

A top-down view of a cargo ship with a red hull and a white superstructure, carrying a large load of colorful containers. The ship is navigating through a dense field of white, jagged ice floes. A narrow, dark blue channel of open water is visible behind the ship, showing its path through the ice.

Climate Quantified™:
Clarity for finance

WTW's Climate Quantified™ is used by a number of the world's leading companies, organisations and governments to make informed decisions about climate, environmental, and other emerging risks that capture value and build resilience.

Managing climate-related financial risks will require new data, methods and unprecedented cooperation. It will also require widespread structural changes across the global economy.

The Climate and Resilience Hub (CRH) is WTW's centre of excellence on climate risk and resilience. It is a large multidisciplinary team with expertise in climate modelling, finance, regulation, climate legal liabilities, nature-based solutions, disaster risk finance and change management consulting. We provide confidence and clarity by combining advanced data and analytics with advisory services.

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Climate at WTW

The transition towards a resilient and low carbon economy is underway: we all face a long and urgent journey of risk management.

Policymakers and regulators will navigate the short and longer term systemic risks to markets and institutions from climate change. Demands from supervisors, investors and wider stakeholders are growing. Financial institutions must adapt to new commercial realities of measuring, managing and reporting climate risks. Doing so will support an orderly transition to net zero emissions. It will also sustain businesses, brands and reputations and also unlock growth.

WTW helps its clients identify climate risks and turn them into opportunities. We have decades of experience in doing so. We have been at the forefront of climate risk measurement since the emergence of catastrophe modelling in the early 1990s and began our partnership

with climate modellers from academia in 2006. Our Climate Quantified™ data and analytical tools build on this heritage and support our cutting-edge tools to measure physical, transition and liability risks.

Competitive responses to climate change must extend beyond risk measurement. They require far-reaching reconsideration of risk management, capital allocation and the way organisations work. We help financial institutions leverage these opportunities, supported by the 45,000 colleagues at WTW in our mainstream risk, capital and people services. We help our clients navigate, manage and thrive in the climate decade ahead.



Rowan Douglas CBE
Global Head, Climate and Resilience Hub
WTW

What do we do?

At our heart lies **Climate Quantified™** - the engine that powers our analytics. It consists of a suite of the latest data, models and expertise for measuring climate-related risks.

These risks include:



Physical risks that arise from extreme weather-related events as well as the chronic effects of climate change;



Transition risks relating to changes in economic activity due to the transition to net zero emissions;



Liability risk arising from losses caused by the impacts of climate change or a failure to manage climate-related risks adequately.

We turn these risks into opportunities. We do so by helping our clients:



Improve their governance by designing and implementing effective climate strategies, ensuring board engagement and alignment, implementing appropriate executive compensation and delivering staff training.



Manage asset portfolios using our advanced analytics to form investment and decarbonisation strategies.



Transfer risk via disaster risk finance and other innovative financial instruments.



Build resilience through targeted investment in adaptation, nature-based solutions and technology.

How do we do it?



Through our transparent 'white box' philosophy

We lift the hood on our analytical engine. Our methods, data, metrics and models are **transparent** and come with **complete documentation**. This means that our clients can understand, trust and defend them in front of their boards, investors and wider stakeholders.



Meeting clients' needs at different stages on their climate journey

We can provide clients with everything from a single data point for regulatory disclosures to wide-ranging, detailed analysis of global climate risks. We supply everything from **off-the-shelf tools and data**, to **bespoke consultancy and tailored analytics**.

Whatever your requirements, our experts translate data and model outputs into information that enable clients to measure and manage risk effectively – whether it be financial metrics, heatmaps, charts, narratives or raw data.



Using leading academic research

Our thinking is informed by the latest science and academic research. We **founded the award-winning WTW Research Network**, which supports climate-related research across leading universities. This allows us to leverage robust climate science and gives us access to experts who review our models.



Through our global reach, leadership and influence

We helped shape the **Taskforce for Climate-Related Financial Disclosures (TCFD)**, which is improving and increasing the reporting of climate-related financial information. We founded the **Insurance Development Forum** to close the insurance protection gap in developing countries, and we convened the **Coalition for Climate Resilient Investment**, which is improving physical climate risk pricing and climate resilience in investor decision-making.

Working across the private and official sectors, our people lead work and chair fora of the UK Treasury, Bank of England, Financial Conduct Authority and International Standards Organisation.

We work in 140 countries. We have relationships with 85% of the US Fortune 1000 and 90% of the Global Fortune 1000.

