time – the sort of response associated with some of the most extreme events in modern history (see Chart 1).

Chart 6: China dominates value chains



Source: OECD, TS Lombard

Chart 7: China factories reopen

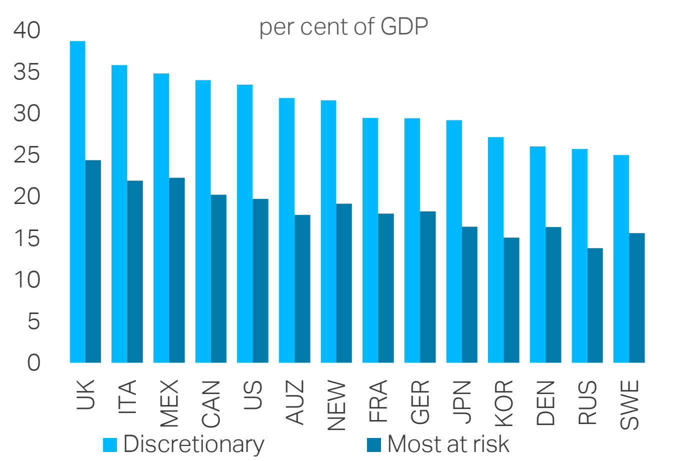


Source: TS Lombard

2. DEMAND DOMINANCE

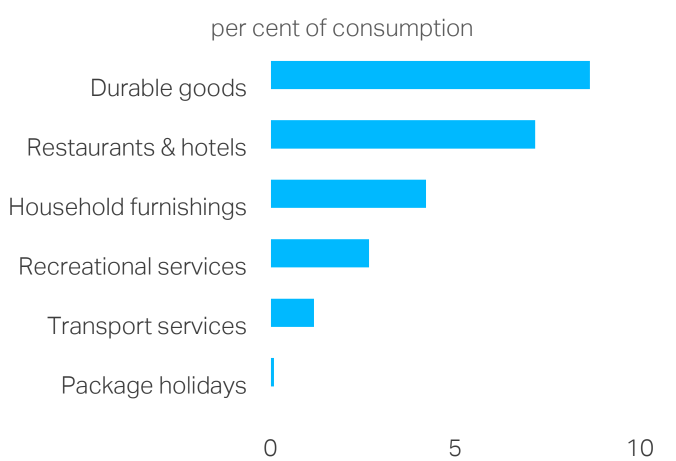
As people become more fearful about the virus, or the authorities impose greater restrictions on everyday life, discretionary spending is now the clearest economic risk – the part of consumer spending left over after essentials such as food, energy, other household bills and medical costs. For most developed economies, this is a substantial part of national expenditure – typically around 50% of consumption or 30% of GDP. If people stay home and cut their spending to essentials, we are talking about a huge hit to global activity. But in most cases, discretionary spending (which is a broad category of consumption) is unlikely to go to zero[1]. People will continue to buy non-essential goods and services, but they will aggressively cut back in specific areas – especially those activities that require social interaction such as tourism, restaurant dining, hotel accommodation and specific professional services. If we count only the most 'at risk' areas of consumption, we are talking about a smaller – but still significant – part of economic activity, perhaps 15-20% of DM GDP. There is plenty of evidence these sectors are already suffering an enormous decline in revenues, with cancelled sports events and business conferences, empty passenger flights, deserted airports and dwindling restaurant receipts.

Chart 8: Discretionary spending is big



Source: OECD, TS Lombard, MAR = social consumption

Chart 9: US personal spending by type



Source: BEA, TS Lombard

The SARS episode

While we can easily identify the sectors most susceptible to plunging demand, it is harder to get a sense of the likely magnitude of these declines. Perhaps the best approach is to look at how Asian consumers responded to the 2003 SARS outbreak. We use data for Hong Kong, which – after the Chinese mainland – had the highest number of SARS cases and reports reliable, high-frequency data for the sectoral composition of spending (Gross Value Added). Charts 10 to 13 show the short-term effects were huge, with output typically dropping by around 10-25 per cent in one quarter (these data are not annualized). Even broadly-defined retail spending declined significantly in Hong Kong in 2003 Q2, down around 10 per cent over the quarter. Exports and imports also dropped significantly, though by a similar magnitude, which suggests net

[1] Italy is an obvious exception. Since the Italian authorities have now closed all retail/consumer business except pharmacies and grocery stories – the definition of non-discretionary spending – discretionary consumption will collapse.

international trade wasn't a big part of the story. In aggregate, Hong Kong registered a 2.5 per cent quarterly decline in GDP (10% annualized), which is an extremely large short-term impact.

