

## B20: Revitalising Global Economic Growth through the Net Zero Transition

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Delhi, India  
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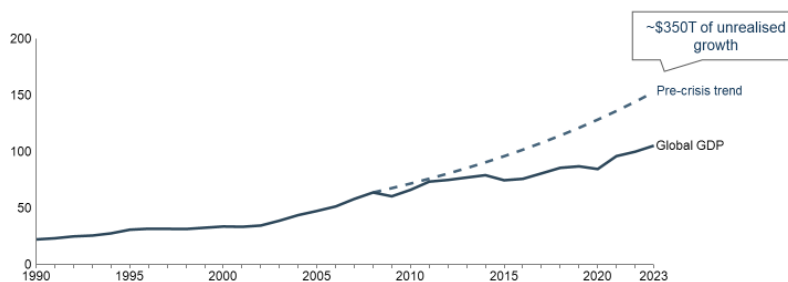
### I. Introduction

We are living in an age of crises— in finance, health, energy, and geopolitics. Each shock has lowered global output and slowed the trend rate of global growth from over 5% at the turn of the millennium and height of globalisation to roughly half that rate today.

The cumulative cost of our biases towards efficiency and the present over resilience and the future is now measured in the hundreds of trillions of dollars.

#### Trend Global Growth has Slowed with Shocks

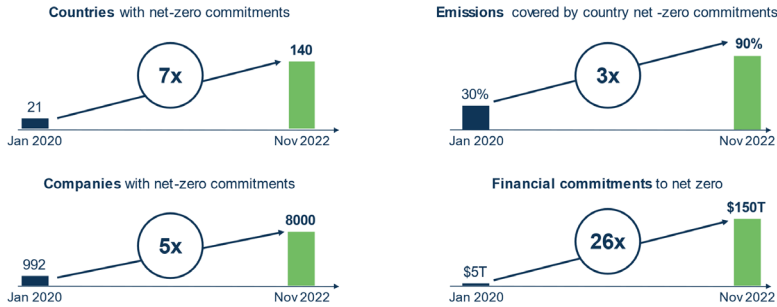
Global GDP (\$T)



The most damaging of these tragedies of the horizon is climate change. Conversely, our greatest opportunity is to build a sustainable economy. Accelerating the net zero transition will affect every sector, it will be capital-intensive after decades of too little investment, and job-heavy during an era of AI-driven creative destruction.

I now have little doubt that the net-zero transition will happen—eventually—it is what people want and what future generations deserve. The commitment—on paper at least—to net zero is overwhelming.

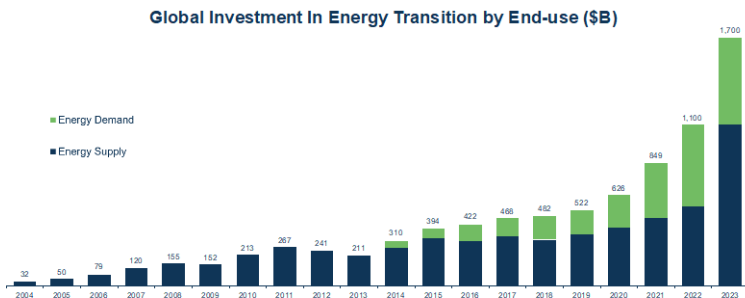
## Net-Zero Transition Accelerating



Moreover, entrepreneurs, innovators and businesses are increasingly focused on the enormous value that can be created by solving this existential problem.

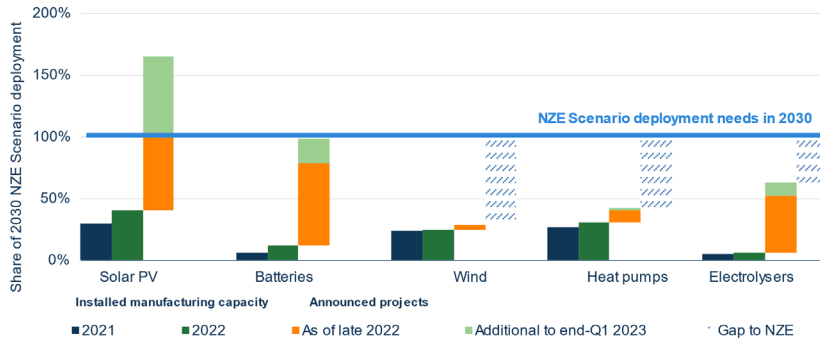
The hardening of the social consensus for addressing climate change has been a catalyst for an explosion in clean energy investment, bringing the energy transition to an inflection point.