Our analytical foundation

Understanding your needs

Our work is grounded in a deep understanding of what our clients need to make decisions in the face of climate risks and opportunities. Identifying the best course of action

requires scientifically rigorous and appropriate data and models. The clarity and robustness of our analysis lets our clients be confident in their decisions.

Helping clients answer tough questions with confidence and clarity:



I am confronted by a plethora of data on physical risk. **Which should I use?**



How much should I **invest** to make my assets **more resilient** in the face of climate change?



How can I **align my portfolio** with net zero emissions targets, and profit from **opportunities** under climate transition?



How can I **decarbonise my portfolio**, but also have a **positive impact** on the real economy by providing **sustainable finance**?



Can I **trust the climate models** that I'm using? Are they right for the sorts of decision-making I need to undertake?



How can I limit my exposure to **climate liability risks**?



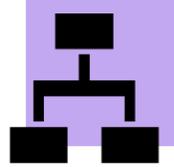
How will my **assets perform** under climate transition over different **time horizons**?



How can I **hedge my residual financial exposures** to transition risks?



Some of my financial counterparties have multiple business lines that **vary considerably** in their exposure to transition risk (e.g. dirty and clean energy businesses). **How do I measure and manage the associated risk?**



How can I access the **right combination of skills sets** to understand the enormous structural changes likely to result in economies and societies as a result of climate change?

Climate Quantified™: Our advanced analytical engine

Our work is powered by **Climate Quantified™**, our advanced analytical engine for measuring and managing climate-related financial risks.

Climate Quantified™ enables us to translate physical and transition risks into **decision-relevant information** for people, businesses and governments. Combined with data on our clients' businesses and assets, it allows us to **model global physical and transition risks** under various future climate scenarios.

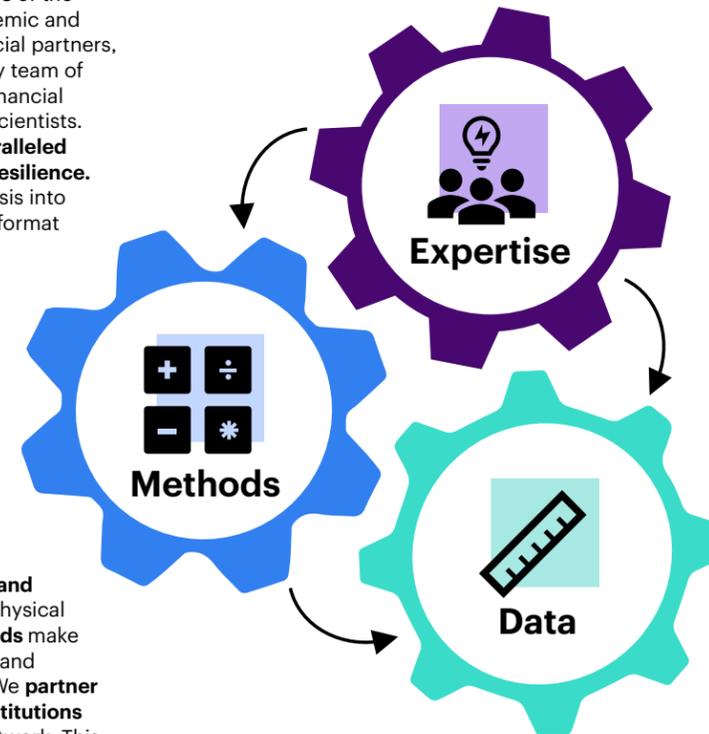
Climate Quantified™ is informed by the **latest climate science and research**, uses multiple data sources, and is designed to integrate into clients' existing risk management systems. Together this means that clients can rely on it for their decision-making.

Expertise

We bring together the **expertise** of the **WTW Research Network** academic and **Climate Quantified™** commercial partners, alongside our multi-disciplinary team of climate and social scientists, financial analysts, engineers, and data scientists. This allows us to provide **unparalleled insight into climate risks and resilience**. Our experts translate our analysis into information in the most useful format for clients.

Methods

Our analytics provide **breadth and precision** of measurement of physical and transition risks. Our **methods** make practical, pragmatic, informed and validated use of climate data. We **partner** with a number of **academic institutions** through the WTW Research Network. This helps us review our models and methods to ensure they are **robust and well-suited** to clients' needs.



Data

We choose from multiple sources of **data**, selecting those **best suited** to our clients' needs. Our data catalogue includes those from **third-party suppliers**, as well as our **in-house data** collected through our **insurance broking activities**.



Physical risk

Financial firms are increasingly affected by physical climate risks: **acute** physical risks from the increasing frequency and severity of extreme weather events, and **chronic** physical risks from the incremental effects of climate change.