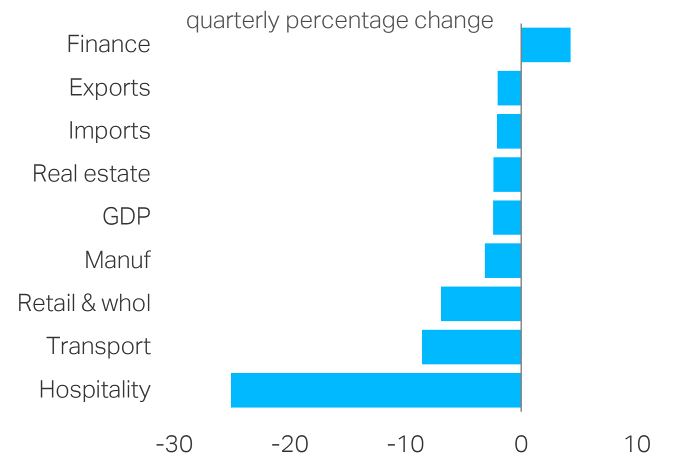
Chart 10: SARS hit some sectors hard

Source: Data for Hong Kong, Datastream

Chart 11: Including traditional retail

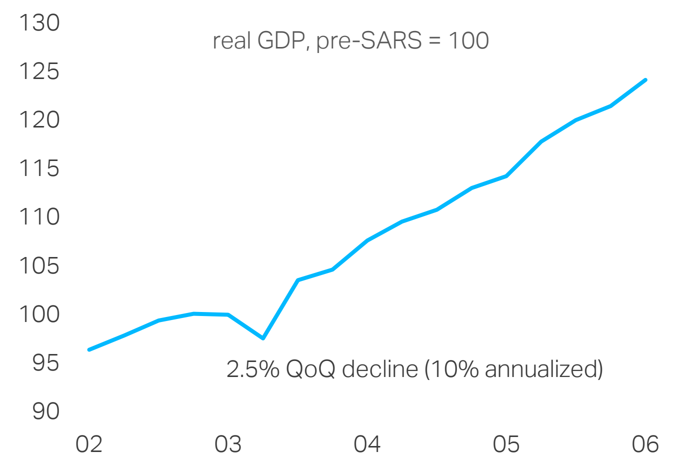
Source: Data for Hong Kong, Datastream

Chart 12: SARS hit by sector



Source: Data for Hong Kong, Datastream

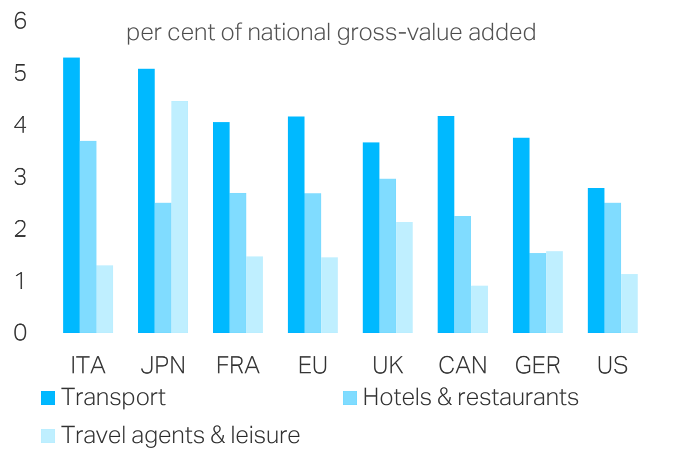
Chart 13: SARS hit to Hong Kong GDP



Source: Data for Hong Kong, Datastream

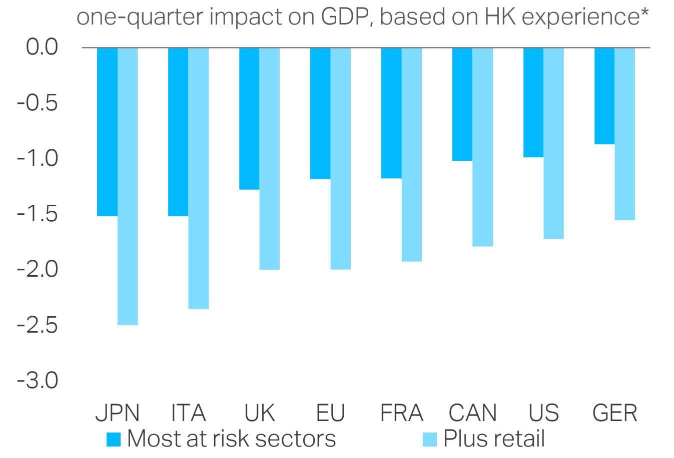
Since the hit to consumer demand in the developed economies is likely to be large, it is no wonder this threat is dominating market anxiety about the economic fallout from the coronavirus. Put in this context, the record collapse in bond yields is not surprising, especially as investors already saw a deflationary environment. That is not to say there is no supply element to the coronavirus shock. Disruptions to international supply chains will increase now that the virus has spread beyond China, particularly if we see widespread lockdowns (either voluntary or involuntary). Governments are also asking people to work from home and are closing schools, which will undermine the supply of labour – especially for working parents with restricted access to childcare. And, of course, we could see large numbers of people taking sick leave at the same time, which will create further disruption. But we suspect the demand consequences of the shutdowns far outweigh the supply effects, creating a deflationary shock overall. And the plunge in oil prices is compounding these effects, further reducing inflation and long-term interest rates.

Chart 14: Most at risk sectors



Source: OECD, TS Lombard

Chart 15: With a SARS-style shock



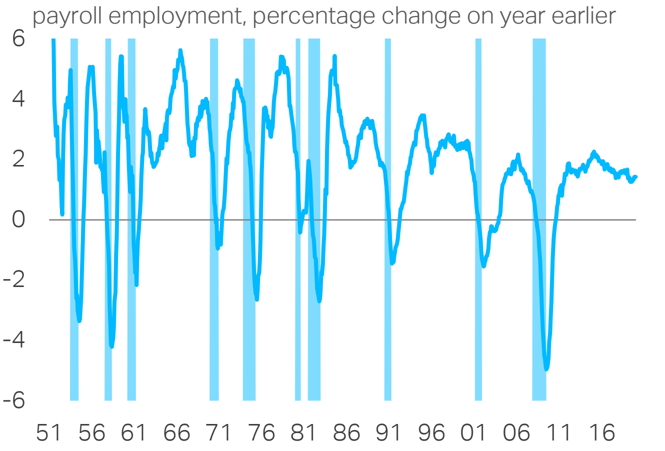
Source: OECD, TS Lombard, *assume same hit as SARS in 2003

Tipping point?

