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New risks, new resilience

2020 has highlighted the value of resilience and the importance of preparing adequately for risks. What can we learn from previous crises to prepare us for climate change?

By **Mark Carney**, UN Special Envoy on Climate Action and Finance, Adviser to the UK Prime Minister for COP 26 Finance and former Governor of the Bank of England

To build a better future, we must learn from our current predicament. The coronavirus tragedy proves we cannot wish away systemic risks, and that we need

to invest upfront to avoid disaster down the road. As with COVID-19, climate change involves the entire world. Yet it is a threat from which no one will be able to self-isolate and is predicted by science to be tomorrow's biggest risk.

The searing experience of the simultaneous health and economic crises of COVID-19 will change how governments

and companies balance risk and resilience. We are entering a world in which they will be expected to prepare for the unexpected. The financial sector learned these lessons the hard way during the global financial crisis, which is why banks have been strong enough to be part of the solution today. The question now is which companies will operate with minimal liquidity, stretched supply chains

◀ North Sea gas processing platforms being scrapped and recycled at the port of Frederikshavn, Denmark. If we are to keep emissions to a level consistent with global warming below 2°C, half of the world's gas reserves must be considered un-burnable

and contingency plans? Which governments will rely on global markets to address local crises?

Let me reflect on a few common features of crises past and present to suggest some remedies to prevent the climate crisis of the future.

Crises compel us to improve transparency and reporting

What gets measured, gets managed. A common feature of financial crises is a lack of transparency, and in response a push to improve reporting. Following the 1929 Wall Street Crash and subsequent Great Depression came the creation of the Securities and Exchange Commission (SEC). The SEC introduced the first common disclosure standard – GAAP (generally accepted accounting principles) accounting – so that investors could receive “truthful and uniform” financial data about public securities.

Before the more recent global financial crisis, the combination of securitisation and shadow banking was lauded for apparently increasing returns and reducing risks. However, this system had only spread risk, contingently and opaquely, in ways that ended up magnifying it, as it collapsed back onto bank balance sheets. Reforms to securitisation rules and accounting standards now ensure that if a bank has an ongoing relationship with a transaction, the risk stays on its balance sheet.

In the pandemic, measurement has meant testing, tracing and reporting becoming key components to contain the virus. It has also meant being transparent about the economic trade-offs of a strategy to prioritise health now and deal with the economic consequences later.

Improving measurement of climate-related financial risks

As the climate crisis crystallises we will not get a second chance to put in place the right

reporting framework. As James Gorman, CEO of Morgan Stanley, remarked in Congressional testimony about whether climate change was a risk to financial stability: “It’s hard to have a financial system if you don’t have a planet.”

In this spirit, we must act in advance to ensure stakeholders know the climate-related financial risks that companies are facing and how they are managing them.

The Task Force on Climate-related Financial Disclosures (TCFD), a private-sector-led initiative for developing recommendations for climate-related financial reporting, has become the go-to standard for consistent, comparable and decision-useful information on these risks.

Suitable for use by all companies that raise capital, the TCFD recommends:

- establishing consistent and comparable metrics applicable across all sectors, as well as specific metrics for the most carbon-intensive sectors;
- including guidance on disclosure of governance and risk management arrangements, with the expectation that these risks are managed at board level and fully embedded into existing governance frameworks;
- encouraging use of scenario analysis to consider the potential future impact of the risks and opportunities of the transition to a low-carbon economy on strategy and financial planning.

Only four years after the TCFD recommendations were published, support has skyrocketed, and private finance is increasingly focused on the opportunities and risks in the transition. Every major systemic bank, along with the world’s largest insurers, biggest pension funds and top asset managers are calling for the disclosure of climate-related financial risk through their support of the TCFD. In January 2020, the International Business Council of 140 CEOs called for TCFD disclosure. And the UN Principles for Responsible Investment (UNPRI) announced that all 2,275 signatories must make TCFD disclosures or risk ejection from the group.

The private sector is responding, with four fifths of the top 1,100 G20 companies

now disclosing climate-related financial risks in line with some of the TCFD recommendations.

The significant private, voluntary momentum in recent years on reporting is welcome, but now needs public coordination.

Making TCFD disclosure mandatory would increase the quantity and quality of disclosure while levelling the playing field across sectors and maximising the prospect that what gets measured will be managed.

Crises increase the focus on resilience

Every crisis calls into question aspects of how we value, and what our values are. That’s because crises have value – or rather misvaluation – at their heart.

The global financial crisis was caused in part by the underpricing of risks and the surrendering of supervisory judgement to the perceived wisdom of the market. Before the global financial crisis, major banks were woefully undercapitalised, with complex business models that relied on the goodwill of markets and, ultimately, the support of taxpayers.

The COVID-19 crisis partly reflects years of undervaluing health, despite ample and varied warnings. The annual cost of advanced preparations would have been less than the value of one day’s lost economic output this year.