But firms are often confronted with a bewildering array of data and models that are **opaque** in their construction, and **differ substantially** in their scope, quality and suitability for different sorts of decision-making.

Firms also often **lack important data** on the susceptibility of their assets to physical risks – such as their precise location. This prevents them from undertaking robust risk assessments – for example, on the location of their assets or their vulnerability to physical risks.

Our solution

We combine various models and data on over **14 hazards at high resolution** across the earth's surface under **several future climate scenarios**.

Together this produces data on physical risks that are:



Granular – We select the most appropriate ensemble of models to generate global physical hazard data at 9km x 9km resolution over the earth's surface



Consistent – Our data on different physical hazards are global in scope, but also based on consistent underlying climate models



Robust – Models and data are reviewed by experts to ensure their reliability and comparability.

//

Data on entities' exposures to the drivers of physical risks lack consistency and granularity... Financial authorities [...] should work to improve the availability and consistency of data on the underlying drivers of climate-related risks.¹

//

This gives our clients access to **comprehensive physical hazard data** with which to assess their exposure to physical risks. Where information about the nature and location of assets is not available to clients, we use expertise from our insurance broking function, together with proprietary data, to **estimate vulnerability** to physical risks based on their sector and approximate geography (e.g. country, region or elevation).

Crucially, our assessments of the vulnerability of assets to physical risks includes not just the **direct effects** of physical hazards (e.g. the destruction wrought by flooding on buildings and businesses) but also their **indirect effects**, for example, to their wider supply chains or critical infrastructure.

In keeping with our **transparent 'white box' philosophy**, clients have access to complete documentation that details the models and data we use. This allows our clients to **present and defend** our analysis to their boards, investors and other stakeholders with confidence. They can **easily integrate** them into their existing risk management systems, and make **robust decisions to enhance climate resilience**.

In action:

- **I'm looking to increase the resilience of my assets to physical risks. How much should I invest in doing so, and over what horizon?**

An increasing number of our clients seek to manage physical climate risk and opportunities by **investing** in adaptation measures that **increase their resilience**. We have considerable experience advising clients on **how, where and over what horizon** to make such investments. We have worked with several large banks, property development groups and multilateral development institutions to identify resilient investment opportunities. WTW also founded the Coalition for Climate Resilient Investment (CCRI): a private sector led COP26 flagship initiative that seeks to integrate physical climate risks and resilience into investment decision-making.

¹Financial Stability Board

- **I want to assess the susceptibility of my business to physical risks, but I'm confronted by a confusing array of different data and models.**

We select the **best data** to match clients' needs. We take a source agnostic approach using a **range of models and datasets** – both those that are proprietary to WTW and those from third-party partners.

- **I want to assess the susceptibility of my portfolio of assets to physical risks, but I lack granular data on the location or nature of my (or my counterparties') assets.**

We work with clients to **obtain reliable data** on the susceptibility of their assets to physical hazards. Where clients do not have these data themselves, we draw on our proprietary **in-house data** – combined with engineering expertise from our insurance broking business – to estimate the vulnerability of assets to physical hazards according to their sector and geography.

How Climate Quantified™ helped a major bank measure and manage physical risks to its corporate lending portfolio

We helped a large bank assess the physical climate risk to its **corporate lending portfolio**. We conducted scenario analysis that fed into its **regulatory reporting** and as part of its **TCFD-aligned disclosure**.

We used our in-house data to produce **globally-consistent** estimates of acute and chronic physical hazards at **high resolution** across the earth's surface. We also worked with the client to determine the vulnerability and exposure of their assets to these physical hazards. Together, this allowed us to build a **highly granular and robust estimate** of the client's exposure to physical climate risks.

Estimates of physical risks highlighted the sectors and geographies within our client's portfolio that were **most vulnerable** to the physical effects of climate change. The analysis also informed our client's strategy for **reducing the vulnerability of assets** most affected by physical risks and for making **targeted investments** to increase the resilience of assets.

Transition risk

The global transition to net zero emissions will trigger significant changes in economic activity and asset values. These are likely to affect the **profitability, solvency, and creditworthiness** of financial firms and their counterparties.

But individual firms' **emissions are a poor guide** to their transition risk. Emissions are backwards looking and not reported consistently across firms' and their supply chains. They also fail to capture how the broader effects of transition on consumer behaviour, technology and regulation are likely to affect firms' profitability.

Together, this means that some firms with low emissions are at **high risk from transition** – for example, those providing services to clients in the oil and gas industry. Conversely, some firms with high emissions will **benefit** from the transition – for example, those in extractive industries producing commodities (e.g. copper and lithium) that will play a critical role in the transition to net zero.