The impact of SARS was short-lived. Hong Kong's GDP dropped 2.5 per cent in 2003Q2 and then bounced back in Q3, jumping more than 6 per cent. Whether we see something similar with the coronavirus will depend on the nature of the underlying infection. We don't know how far the virus will spread or whether warmer spring/summer weather will temporarily eradicate it in the northern hemisphere (this is the working assumption of many experts). We do know, however, that the authorities are trying to 'flatten the curve' of the disease. Since a large number of sick people getting the virus at the same time could quickly overwhelm the health services, governments want to take actions to slow the disease, even if this means the problem lingers. There is also a risk of further waves of pandemic, especially given the staggered and globalized nature of the coronavirus. While there is no doubt the authorities are doing the right thing – public health must take priority – flattening the curve also means the disruption will linger for longer than SARS. And a longer economic downturn increases the risk of outright recession.

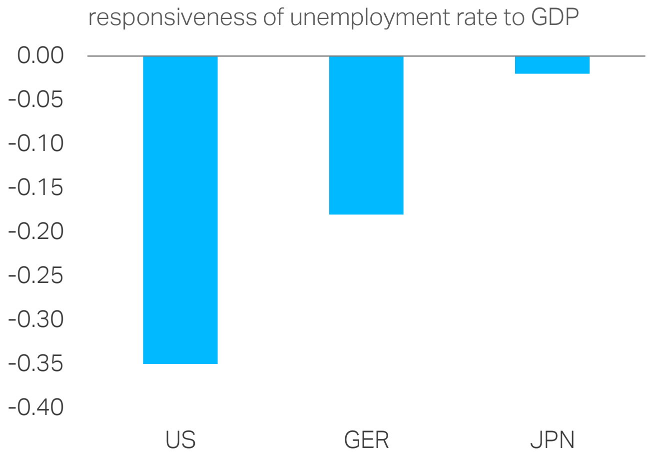
We see two potential 'second-round' effects that could mean even a temporary plunge in activity morphs into a more dangerous downturn. First, developments in credit markets will be critical. If people begin to default on their loans or businesses start to go bankrupt, the global economy will not be able to rebound immediately. So investors must watch credit conditions closely. Stress is already appearing in these markets and spreads have widened, though this partly reflects the plunge in oil prices (energy producers have a large weight in the US high yield sector – remember what happened in 2015). If the credit markets continue to crack, tighter financial conditions will amplify the inevitable downturn. Bear in mind that corporate debt hit record highs during this global expansion and much of this is concentrated in a fat tail of highly leveraged, low-margin smaller companies (Chart 20). Since a lot of this debt was created by capital markets, fuelled by an insatiable demand for yield among institutional investors, we could be talking about serious financial contagion – including large scale downgrades of BBB securities, mass 'fallen angels' and even the bursting of the 'Buyside Bubble'.

Chart 16: Employment defines US recessions



Source: BLS, TS Lombard

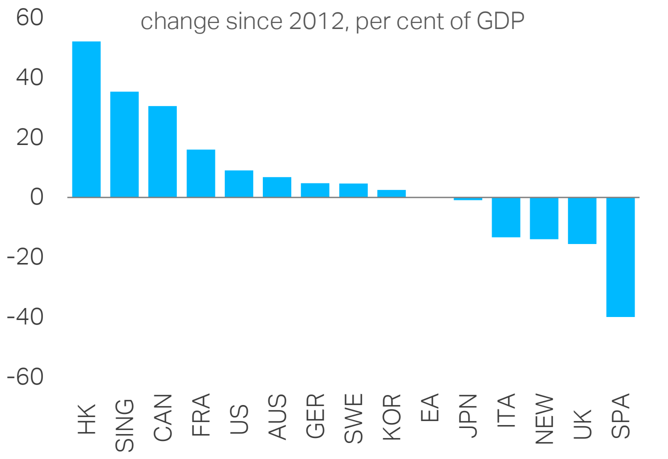
Chart 17: Other countries hoard labour



Source: TS Lombard estimates (see here for more)

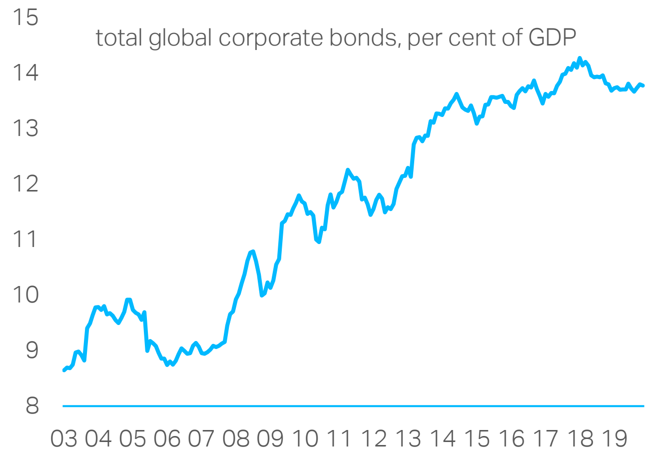
SMEs are also responsible for much of the employment that has taken place over the last decade, which creates another possible multiplier effect – the labour market. US recessions, in particular, are defined by employment. The big difference between a recession and a temporary slowdown is that companies start to lay off workers, which has spillover effects to the rest of the economy. Households reduce their spending, either because they have lost their jobs or because they fear losing their jobs in the future. This, in turn, undermines corporate profits, which creates a nasty spiral. In other countries such as Germany and Japan, where the cost of firing workers and rehiring them is higher, companies are more likely to hoard labour. So the response of companies to the coronavirus will have a critical bearing on the 'shape' of the economic downturn. For a v-shaped recovery, we want employers to hang onto workers in the expectation that revenues will quickly rebound. Yet, for many of the sectors that are most exposed to the virus – especially low-skilled services such as tourism and catering – the incentive to keep workers is actually fairly limited, since job-specific knowhow is less important.