## Energy Transition Investment at an Inflection Point



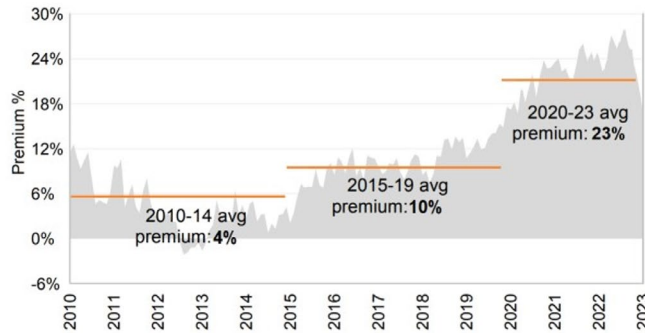
This momentum is driving a surge of investment in manufacturing capacity.

### Investment Surging into Manufacturing Capacity



And as de-carbonisation becomes a key Driver of Competitiveness, the valuation premiums across sectors for outperformers are rising sharply.

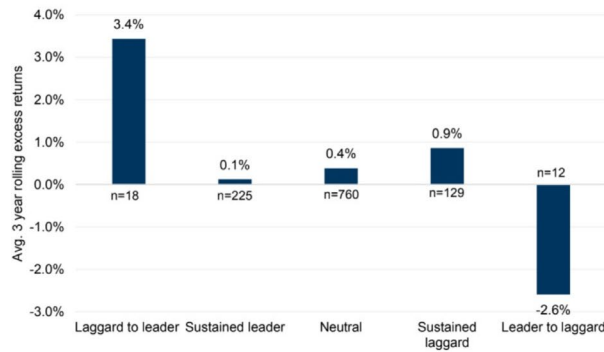
### Low Emitting Companies Trading at Rising Premiums Across Sectors



And those companies that are moving from being climate laggards to leaders are generating excess returns.

## Excess Returns for Companies Becoming Decarbonization Leaders

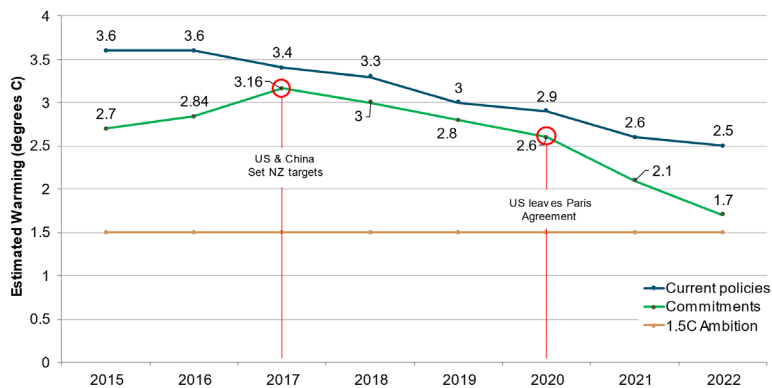
Environmental and Social Laggards-to-Leaders Show the Most Significant Outperformance



However, despite this growing momentum, there are grave risks that the transition may not happen in time.

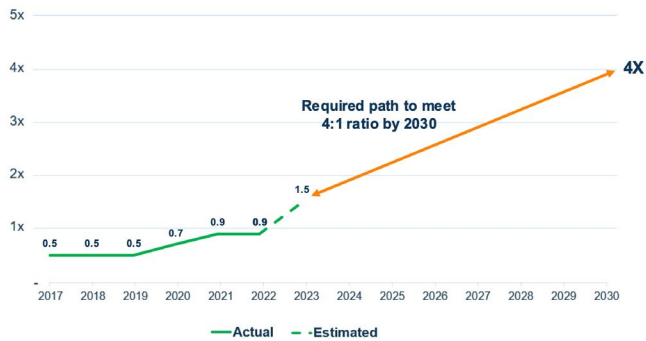
The climate commitments and policies of countries—while much improved—are still insufficiently ambitious:

## Net Zero Ambition - Policy Gap



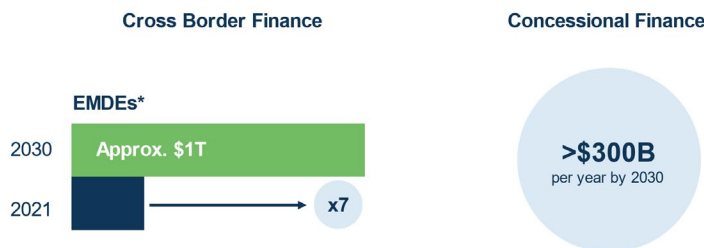
The energy transition—while accelerating—must continue to ramp up sharply...