The climate crisis arises because in the tragedy of the commons we’re not fully pricing the externalities of pollution. We’re effectively ignoring the costs of environmental degradation and species loss. Moreover, in what I’ve previously described as the tragedy of the horizon, we’re undervaluing the future, creating a terrible legacy for future generations.

Applying this lesson to the climate crisis

The good news is that it is possible to test resilience to climate risks and plan accordingly. Climate change presents both physical and transition risks.

Physical risks damage property and disrupt trade. Transition risks result from the adjustment towards a lower-carbon economy. Changes in policies, technologies and physical risks will prompt a reassessment of the value of a large range of assets as costs

and opportunities become apparent. The longer that meaningful adjustment is delayed, the more transition risks will rise.

The nature of these risks means that the biggest challenge in climate risk management is in assessing the resilience of firms' strategies to transition risks. This information will help reveal which companies will seize the opportunities in the transition to a net-zero world and which will cease to exist.

For central banks, that means stress-testing major banks and insurers against different climate pathways. These include: the catastrophic business-as-usual scenario; the ideal (but still challenging) transition to net zero by 2050; and the late policy action – or climate 'Minsky moment' which defines a point in time where the sudden decline in market sentiment and major collapse in asset values leads to a crash – scenario that could result in a sudden recognition of the scale of stranded assets and economy-wide disruption.

With 80 per cent of the world's known coal reserves, 30 per cent of oil and 50 per cent of gas reserves considered un-burnable if we want to keep emissions below 2°C, uncovering information about which companies and economies are exposed will be critical. Climate stress-testing of the financial system, for example, will reveal the financial firms – and, by extension, the companies – that are preparing for the transition. It will also expose those that are not.

Companies will need to look through their supply chain and understand where they are vulnerable to physical and transition risks. This year, BP cut its long-run oil forecast by \$20 a barrel and raised its long-run shadow carbon price from \$40 to \$100 a tonne – three times the European benchmark level – as part of a strategic review. These judgements about the pace of the energy transition led to write-downs of £11 billion of assets and highlighted the attractiveness of emerging energy sources. This type of forward planning and early action is exactly what we need for a smooth transition.

Climate stress-testing and scenario analysis is, however, a nascent field. That's why authorities and banks are working

together to develop climate risk management capabilities. The Network for Greening the Financial System (NGFS), a coalition of 70 central banks from countries representing two thirds of the world's emissions, has published open-source scenarios that any company in any sector can use to access their strategic resilience.

The scenarios include: an early and orderly transition; a late and disorderly transition; and a failure of transition where physical risk crystallises. NGFS have also included five alternative scenarios to help test the impact of different assumptions, such as technology development or physical risk changes. These are baseline scenarios that can and will be adapted to different sectors. They will provide a useful insight into resilience against different climate outcomes.

Crises trigger economic and social resets

The global financial crisis showed what happens when capitalism loses its sense of moderation, when the belief in the power of the market enters the realm of faith. In the decades prior to the crisis, such radicalism came to dominate economic ideas and became a pattern of social behaviour. Market fundamentalism – in the form of light-touch regulation, the belief that bubbles cannot be identified and that markets always clear – contributed directly to the financial crisis and the associated erosion of social capital.

Perhaps the most severe blow to public trust was the revelation that there were scores of too-big-to-fail institutions operating at the heart of finance. Bankers made enormous sums in the run-up to the crisis and were often well compensated after it hit. In turn, taxpayers picked up the tab for their failures. That unjust sharing of risk and reward contributed directly to inequality but – more importantly – had a corrosive effect on the broader social fabric of which finance is part and on which it relies. By replacing such implicit privilege with the full discipline of the market, social capital can be rebuilt and economic dynamism increased.

The COVID-19 crisis is also prompting a reassessment of how the system operates. It is accelerating change in the economy and new drivers of value are emerging. The

world is shifting from moving atoms to bits, as e-commerce replaces bricks and mortar and activities become digital by default. Supply chains are also reorienting from global and just-in-time to local and just-in-case. And consumer attitudes are changing as entire populations experience the fears of the unemployed and the anxieties of inadequate or inaccessible healthcare.

Alongside this economic reset, a social reset is underway. In this crisis, we have acted as interdependent communities, not independent individuals. The values of economic dynamism and efficiency have been joined by those of solidarity, fairness, responsibility and compassion. The realities of inequality have been exposed. We are all in the same storm but not all in the same boat. Events have brought greater attention to inequalities: of low-paid key workers, of the incidence of disease, of the burden of unpaid care work, and of education.

There is now a greater value on resilience. As I mentioned, the COVID-19 tragedy proves we cannot wish away systemic risks and that we need to invest upfront to avoid disaster down the road. A valuable conversation about the importance of systemic resilience has emerged. This means taking an approach that acknowledges the range of threats to the global system, and reconsiders the priority that the present economic system has given to optimisation and efficiency over preparedness for such threats.