Chart 18: Corporate debt vulnerabilities



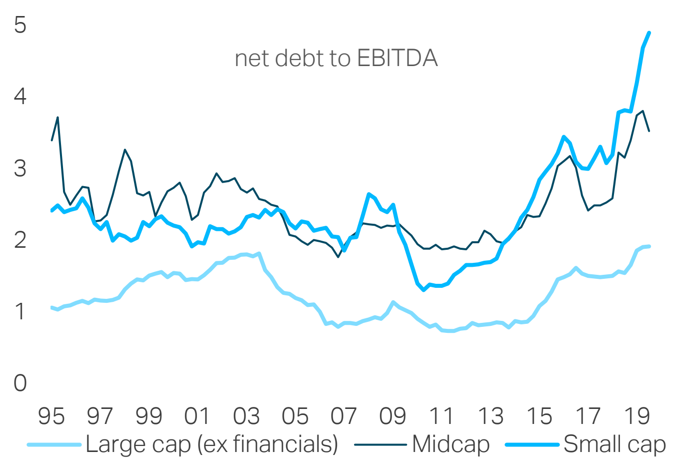
Source: BIS, TS Lombard

Chart 19: The Buy-side Bubble



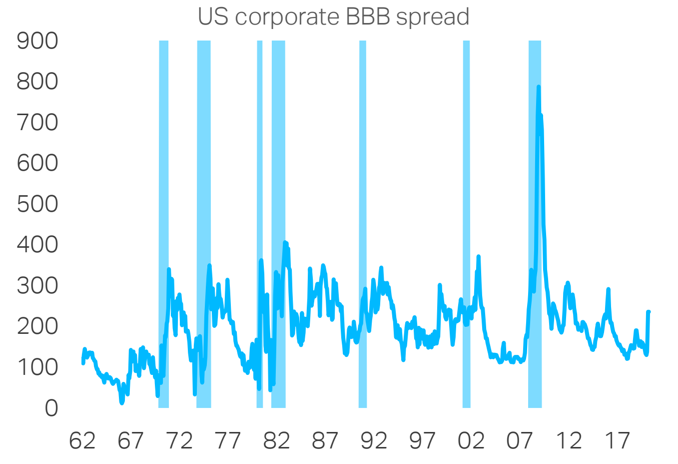
Source: Bloomberg, TS Lombard

Chart 20: Smaller companies most exposed



Source: Bloomberg, TS Lombard

Chart 21: Corporate credit spreads

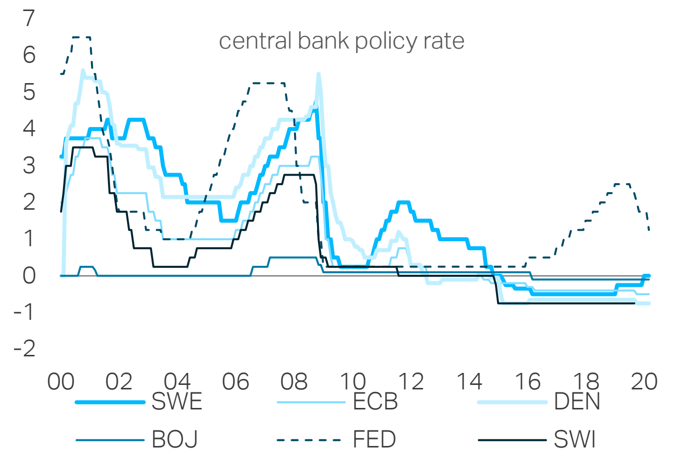


Source: FRED, TS Lombard

Existing vulnerabilities exposed

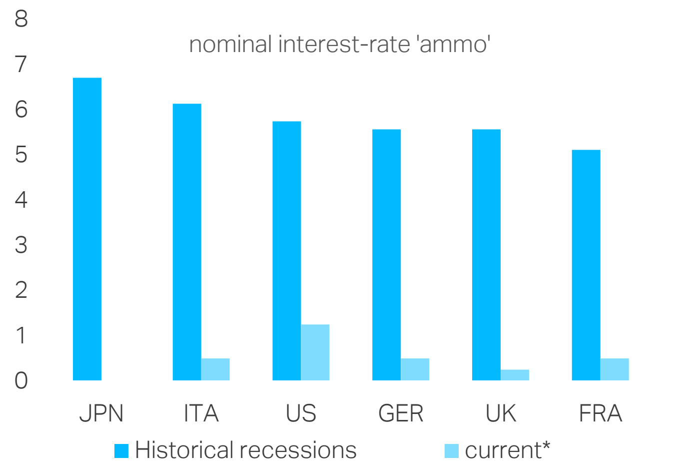
Investors have been aware of a number of vulnerabilities in the global economy over the past five years – including high levels of corporate debt, a potentially dangerous search for yield by institutional investors, an over-reliance on dollar funding, elevated asset prices and various sources of illiquidity in global markets (ETFs, algorithmic trading etc.). In fact, these vulnerabilities have featured heavily in previous Macro Pictures. We have analysed these vulnerabilities in detail but it was always hard to identify the 'trigger' for things to go spectacularly wrong, particularly in an environment of low inflation and minimal macro volatility. But the coronavirus provides the potential trigger for a lot of these vulnerabilities to start to matter, by creating massive uncertainty for financial markets and substantial short-term economic destruction. The question is whether policymakers can act decisively to minimize these risks, preventing the second-round effects that would turn a v-shaped downturn into a 'U' (or even an 'L'!).