### Clean-to-Conventional Energy Investment Ratio must Rise Sharply



And there is a huge shortfall in cross border climate finance available to EMDEs. External finance of clean energy in EMDEs (ex China) needs to grow more than seven-fold by the end of this decade to \$1 trillion per year.<sup>1</sup> The needs for adaptation and resilience will be at least as large<sup>2</sup>.

### Huge Shortfall in Energy Transition Finance for Emerging Markets



It is therefore imperative that India’s G20 drives better the climate policies and the revolution in finance needed to harness the full energy of the private sector.

<sup>1</sup> Reflects clean energy investment need only. In reality, the investment need required will be much bigger and include other types of climate finance. Source: [Financing clean energy transitions in emerging and developing economies](#) IEA, 2021. Reflects clean energy investment need that will be required by the end of the decade within EMDEs if the world is to meet net zero by 2050. Estimates exclude China.

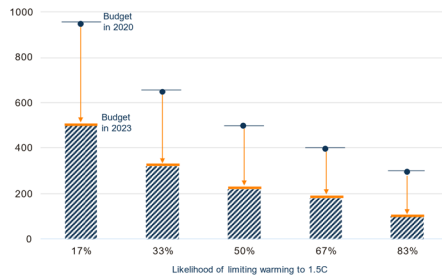
<sup>2</sup> Independent High-Level Expert Group on Climate Finance (IHLEG), [Finance for Climate Action: scaling up investment for climate and development](#), Nov 2022.

## II. The Net Zero Imperative

It is clear we have no time to spare. The latest estimates are that the world's remaining carbon budget to limit the temperature rise to 1.5C will be exhausted by the end of this decade. <sup>3</sup>

### Carbon Budget Being Rapidly Exhausted

Estimated Remaining Carbon Budget (GtCO<sub>2</sub>)



**1.4Gt**  
Annual Emissions Reductions Needed  
for Net-Zero by 2050

**10**  
Years of Lost Economic Growth

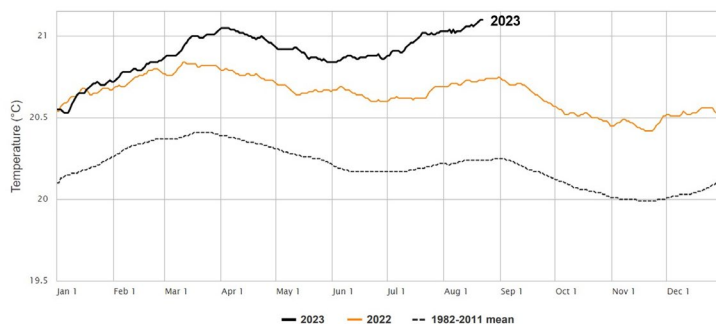
**2/3**  
Likelihood that temperatures  
breach 1.5°C by 2027

As a consequence, the Earth's average temperature is already almost 1.2° Celsius above pre-industrial levels, extreme weather events are multiplying, the impacts on our planet's finely tuned ecosystems are escalating, and the economic costs are mounting.

This year, much of Asia has baked under a record-breaking heatwave, last month was the hottest July the world ever recorded, Europe and North America have been ravaged by record wildfires, while China has been flooded by the heaviest rains in over 140 years.