Our solution

We look beyond emissions and estimate the **impact of changes in consumer sentiment, regulation and technology** on firms' profitability and value. This forms the basis of our proprietary measure of transition risk: **Climate Transition Value-at-Risk (CTVaR)**.

CTVaR is the difference between current market expectations of firms' future cash flows and those under different climate transition scenarios. It captures the **changes in firms' profitability** that are likely to result from the global shift to net zero emissions.

In contrast to metrics based on backward-looking emissions data, CTVaR is **forward-looking** and considers a **range of different changes** necessary across the economy to enable the transition to net zero emissions. It is also calculated at the level of firms' **individual business lines and assets**. This gives rise to a **holistic and highly granular** view of transition risk.



Beyond Carbon

CTVaR looks beyond emissions as a proxy for climate transition risk. Instead, it considers how changes in consumer sentiment, regulation and technology will affect asset values.



Forward, not backward

Forward-looking estimates of firms' transition risk are continually updated (unlike historical emissions data).



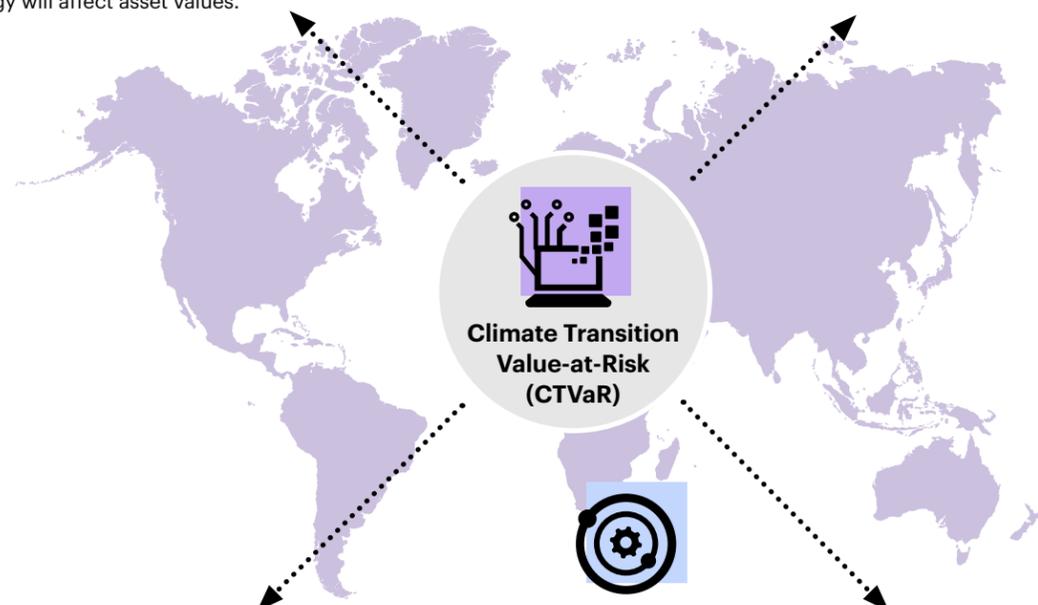
Deeper data

CTVaR uses multiple sources of data to build a highly granular view of climate transition risks at the level of firms' individual business lines.



Whole economy

CTVaR captures the wide-range of changes – across different goods, services and commodities sectors – that will be necessary to reduce emissions in line with the goals of the Paris Agreement.



In action:

• How can CTVaR enhance a portfolio that is committed to decarbonisation targets?

CTVaR allows investors to align their portfolios to decarbonisation targets, but in a way that **enables meaningful transition to net zero in the real economy**. It identifies firms that, although being high emitting, are likely to profit from transition (e.g. those that extract transition-critical minerals such as copper and lithium). It can therefore be used to **direct capital towards investments that both benefit and profit from the transition net zero emissions** in the wider economy.

• I require comparable data on transition risks for an extensive portfolio of assets.

We have **easily accessible and comparable data** on transition risks to over **7,000** listed companies worldwide. This enables investors to **manage downside risks** in their portfolio and allow them to form investment strategies that facilitate an **economically efficient path** to net zero emissions [see the next section on **Climate Transition Indices** for more information].

• I need to align my portfolio to net zero targets, but transition risks are unlikely to crystallise before my assets mature.

Our transition analytics allow clients to estimate the horizon over which transition risks will materialise under different climate scenarios. This insight allows investors to make informed decisions about where to invest, over what time horizon, and to refine their risk management strategies.

• I am an investor in a firm that is exposed to firms with multiple lines of business (e.g. clean and dirty energy) which vary considerably in their transition risk. Can CTVaR help me distinguish between these?