Chart 22: Close to zero



Source: BIS, TS Lombard

Chart 23: Limited room to cut rates

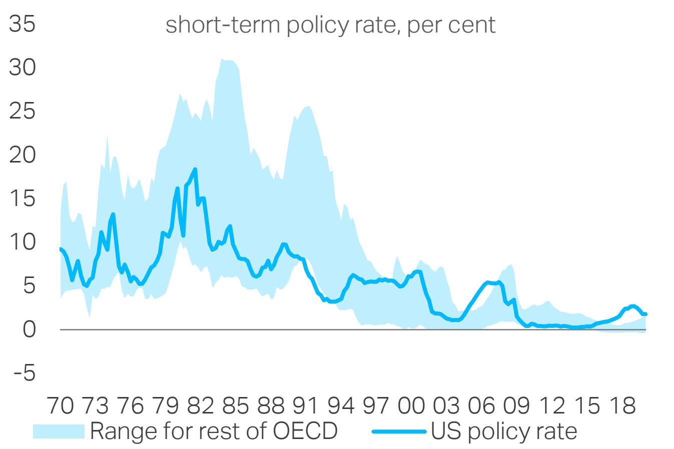


Source: OECD, TS Lombard, *assumes hard lower bound of -1 in EA

3. POLICY RESPONSE

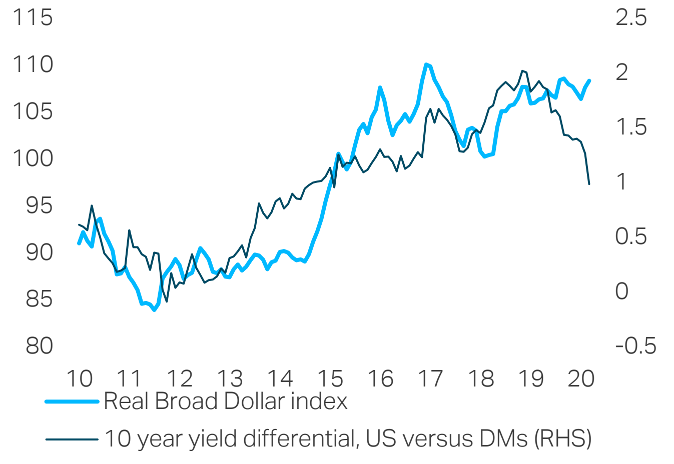
Obviously the immediate priority is to ensure the health services have the resources they need to deal with the emergency situation they face. Still, our focus has to be on the macro and financial implications of the coronavirus, which is what our clients expect – not in telling governments how to tackle a health crisis. With markets plunging, there is always a tendency for investors to look back at previous crises for macro policy solutions. Yet the situation we face today is unusual and certainly different to 2008. Back then, we had a problem that started in financial markets and spread to the real economy. Today, the real economy provides the epicentre. Demand has plunged, particularly in some sectors, and there is serious uncertainty about how long this weakness will persist. The authorities will struggle to support market sentiment if the underlying problem is unresolved. Central banks have little room to reduce interest rates and this is unlikely to make much difference in the short term – as the Fed, the Bank of England and the ECB discovered after their recent emergency announcements.

Chart 24: Fed set to re-join the pack



Source: BIS, TS Lombard

Chart 25: Can they get the USD down?



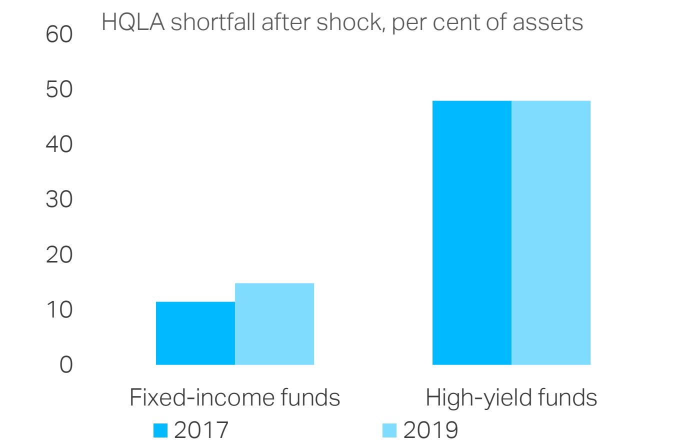
Source: Bloomberg, TS Lombard

Supporting the credit cycle

Policymakers cannot prevent a large short-term plunge in activity, but they can try to limit any second-round effects that would prevent a quick rebound. There will be a temptation to use QE to try to prop up asset prices but we are sceptical this would work, unless it is aimed at specific sectors – i.e. 'credit easing'. It probably makes more sense for central banks to purchase corporate bonds directly to fight the current contagion in credit markets. Some central banks such as the ECB are already doing this, but the US would require a change in the Federal Reserve Act, which restricts the Fed to buying government-backed debt, mortgage-backed securities and Treasury notes. While some officials – notably James Bullard – have called for adjustments to the Fed's remit, this is unlikely to happen in time (if at all). It also difficult to imagine central banks directly buying equities (outside of the BoJ, which already does this).

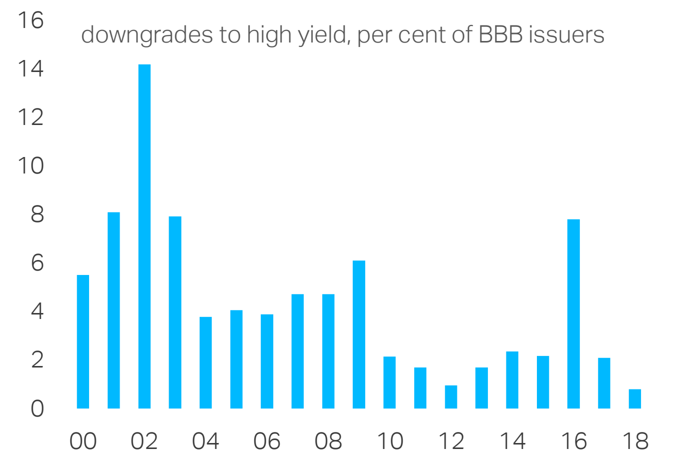
Central banks arguably have more power over the banks they regulate, which provides additional tools to counter any credit squeeze. The authorities, for example, can add liquidity to the system, ease regulatory requirements (such as loss provisions for distressed firms) or even encourage loan forbearance in order to ensure that banks continue to provide credit to those banks and companies most affected by the coronavirus. The Italian government has even announced a freezing of mortgage payments for individuals in an effort to ensure they can keep servicing their home loans, though the exact details of the scheme are rather sketchy. There is also talk of new ECB TLTRO programmes, perhaps explicitly designed to channel funds into SMEs. And the Bank of England has introduced a programme of cheap four-year loans for struggling SMEs. If the 2008 'bailout' was about banks, the coronavirus 'bailout' will be aimed at small businesses.