### Sea Temperatures Rising Sharply

Average daily sea surface temperature

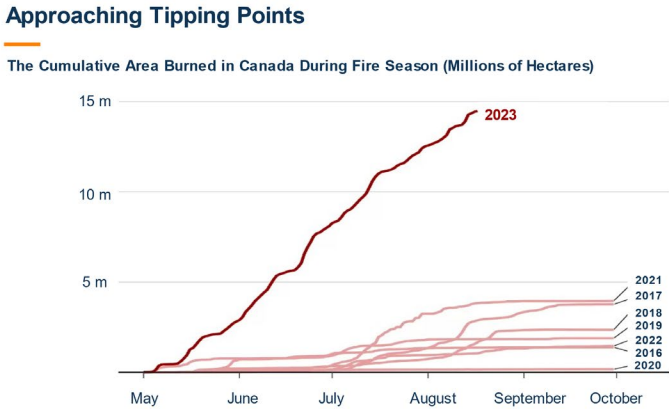


<sup>3</sup> . FT: The Fast Shrinking carbon budget <https://www.ft.com/content/5ef31328-2855-4637-9045-318267cc999c>

Allianz estimates that the current rash of extreme weather events will reduce global growth this year by more than half a percentage point. <sup>4</sup>

That these calamities were predicted offers no comfort but should add greater urgency. After all, even if the world succeeds in limiting temperature increases to 1.5 degrees, extreme weather events will become even more frequent and severe.

And that prospect is becoming more likely as nature approaches its tipping points, and climate action—while accelerating—remains insufficient. For example, Canada’s wildfires—exacerbated by the warming climate—have pumped the equivalent of 3x Canada’s annual emissions into the atmosphere.



### III. How Decarbonization can Revitalise Global Growth

The stakes are high. Conservative estimates suggest that 2.5C warming could cause the equivalent of a decade of no economic growth.<sup>5</sup> The more vulnerable regions, including Africa, the Middle East and ASEAN would be more severely affected.<sup>6</sup> In general, estimates of the impact of climate change project that what is lost will likely stay lost, making climate change the curse that keeps on taking.

As significant as such GDP estimates are, they don’t include major economic channels such as financial instability, disruptions to supply chains, and climate-induced mass migration. Nor do

<sup>4</sup> Allianz Research. *Global Boiling*. 4 August 2023.  
<sup>5</sup> [NGFS](#), Scenarios for central banks and supervisors (2022), pg17  
<sup>6</sup> [Swiss Re Institute](#) The economics of climate change: no action not an option April 2021

they take into account that half of global GDP is at least moderately dependent on natural assets.<sup>7</sup> And, by their very design, they ignore that so much of what climate change destroys – species, habitats, ways of life, natural beauty – is not formally valued.

To paraphrase Einstein, too much of what counts is not counted.

Obviously, at a minimum, there is enormous value in preventing this destruction. But the prize of the net zero transition is even greater because, if done properly, it can help revitalise global growth through several channels.

#### Channels to Revitalise Global Economic Growth



**First, the transition represents a multi-decade investment boom after a decades-long drought.** The IEA calculates that to be on track for 1.5 degrees warming, global investment in energy infrastructure alone must rise from 2.5 percent of world GDP in 2016 to 4.5 percent by 2030<sup>8</sup> This is achievable; in fact, the world has invested on this scale before as recently as the turn of the millennium.<sup>9,10</sup>

The return on this investment will be a secure, sustainable energy system, competitive economies, more jobs, and higher growth. With respect to the last, the IEA forecasts material

<sup>7</sup> [WWF](#) Living Planet Report 2022 – Building a nature positive society

<sup>8</sup> IEA (2021) Net Zero by 2050 <https://www.iea.org/reports/net-zero-by-2050>

<sup>9</sup> Stern: “There has been a persistent gap in infrastructure spending in both developed and developing economies that has been estimated at 2 - 3% of global GDP”

<sup>10</sup> Stern, Time for Action (2021) fig 5



GDP multipliers from accelerating transition investment, with global output that is more than 4% higher by the end of this decade.

Second, **addressing climate change can increase productivity across value chains.** One of the benefits of tracking Scope 3 emissions is that it aligns the interests of stakeholders to find the most cost-effective emissions reductions. This is beginning to play out as shocks encourage companies to de-risk and re-locate their supply chains, and clustering activities within geographic locations, and in some cases, across supply chains.

Third, **reducing demand for carbon-intensive products and processes will increase productivity.** Companies are increasingly focused on continuous improvements in energy intensity, rather than solely relying on lower carbon energy supply.

Finally, the accelerating transition is **identifying choke points (such as for critical metals and minerals) and promoting innovation for technologies,** such as SMRs and Hydrogen, that the world will need in the later stages of the transition. Economic history suggests that, if something costs hundreds of trillions of dollars, entrepreneurs will find ways to make it cheaper, faster, and better. This dynamic has already occurred in wind and solar and it is beginning to take hold in battery storage and hydrogen. The only question is whether it will move fast enough.