CTVaR gives a more **granular view** of risk than other metrics based on emissions. It splits out exposure to transition risk at the level of firms' **individual business lines**. In doing so, it can identify risk and opportunities across large multi-national firms and how they differ by sector and geography.

How Climate Quantified™ improved a client's transition risk analysis, and used matching climate scenarios to combine transition and physical risk assessments

We assessed a client's exposure to climate transition risks across their assets, operations and supply chain. This allowed our client to understand the risks to their businesses as part of the transition to net zero.

We also combined our analysis of transition risk with that of physical risks (see page 8). This allowed our client to make a holistic assessment of climate risks across their business. This was then used to inform their strategic planning, risk management, and disclosures. It also provided our client with the clarity and confidence to stand-by its commitments to managing climate risk with its board and wider stakeholders.



Climate Transition Indices and Strategy

The **STOXX Willis Towers Watson Climate Transition Indices (CTI)** with a sophisticated way to benefit from opportunities and manages risks associated with climate transition. They aim to align broad-based equity indices with the global economic transition to net zero emissions. The indices leverage WTW's proprietary methodology for measuring **Climate Transition Value-at-Risk (CTVaR)** - see previous section) - which assess the anticipated impact of climate transition on company valuations through forward-looking, bottom-up analysis of individual companies.

CTVaR determines the weight of each stock in the index. In general, allocation is increased to companies likely to gain from – and decreased to companies at risk from – climate transition.

The WTW climate transition indices provide investors with a sophisticated way to benefit from opportunities and manages risks associated climate transition. They also enable investment that enhances climate transition in the real economy, rather than simply reducing portfolio emissions.

The CTI is:



Granular

STOXX WTW Climate Transition Indices (CTI)

employ a highly granular analytical approach that goes beyond simple carbon pricing of carbon exposure as a proxy for climate value at risk.



Bottom-up

The CTI incorporate Climate Transition Value at Risk (CTVaR), which is calculated by a dedicated team of climate transition experts. The team combines commodity modelling with asset-by-asset company models to understand how transition risk (e.g. changes in demand for fossil fuels) impacts company fundamentals and in turn company valuations.



Forward-looking

Rather than using backward-looking carbon emissions data, the indices use forward-looking company transition risk that is refreshed regularly.



Holistic

The indices consider the wide range of changes in demand for different goods, services, technologies, and commodities, in order to drive down emissions consistent with the goals of the Paris agreement.



Investing for net zero

Index construction tilts towards companies expected to make key contributions to the transition to a low-carbon economy. Similarly, the indices tilt away from companies expected to be negatively impacted by the transition.



Smart beta solution

Investors can use the indices as replacements for current broad market-cap weighted allocations or simple ESG metric-based portfolios.

Benefits to investors

For most investors, adding the CTI strategy to an investment could bring material risk reduction as well as accelerating progress towards climate goals. In addition, investors may benefit from potential enhanced returns.

In action:

- **How can CTI be incorporated into different investment strategies?**

Investors currently using market cap-weighted indices to access public equity markets may consider a CTI-based strategy to better position portfolios for the climate transition. As well as increasing weights to companies likely to perform well in the climate transition, this strategy reduces investors' exposure to tail risk climate events which could have significant impacts on individual companies' stock prices.

Some investors focused on sustainability factors have already moved away from market cap-weighted indices in favour of smart beta strategies which often consider various ESG and sustainability metrics. We believe adding this strategy to a diversified smart beta portfolio will further reduce risk and help investors make progress towards any climate goals and commitments.

The CTI strategy may also be an interesting complement to an active equity approach for those clients wanting to make **rapid progress** against climate objectives

- **Despite efforts to decarbonise, I retain exposure to firms in emissions-intensive industries at risk from climate transition. How can CTI assist me in managing these financial risks?**

For most investors, adding the CTI strategy to their investment portfolio could bring material risk reduction as well as accelerating progress towards climate goals.



Disaster Risk Finance and Parametric Insurance

Climate-related natural hazards such as storms, floods, heatwaves, and droughts, are becoming **increasingly frequent and severe**. These extreme weather events cause damage to physical assets and natural capital and endanger lives. They also disrupt business operations and value chains, thereby posing **financial risks that extend well beyond the location of the hazard**.

Reliable and immediate access to finance helps businesses and governments respond quickly to natural disasters, and enables business continuity and recovery efforts. WTW designs financial tools, such as parametric insurance, that ensure our clients have access to funds immediately after natural disaster events.

In designing these tools, we bring to bear our understanding of physical hazards, and their effect on assets, lives and livelihoods.