Chart 26: IMF shock to asset-management



Source: IMF Financial Stability Report (2019)

Chart 27: Fallen Angel risk



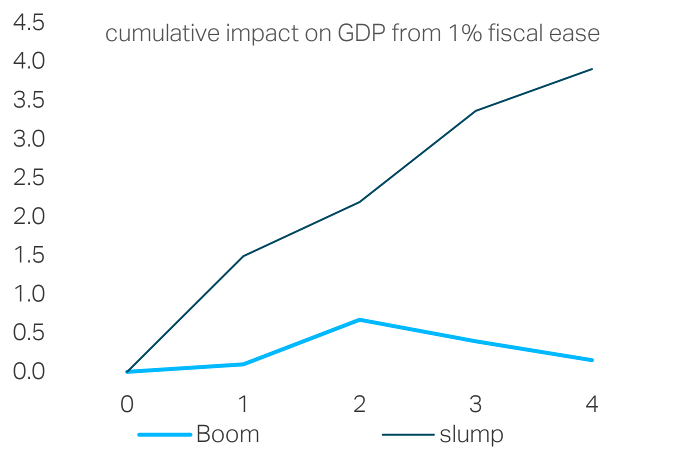
Source: IMF, TS Lombard

Replacing lost income

While central banks will make every effort to support the flow of lending to the real economy and prevent the credit cycle from souring, the coronavirus is still going to generate large losses in income for many parts of the economy. In the past, monetary policy would try to offset these losses by stimulating aggregate demand. But this time there is much less scope for action. Bond yields are already at historic lows and the impact of monetary stimulus has steadily declined, to the point where it is largely ineffective (perhaps even harmful). This means fiscal policy must take over. We have no doubt this will happen, especially as there was already a consensus in favour of fiscal action even before the outbreak of the coronavirus and the authorities only needed an excuse to ramp up their spending. (We thought this new regime of fiscal dominance would focus on a 'war on climate change', but the coronavirus presents a more pressing emergency).

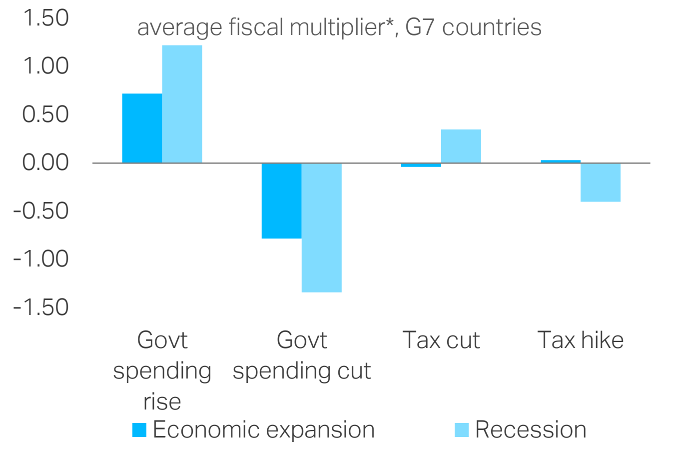
A large fiscal stimulus is now inevitable, either in the form of tax cuts or additional government spending. This week's UK Budget gives a taste of what is to come. In the short term, tax cuts are probability to quickest measure to implement. Hong Kong and Australia have already made significant cash payments to citizens and while some economists label this 'helicopter money', it is closer to a large tax rebate. Italy has also suspended tax collection on some of the hardest hit sectors. Meanwhile, President Trump has said he is considering a cut to US payroll taxes. Trump actually has significant discretion to do this even without Congressional Approval. The President could, for example, adjust employers' withholding tables, which would provide a temporary reduction in tax payments. President Bush did something similar in 1992 and some studies suggest this had a significant impact on consumption, with 40 per cent of households spending the windfall. In theory, government spending should be a more effective than tax cuts as a form of stimulus (Chart 29), especially for a depressed economy where people are unwilling to spend. But in a crisis it is always difficult to identify 'shovel-ready' spending schemes quickly.

Chart 28: Fiscal stimulus would work



Source: Peterson Institute

Chart 29: Spending is most powerful

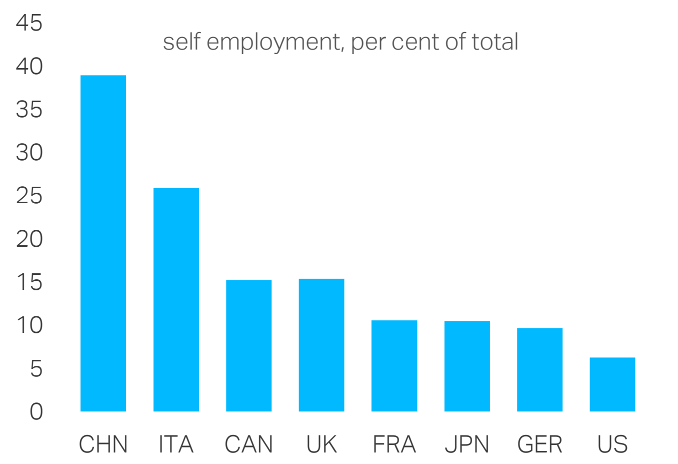


Source: IMF estimates

Targeted measures more effective?