#### **IV. What then must be Done?**

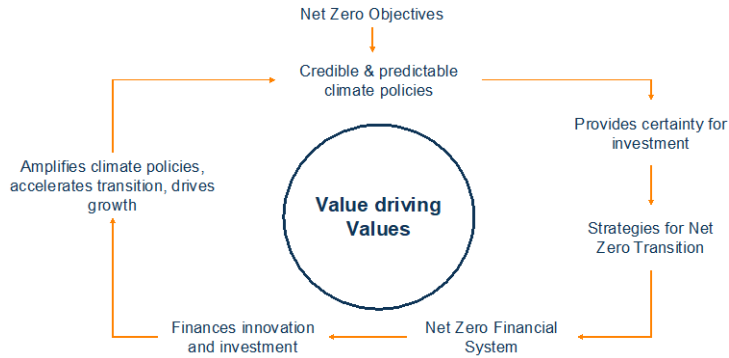
With their budgets strained by the immediate imperatives of defence, health care, disaster relief, and support for households hobbled by the energy crisis, governments have limited fiscal capacity. Only the private finance can deliver the trillions of dollars of additional investment needed every year for decades.

But to get this capital and revitalise growth, markets must be able to operate to their full potential. To promote this, the G20 should follow five principles.

First and foremost, governments must pursue **increasingly ambitious climate policies.** As Secretary Yellen and I have shown, the more credible and predictable government climate

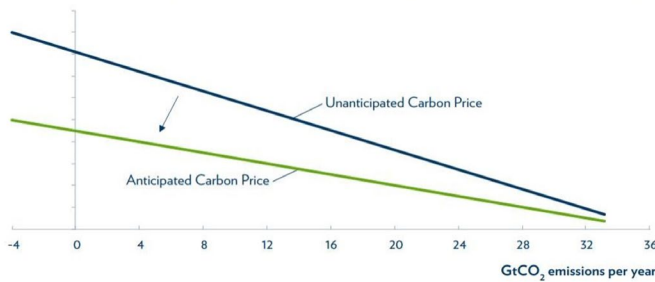
policies are, the more investors will finance in anticipation, creating a virtuous circle of large-scale investment, faster decarbonisation, more jobs, and faster growth.<sup>11</sup>

### Credible Policies Amplify and Accelerate Investment



And the more credible climate policies are, the more they will be anticipated, bringing forward investment, and smoothing the transition.

### Credibility means 'Less is More'



For example, the *Inflation Reduction Act* is putting the US close to on track for achieving its target 50% reduction in greenhouse gas emissions by 2030. The IRA is:

<sup>11</sup> G30 Report: Mainstreaming the transition to a net zero economy (2020). [https://group30.org/images/uploads/publications/G30\\_Mainstreaming\\_the\\_Transition\\_to\\_a\\_Net-Zero\\_Economy.pdf](https://group30.org/images/uploads/publications/G30_Mainstreaming_the_Transition_to_a_Net-Zero_Economy.pdf)

- **Simple** (with its core incentives largely straightforward (and tradable) tax credits);
- **Predictable** (the rules are clear, and the support is open-ended over the next decade)
- **Credible** (US government can afford it, and ‘facts on the ground’ are making it increasingly robust), and
- **Transformative** by reducing the decarbonisation cost curve by an average of 40% across technologies.

### Cost Reduction by Technology

US IRA Tax Credits and Other Incentives as a % of the Average Total Cost of Each Clean Technology



The IRA is galvanising investment, with over \$200 billion committed to U.S. manufacturing projects in its first year.<sup>12</sup> Estimates suggest the IRA could catalyse over \$3 trillion in clean energy investments over the next decade—a scale that will create major positive global spill overs across countries.

Others are responding. Canada is largely matching US incentives, and the EU is using a combination of sticks, carrots, and promises of better delivery. The world’s biggest emitter, China, is on a path to overachieving its CO2 intensity target for 2030. And India’s 2030 intensity target and 50% renewables target increasingly look within reach.<sup>13</sup>

<sup>12</sup> Lazard LCOE+ (April 2023): <https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/>

<sup>13</sup> India’s policies put it on track to achieve 100% of the 45% emissions intensity reduction by 2030 from 2005 levels and 50% energy from renewable sources by 2030. Currently the government is updating policies in order to meet the 500GW renewables capacity target.