We have a rich history of providing disaster risk analytics, finance and parametric and parametric insurance for public sector organisations and governments.

We develop integrated, cutting-edge solutions in four key areas:



1. Catastrophe risk pooling that enable shared ownership of risk management and transfer;



2. Financial mechanisms for ecosystem conservation and restoration to enhance resilience of natural assets and protect livelihoods dependant on them;



3. Anticipatory action and rapid response financial mechanisms for humanitarian crises and social protection; and



4. Climate-resilient debt structuring that lowers costs of capital and enhances liquidity to address sudden and slow-onset climate risk.

In action:

- **How can parametric insurance enable clients to continue servicing their debt in the face of climate hazards?**

We help to **improve the credit risk profile** the cost of capital, for local and national government clients by providing parametric protection for critical infrastructure. By creating standardised methods to **quantify values of public assets and risk hazards**, for example, we are able to help cities determine **high-value and high-risk assets** that should have disaster risk insurance cover. We use our market knowledge and insurance broking practice to place insurance at the **optimal price** for our clients.

How WTW's "catastrophe wrapper" brought climate resilience to Belize's blue bond debt conversion

In 2021, WTW developed a **multi-award-winning** bespoke parametric insurance solution tailored for the Government of Belize. Belize is a coastal nation that relies heavily on valuable natural assets but that also faces high exposure to the damaging effects of climate change.

Ocean conservation is crucial to Belize, with 40% of the economic output coming from tourism, and **one in every 10 workers** employed in the fishing sector ensuring national food security. At the end of 2020, Belize was struggling to service its public debt, which stood at US\$2.1 billion. Around the same time, Belize suffered major flooding in the aftermath of Hurricane Eta, while also battling the COVID-19 pandemic. Belize needed immediate resources for disaster response and at the same time to continue meeting its debt servicing obligations.

In 2021 **The Nature Conservancy** (TNC) set up the **Belize Blue Investment Corporation** (BZBIC) which purchased all of Belize's privately held sovereign debt (over \$500 million) via the issuance of a **twenty-year blue bond**. Wrapped into the debt servicing payments

is the premium for a parametric insurance policy. This catastrophe or 'cat' wrapper is a risk transfer product that provides insurance protection to cover regular debt servicing payments after a triggering event. WTW designed the cat wrapper using **innovative risk analytics** and worked hard to find the best price in an increasingly competitive marketplace of (re)insurers keen to take on risk via parametric instruments in a development and/or environmental conservation context. After an extreme weather event (in this case a hurricane), the next debt servicing payment that the Government of Belize must pay is waived and is instead paid for via a parametric insurance pay-out. In this way, the loan terms and duration remain fully intact while the Government of Belize can **focus resources on disaster response and economic recovery** over the short and medium term.

The **innovative blue bond** will unlock around **US\$180 million** over the next 20 years to fund environmental conservation in Belize, helping to increase its overall resilience to extreme weather events. The product and related debt restructuring substantially **reduced the sovereign debt burden, lowered** the interest rate on a large portion of that debt to below 5% from over 15%, and led directly to an **upgrade** of Belize's S&P sovereign credit rating by three steps.



Climate Strategy: analytics in action

Climate Quantified™ – our analytical engine – provides the foundation for a range of broader climate-related products and services. Together, these enable our clients to put their **analytics into action** and adapt their organisational culture to meet the increasing demands of regulators, investors, customers and broader stakeholders.

Climate scenario analysis and stress testing

We assist clients in conducting climate stress testing and scenario analysis, both for internal purposes and to meet the requirements of their regulators (for example, as part of the Bank of England's Climate Biannual Exploratory Exercise). Our analysis is based on reputable scenarios produced by the **International Energy Association (IEA)** and **Intergovernmental Panel on Climate Change (IPCC)**. We can also assist clients in **developing bespoke scenarios** to meet their needs and business challenges.



Improving governance

Our climate board engagement process, **Climate Vista**, helps boards engage with climate-related issues. By surveying board **attitudes and understanding**, Climate Vista ensures boards have tailored information to drive more meaningful and appropriate action across their business. Our engagement services help **build alignment** between the board, senior management and key departments to help firms achieve their climate objectives.



We also enable organisational change through a broader range of corporate climate training and consulting services, including:

- **Executive compensation:** Data and advisory services allow clients to link executive compensation with their climate objectives.

- **Risk assessment approaches:** Defining clients' approach to risk assessment, including necessary data, metrics and reporting.
- **Governance arrangements:** Assessing climate governance arrangements, including those for outsourcing work and supply chain management.
- **Data governance:** Improving climate data governance.
- **Organisational change:** Improving organisational structures and accountability.
- **Learning and engagement:** Develop staff climate awareness and learning programmes.