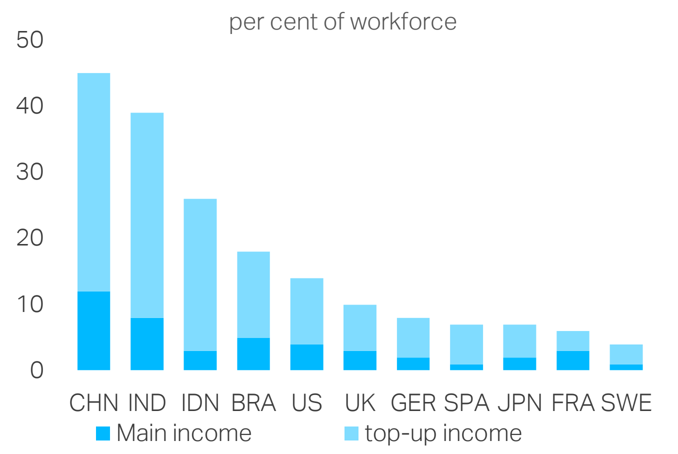
While broad reductions in taxation or increases in government spending might relieve income losses at the national level, there is also a strong case for a more targeted approach. Some sectors will be hit hard and will not necessarily benefit from wider government initiatives, especially if they are victims of coronavirus-related fear (tourism, restaurants etc.). This is where the government will provide specific tax relief, or even cash transfers. This should also include things like sick leave, especially for the self-employed or those who work in the 'gig economy'. Self-employment varies considerably across countries but in places like Italy, where it is particularly high, it will be difficult to force workers to stay home if they won't get paid. The UK and Irish governments have announced new sick leave programmes – which are necessary not only to slow the spread of the virus but also to directly help the most directly affected. For areas in lockdown, it is important to remember that there are many workers who cannot work from home, even if the government urges them to do so. In the US, for example, homeworking is closely tied to skill levels (Chart 32). The same is undoubtedly true in other countries too.

Chart 30: Not everyone can take time off



Source: TS Lombard

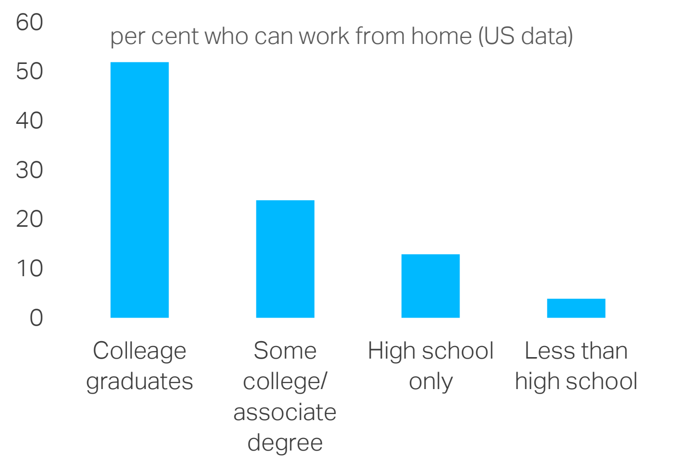
Chart 31: The gig economy might suffer



Source: TS Lombard

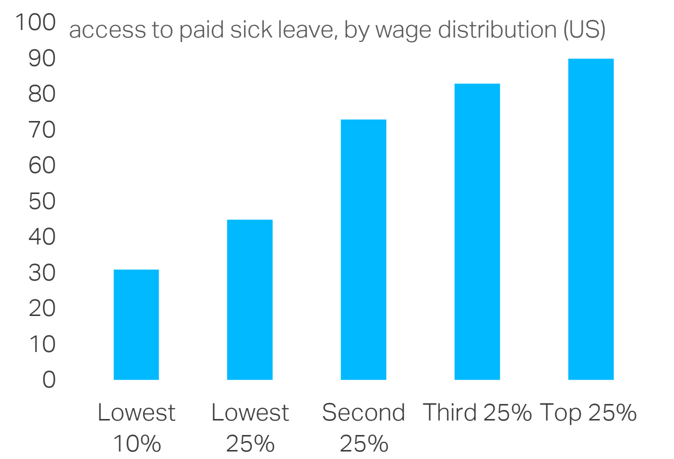
In short, there are lots of things government can do to try to cushion the economic blow from the coronavirus but the onus now is very much on fiscal policy, not central banks. The authorities must act quickly to try to prevent second-round effects via credit and labour markets. They must absorb at least part of the problem into their own balance sheets. With bond yields at 700 year lows, there is no excuse for inaction. If they delay and the short-term hit to the global economy becomes an outright recession, the ultimate fiscal cost will be several multiples higher. Unfortunately, however, there is no guarantee of success. The longer it takes to contain the virus, the greater the threat it poses to the longest economic expansion in history.

Chart 32: Not everyone can work from home



Source: BLS (available here)

Chart 33: Not everyone gets sick-pay



Source: Census (available here)

Bottom line

The nature of the coronavirus threat has changed, with plunging demand replacing supply disruption as the main economic consequence. Financial markets are responding to this prospect, plus the acute uncertainties associated with the disease itself. Whether this weakness is temporary or tips the global economy into recession depends on how wide the infection spreads (unknowable at this point), plus the potential for second-round effects through credit and labour markets. The large short-term shock to global growth could expose all sorts of vulnerabilities in the financial system, especially high levels of corporate debt. Policy will focus on preventing these second-round effects, with central banks trying to preserve the flow of credit and the fiscal authorities replacing lost income, especially for the hardest-hit sectors. While it is encouraging policy has acted quickly – certainly faster than in previous downturns – this will not be enough if the disruption from the virus lasts longer than a few months.