Second, to maximise its potential for strong and inclusive growth, **the net zero transition must involve the whole economy**. In particular, capital shouldn't be constrained by regulatory fiat or simplistic bans on financing whole industries. This only promotes paper decarbonisation and starves action plans to reduce emissions. Instead, capital must be incentivised to go where the emissions are and help companies in high emitting sectors get them down.

Third, **we must ramp up solutions before shutting down existing activities**. This will minimise disruptions, while giving workers and communities time to prepare, retrain and relaunch. Equally, it is critical to set clear expectations for the transition in key sectors as Canada, the EU, and UK have done with their moratoria on new ICE vehicles from 2035 and India has with its 500GW by 2030 renewable objective.

Fourth, **we must recognise the time value of carbon**. Net emissions reductions today are especially valuable because they extend the horizon for clean tech innovation and create time for the enormous physical investments in proven technologies. Climate physics plays no favourites, but it does watch the clock.

To maximise our limited carbon budget, the carbon efficiency of oil and gas production must increase significantly. The COP28 President-designate H.E. Dr. Sultan al-Jaber's objective to double the efficiency of production by 2030 would result in a double-digit decline in global emissions given the emissions intensity of methane relative to carbon dioxide.<sup>14 15</sup>

In a similar vein, now is the time to grasp the nettle to create global Voluntary Carbon Markets (VCMs). For too long, the COP process has been engaged in esoteric debates while, literally, the world burns. VCMs can provide hundreds of billions of dollars of annual cross-border capital flows from the global north to south. That's because the most companies making net-zero commitments are in advanced economies, and the most efficient emission reduction projects will be in emerging and developing economies. They can play important roles in retiring high-emitting assets and preventing new coal generation. And Voluntary carbon markets can create significant financing for biodiversity and indigenous peoples.

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<sup>14</sup> <https://www.reuters.com/business/sustainable-business/uaes-jaber-urges-methane-emissions-phase-out-by-2030-2023-05-10/>

<sup>15</sup> <https://www.reuters.com/business/sustainable-business/uaes-jaber-urges-methane-emissions-phase-out-by-2030-2023-05-10/>

Achieving scale requires the highest levels of both supply integrity and demand integrity. There has been immense progress in developing these frameworks through the Integrity Council for the Voluntary Carbon Market (IC- VCM) and Voluntary Carbon Markets Integrity Initiative (VCMI). These approaches now need to be implemented and integrated with science-based targets that recognise the time value of carbon. India is well placed to lead in making this opportunity a reality, ultimately delivering hundreds of billions of dollars of financing per year to emerging and developing economies.

Fifth, the net zero imperative **needs an open trading and financial system** to build efficient global supply chains for clean energy and sustainable industrial processes. But there are strong headwinds: the EU's Carbon Border Adjustment Mechanism provides both stick and carrot to encourage decarbonisation of high emission imports, while the U.S. Inflation Reduction Act and other green industrial policy measures encourage the onshoring of activity. The more carbon is viewed as a vector of national competitiveness, the greater these pressures will be. While some degree of fragmentation is inevitable, the G20 cannot allow de-risking cannot be allowed to promote the ultimate economic risk.

With these core principles in mind, I will conclude with the priorities for finance to revitalise global growth. These changes are fundamental not incremental.

## **V. The Net Zero Revolution Requires a Financial Revolution**

The Industrial Revolution was made possible by a financial revolution that transformed the nature of private financial intermediation, the focus of central banking, and scope of the international monetary system. The Net Zero Revolution requires changes at least as bold.

This revolution in finance during the Industrial Revolution brought greater maturity transformation and increased financial leverage to the core of the system.

## Energy Revolutions Require Financial Revolutions

### Industrial Revolution

#### **Fractional Reserve Banking**

- Maturity transformation
- Financial leverage

#### **Central Banks**

- Lender of last resort
- Supervision of banks

#### **International Monetary & Financial System**

- Gold standard
- Free flow of capital

### Sustainable Revolution

#### **Financial System**

- Aligning with Net Zero transition
- 'Carbon' leverage

#### **Central Banks / Supervisors**

- Climate disclosure
- Supervision of transition risks

#### **International Monetary & Financial System**

- Blended finance
- Transition-aligned private flows
- Carbon markets

To finance the Sustainable Revolution, we must bring alignment with net zero pathways and reduced carbon leverage to the core of financial decision making.