Regulatory disclosures and TCFD reporting

We assist clients with their regulatory reporting and TCFD-aligned climate disclosures. We are experienced in helping our clients use physical and transition risk analytics for regulatory reporting (including Pillar 3 disclosures) and TCFD reports that set out clients' approaches to climate risk management.



Measuring maturity

We assess clients' **climate readiness** against TCFD recommendations via **gap analysis, readiness assessments and benchmarking** versus their peers. We have also undertaken reviews of official-sector positions in clients' countries of interest, including government policy and regulation, as well as actions of NGOs and other initiatives.



Liability risk measurement and management

We are also seeing **growing demand** for measuring and managing climate-related legal exposures. Concerns around climate-related legal risks are reshaping the business landscape across every economic sector and are beginning to affect organisations' decision-making.



These legal risks arise from compliance with existing laws, new climate-related regulations, and litigation. They are related to the company's **short and long-term physical risks** posed by climate impacts and to clients' needs and **commitments to reduce emissions**.

Addressing climate-related legal risks - as they materialise through operations, markets, value chains, and transactions - can help to **reduce** material financial losses, **optimise** corporate strategy, and **unlock** new growth opportunities.

Together with our partners, we develop new products and services to assist clients in managing their climate-related liability exposures, combining analytics, advice and transaction expertise from across our business.

How WTW helped s/b Macquarie Group put their analytics into action and realize opportunities

WTW provided the physical climate risk scenario analysis that featured in Macquarie Bank's 2021 TCFD implementation progress and scenario analysis report.² We conducted an initial mapping of physical risks across Macquarie's lending and equity portfolios under various climate scenarios. Building on this work, we conducted a more detailed physical risk analysis for selected parts of Macquarie's portfolio of infrastructure assets (including oil and gas and power generation) and an assessment of the operational resilience of its business operations.

This project enables the client to evaluate how physical climate hazards impacts NPV (Net Present Value) and integrate physical climate risk into investment decisions (current and future). The work also enabled the client to identify operations and assets at greatest risk, and to develop a targeted approach to building climate resilience into their operations as it provided a tailored set of adaptation recommendations.

² Macquarie (2021) Macquarie and climate change: TCFD implementation progress and scenario analysis



Health Check Questions

From our experience, clients that can answer these sorts of questions with confidence and clarity are the most advanced in managing their climate-related risks. They are also first to take advantage of emerging opportunities.

- 
 Where are the opportunities for you to **manage risks** and **leverage opportunities** in the face of transition to net zero?
- 
 How confident are you that your net zero strategy will be **agile enough** to take advantage of **changing risk profiles** across **different assets, businesses** and **geographies**?
- 
 Does your **board** have the knowledge and understanding needed to **implement a climate strategy that responds robustly** to transition risks and opportunities?
- 
 Are you able to **compare climate-related metrics** and choose the data **best suited** to your needs?
- 
 How reassured are you that the climate and transition models you are using are **adequately rigorous**, and suitable for developing your policies and disclosures?
- 
 How confident are you in the **governance mechanisms** that you have in place to manage current and future climate risks?
- 
 Are the climate-related risks that exist along the supply chain to your assets **visible and quantifiable** by you?
- 
 Are you aware of **climate liability** to which you and your business are exposed?

Frequently asked questions

What makes your climate analytics different?
 Our expertise lies in risk – both its measurement and management. Climate is no exception. We excel at measuring climate risk, advising on its management and identifying opportunities.