Using this momentum to build the future, not rebuild the past

The COVID-19 crisis will prompt a massive reallocation of capital. That means we have a once-in-a-lifetime opportunity to build a competitive, sustainable economy for all. The right fiscal and policy frameworks can help deliver dividends for the economy and environment.

Fiscal spending will need to focus forward and on green investment. Major home retrofitting to improve energy efficiency of buildings could create new green jobs and support more working from home. Differentiated subsidies and investment in charging infrastructure for electric vehicles (EVs) could raise demand and help

phase out internal combustion engines. Investment in electric grid infrastructure could help attract private investment and create three times as many jobs as in the fossil fuel industry.

The need for state support creates an opportunity to ensure that firms are part of the sustainable economy. The Canadian Government's relief package makes TCFD disclosure a condition for firms to receive bailout money. The French Government's bailout of Air France requires the airline to halve emissions from domestic flights by 2024.

Alongside direct fiscal spend, the right regulation can frame the terms of the new economy. This includes, for example, banning the sale and rental of houses that do not meet energy efficiency standards. It means targets for carbon intensity for electricity generation, the phasing out of fossil fuel subsidies, changing vehicle and fuel taxation, creating EV-only vehicle lanes and creating ultra-low emission zones in cities to incentivise the move to EVs.

The decision between a low-emissions or high-growth (job-creating) trajectory is not zero sum. There is a growing body of evidence that clean-energy investment generates far more employment than does other energy forms: one recent study by Heidi Garrett-Peltier in *Economic Modelling* suggests that the same amount of investment in renewable energy over fossil fuel industries generates two to three times the number of jobs. Policymakers are developing menus of options for delivering a green and resilient post-pandemic recovery, and we should look to these efforts for a pathway into the new economy.

The finance sector in turn needs the tools and incentives to support the transition. Achieving the Paris Agreement objective of limiting global temperature rise to less than 2°C requires a whole-economy transition. We therefore need to ensure that every professional financial decision takes climate change into account. Alongside the fiscal and regulatory instruments described above, we need to ensure that the right financial frameworks are in place so that capital allocators can align investments with the low-carbon and resilient trajectory. In effect,

this means focusing on the three Rs of reporting, risk and return.

Systemic resilience-planning is becoming a growing imperative for firms and investors. In 2020, concerned citizens and investors have put greater pressure on firms to account for a wider range of environmental, social and governance factors. Financial institutions

take into account how climate change will impact their business, as well as how they contribute to climate change.

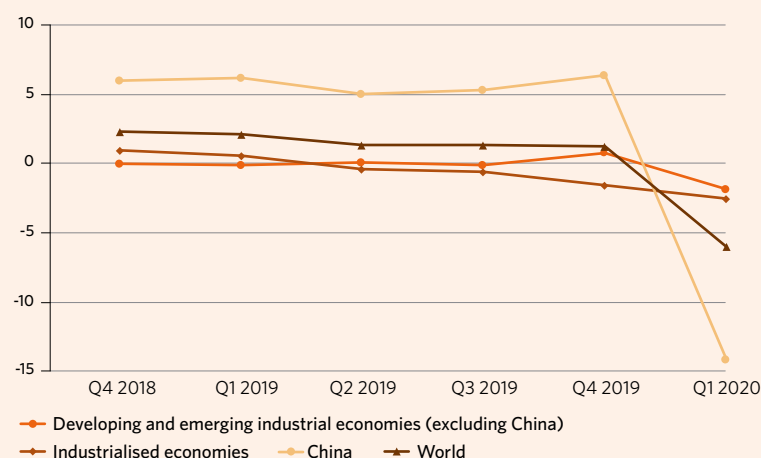
For COP26, the private finance work is aiming to arm the financial sector with the tools to enable the system to do this effectively, and to leverage the finance needed for the global transition. ●

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

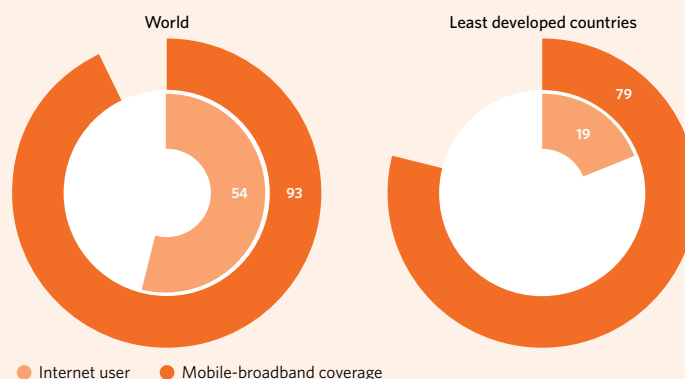


Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

Quarterly growth rate of manufacturing output compared to the same quarter the previous year, fourth quarter of 2018 to the first quarter of 2020 (percentage)



Proportion of population covered by a mobile-broadband signal and using the internet, 2019 estimate (percentage)



Source: Sustainable Development Goals Report 2020