**The foundation of transition finance** is to measure all GhGs produced, avoided, and reduced. That's one of many reasons why the G20 should endorse the ISSB climate disclosure standards and ensure their speedy implementation. Amongst the most important aspects are scope 3 disclosure: this will promote alignment across value chains and with that, huge investments in decarbonisation in emerging markets.

Second, in order to have an orderly, inclusive whole economy transition, the world needs a **common definition of transition finance**. That's why GFANZ has developed guidance for financial institutions and companies centring on four strategies. The first two are obvious: financing those climate solutions and companies already aligned with science-based net-zero pathways. But the strategies go further to 'go where the emissions are' and back companies with credible transition plans to get them down, and if that is not possible, to fund the managed phaseout of stranded assets, particularly in EMDEs.

## GFANZ Transition Financing Strategies to Catalyze Emissions Reductions



The G20 should therefore adopt a **common definitions of transition finance and planning**.

To improve accountability, this approach will be underpinned by the new Net Zero Data Public Utility (NZDPU). This will provide consistent, accurate, freely available climate transition-related information to allow everyone to track progress on companies' emissions.

This data will enable financial institutions to develop and implement comprehensive transition plans, it will show who is leading and lagging, and reinforce emissions reductions across value chains.

### VI. Mobilising Finance to Emerging Market & Developing Economies

Finally, the Indian G20 Presidency has rightly emphasised that the need to finance emissions reductions everywhere.

The world has been caught in a *Paradox of Prudence* in which International Financial institutions, such as the World Bank, are being micro-prudentially sound by minimising project-specific risks but macro-prudentially foolish by fostering the existential risk of climate change.

The only way to solve this Tragedy of the Horizon is to bring forward action using guarantees, risk insurance, blended finance structures.

This is the work of the new World Bank Investment Lab – a group of 15 CEOs and Chairs convened by the new President Ajay Banga and including our B20 Chair Natarajan Chandrasekaran. For example, guarantees are very effective at mobilizing private investment

and in practice they have tended to be relatively low risk, so how can we to scale their use quickly? What additional risk categories could be covered? To what extent does arcane accounting at the World Bank hold back their application?

If existing governance arrangements don't permit MDBs to bear these risks, either they must be changed, or a new public loss-absorbing vehicle must be created to backstop risks and leverage scarce public with immense private capital.

As highlighted yesterday by Uday Kotak and Chandra, the B20 initiative to dedicate 20 basis points of corporate profits to a new **Global Acceleration Fund** in support of SDGs including climate could provide the power of catalytic capital, particularly as it can be leveraged as first loss.

India's G20 will be critical in determining whether the shareholders who control the international financial institutions take their responsibilities.

## **Conclusion**

I have spent many years around the G20 table. These meetings generally take place during immediate crises (such as the GFC or covid) and against, an often unseen, backdrop of deep secular forces (such as the 4IR and climate change). G20 Leaders must manage both the immediate while taking the initiatives for shared future prosperity. Their uneven record has meant that India's Presidency is now taking place as powerful forces are fragmenting the global economy just when we most need to come together to meet humanity's greatest challenges.

When G20 summits are successful—such as in London in 2009— it because of the combination of shared purpose and specific, tangible initiatives that change the trajectory of the global economy.

India has the right purpose: One Earth, One Family, One Future. To achieve it, we need One Market for the net zero transition. To that end, the B20 is tabling specific initiatives to build the financial markets the world needs now:



## Building the Markets for Net Zero

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- ✓ **Standards** to track the problem (ISSB) and data to create transparency (NZDPU)
- ✓ **A common framework for transition finance** to bring capital to where the emissions are and get them down
- ✓ **A voluntary carbon market** that smooths adjustment and finance the Emerging world
- ✓ **Reforms to multilateral development banks** so they take risks worthy of their roles and catalyse enormous private capital flows of finance to all corners of the globe

- **Standards** to track the problem (ISSB) and hold companies to account for the solutions (NZDPU);
- **A common framework for transition finance** to bring capital to where the emissions are and get them down;
- **A Voluntary carbon market** that smooths adjustment and helps finance the transition in the Emerging world; and
- **Reforms to multi-lateral development banks** to catalyse enormous private capital flows to all corners of the globe.

**One market for transition finance** so that all can share in the stronger growth the world needs today while building the sustainable economy that our children and grandchildren deserve tomorrow.