The appendix on the next page shows the policy measures the authorities have introduced so far. We will make this available online and regularly update it.

Appendix: Main policy measures introduced so far

	Monetary	Fiscal	Other
China	• Compliance with new asset management regulations delayed to end of 2021. The postponement allows banks to grow shadow banking assets. • PBoC, CBIRC, and CSRC issue joint statement calling for forbearance and flexibility in debt collection up to 30 June 2020. • 1y Marginal Lending Facility rate cut 10bp Loan Prime Rate cut 10bp for 1y, 5b for 5y. • 7-day and 14-day repo cut by 10bp. • Banks allowed to delay NPL recognition by 180 days. • Rolling OMO occurred over the past few weeks, equalling a net injection of RMB 820 bn liquidity since February 2nd. • RMB300bn special purpose re-lending provided to banks. • Increased re-lending and re-discounting rate for small commercial lenders by 25bp to 2.5%. • MoF announced subsidizes of up to 50% of interest rate payments for companies impacted by the virus. • Re-lending facility changed dictating banks must not issue loans above 4.55% - 50bps above the LPR and 205bp above that charged to small banks. • State-owned large commercial banks to achieve 30% yoy loan growth to SMEs in H1. • Extend debt repayments for SMEs and all firms inside Hubei to Q2.	• Frontloaded local government special purpose bond issuance • Eased funding leverage restriction for local government financing platforms. • Mandate higher proportion of local government bond proceeds spent on infrastructure projects, and prohibits usage for land and property activities. • Part of social security tax waived – 5 months for SMEs and all firms in Hubei, 3 months for large firms ex-Hubei. • Waivered toll road fees from February 27. • VAT exemptions for small-scale taxpayers in Hubei between March and June, VAT for small-scale taxpayers outside Hubei lowered from 3% to 1%. • Electricity prices for businesses cut by 5%. Stimulus expectations • The National People's Congress will hike the quota for special bond issuance by local governments to RMB 3.1tr (US$450bn), up from last year's RMB 2.15tr. • The central budget deficit is likely to surpass the 3% of GDP threshold for the first time, with an increase of at least 20 bps over 2019 level of 2.8% of GDP. • Cheaper car loans and lower auto purchase tax. • Larger license plate quotas.	During lockdown • Widespread containment policies After outbreak peak • Work resumption rate targets set • Planes and trains chartered for migrant workers

	• Coronavirus bonds and WMP issued to support bank and corporate capital. Stimulus expectations: • 100-150 bps RRR cuts • 10-15bps MLF and 15-20 LPR cuts • Pledged supplementary lending to policy banks		
US	• 50 bp inter-meeting cut • Regulatory relief for lenders where borrowers are affected Stimulus expectations: • Market is expecting more cuts	• Congress passed an $8.3bn package • Most of the funds are targeted at the medical and healthcare response • Trump administration to discuss possible tax relief measures	• Schools in Seattle closed • Multiple states declare state of emergency
Japan	• BOJ expands repo operations Stimulus expectations: • Possibility of raised asset purchases at March 18 meeting	• 1.6tr yen ($9.6bn) in support has been approved in total • The packages provide for low- or no-interest loans to SMEs and freelancers • Parents burdened by school closures will be compensated	• Schools closed until April
South Korea	• Discounted loans for impacted firms via BoK lending facility • Infected cash burnt and/or quarantined • Window guidance in support of debt forbearance Stimulus expectations: • 25 bps cut at/before next monetary policy meeting (April 9)	• 11.7 trn won allocated for medical response, business and households • Short selling rules strengthened Stimulus expectations: • Additional 5trn won supplementary budget in H2 • Increases to unemployment and pension payouts • Accelerated infrastructure spending • Free childcare vouchers	• Widespread social distancing and testing programme • Mask rationing • Special care zone (soft quarantine) of Daegu • Voluntary factory closures and quarantine
EU	Stimulus expectations: • Markets are expecting further easing • Reports of targeted lending schemes under discussion	Italy • €25bn earmarked, including up to €20bn new debt • €12bn of measures to be announced in coming days • Suspension of municipal and utility bills • Moratorium on repayments for mortgage and bank loans to businesses	• Italy has implemented a full-country quarantine • All retail except grocery stores and pharmacies have now closed

		• Government payments to freelancers and parents staying home	
		Germany • Eased conditions for companies to access the “Kurzarbeit” programme subsiding reductions in working hours • Small increase in investment (€12.4bn spread over 4 years)	
		France • Calling for a “massive” European stimulus	• Large gathering banned
		Spain	• Schools and universities closed in affected regions
UK	• 50bp cut to 0.25% • New Term Funding SME scheme • Banks’ capital requirements lowered • Several UK banks offering repayment holidays to businesses or individuals affected by the virus	• £12bn of extra spending • Of which £5bn NHS response fund • £7bn in business support • Expansion and subsidies for sick pay • Guarantees for SME loans • Business rate tax holiday for smaller retail and entertainment businesses • Cash grants for businesses	
Australia	• 25bp cut • Guidance as to further cuts	Stimulus expectations • $15bn package expected	
Canada	• 50bp cut • Guidance as to further cuts		
Indonesia	• 25bp cut (20 Feb) but IDR volatility limits room for further cuts at present • RRR cuts (announced,, effective from 16 March) • Easing of macroprudencial regulations(20 Feb announced)	• 10.3 tr rupiah (USD720mn) stimulus package aimed at consumer spending and tourism already announced • More stimulus will come targeted at supporting imports and exports • Measures including government bonds buybacks and income tax halt are being considered.	• Relaxation of rules on shares buy-backs for listed companies. • Easing of rules on loans restructuring for sectors affected by Covid-19.