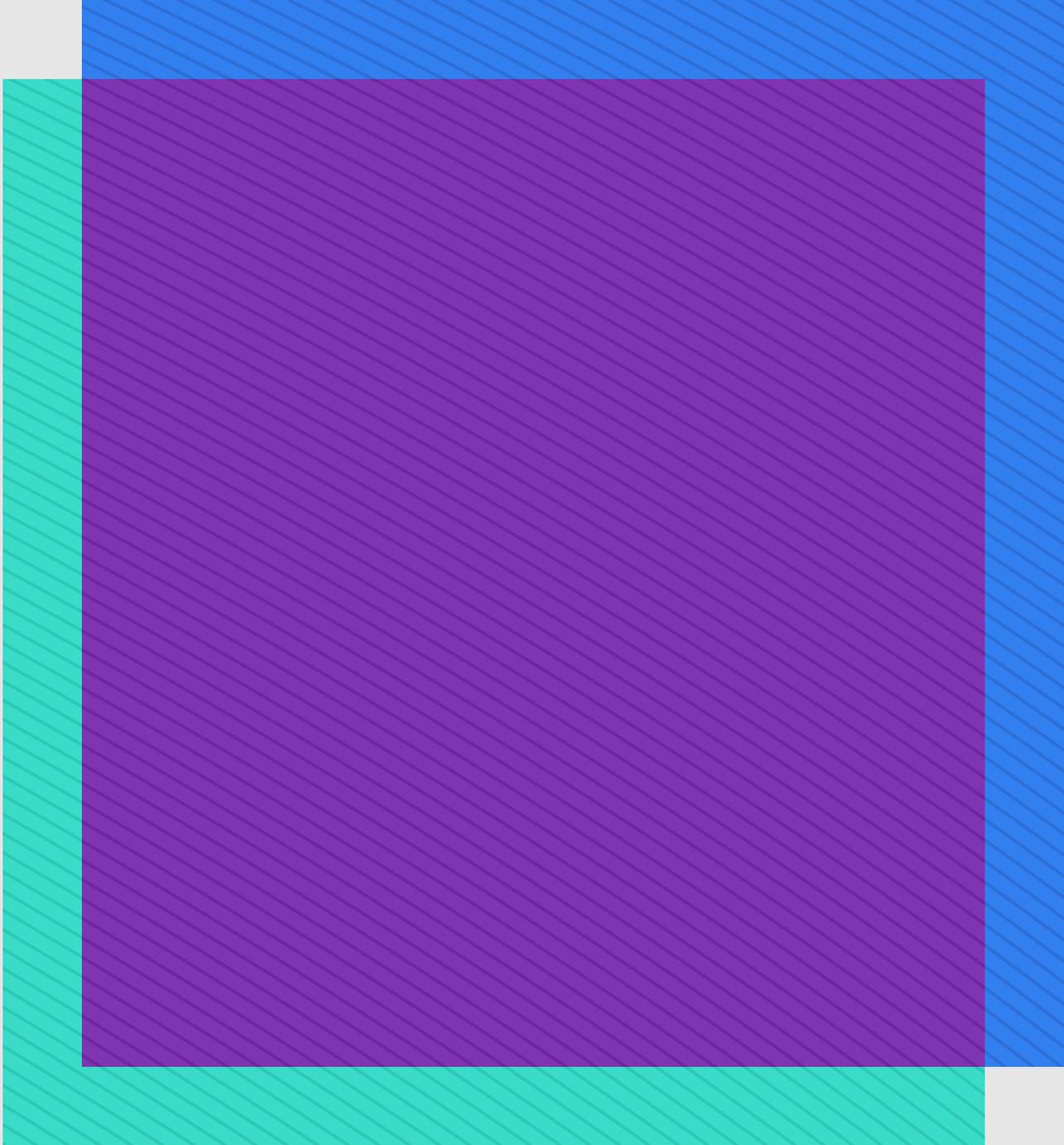
From where do you get your data?
 We work with several data suppliers to select the best data for each client problem. We also have various in-house data, including on the vulnerability of assets to climate change, from our insurance broking and advisory business. Whatever their source, our data are held to high standards of validation.

Why can we trust your models over the plethora of others available elsewhere?
 Each client is provided with documentation that explains the data and models on which our analysis is based. We ensure that our data and models are the most up-to-date and draw on cutting-edge research.

How can my organisation access your analytical tools?
 Clients can access our data and analytics in a variety of ways. We provide everything from off-the-shelf tools and data available via online platforms to bespoke consultancy and tailored analytics. Our analysis and assessments are delivered in the most helpful format for our clients: whether that is a report, charts and graphs, heatmaps or raw data files.

We have specific needs related to the nature of our business...
 We always ensure that our data, models and analytics are carefully tailored to our clients' needs. Where existing methodologies and data don't exist, our team will create new analytics to suit your requirements.

Is there anything you don't do?
 We don't hide how we do things. We believe it's important to be transparent with our clients as to where data have come from and the details of the methodologies we've applied. Only then can clients have confidence in our analytics, make decisions based on them, and defend these to their boards, investors and stakeholders.



About WTW

At WTW (NASDAQ: WTW), we provide data-driven, insight-led solutions in the areas of people, risk and capital. Leveraging the global view and local expertise of our colleagues serving 140 countries and markets, we help you sharpen your strategy, enhance organizational resilience, motivate your workforce and maximize performance. Working shoulder to shoulder with you, we uncover opportunities for sustainable success — and provide perspective that moves you. Learn more at [wtwco.com](https://www.wtwco.com).

For more details, please visit:

[Climate Resilience & Financial Services](#)
[Climate and Resilience Solutions](#)
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