The Edge Economic Update

Sustainable Finance and the Green Economy

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Sustainable Finance and the Green Economy

Introduction

Sustainable finance and the transition to a green economy have moved from niche concepts to central pillars of financial strategy in recent years. Financial institutions worldwide – especially banks and investors – are increasingly integrating Environmental, Social, and Governance (ESG) considerations into their decision-making.

This report provides a comprehensive overview of sustainable finance and the green economy, highlighting key developments globally, within the GCC region, and specifically in Kuwait's banking and finance sector. It covers the growth of green bonds and sustainability-linked loans, the evolution of carbon markets, ESG reporting frameworks, the impact of climate policies like the Paris Agreement on financial institutions, and Kuwait's own policy landscape (including the roles of the Capital Markets Authority, Central Bank of Kuwait, and Kuwait Investment Authority).

The intended audience – executives, regulators, investors, and policy observers – will find data-driven insights, relevant examples, and up-to-date information through 2025.

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Overview of Sustainable Finance and the Green Economy

Definitions: *Sustainable finance* refers to the process of incorporating ESG factors into financial decisions, aligning capital allocation with sustainable development goals. In practice, this means investments and lending decisions account not only for financial return but also for environmental protection, social well-being, and good governance. By channeling funds toward projects and companies that perform well on ESG criteria, sustainable finance aims to support long-term economic growth that is *greener* and more inclusive. A closely related concept is the *green economy*, which the United Nations Environment Programme (UNEP) defines as an economy that is low carbon, resource efficient, and socially inclusive. In a green economy, growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent biodiversity loss and ecosystem degradation.

Relevance to Banking and Finance: The financial sector plays a pivotal role in enabling the green economy by mobilizing and directing capital toward sustainable activities. Banks, asset managers, and insurers are increasingly expected to support the transition to a low-carbon future through their financing decisions. This shift is driven by both opportunity and risk management considerations. On the opportunity side, the financing needs are enormous: estimates for achieving the UN Sustainable Development Goals (SDGs) run between $2.5–7 trillion per year in investment requirements. Bridging this gap presents new markets for green financing products – from renewable energy project loans to green bonds funding climate adaptation. At the same time, there are growing risks in ignoring sustainability – climate change, for instance, poses material financial risks through physical damages, regulatory changes, and shifting market preferences. Banks that fail to adapt could face financial, regulatory, and reputational damage. In short, sustainable finance offers a framework for the financial industry to create long-term economic and social value by funding the transition to a more sustainable, climate-resilient economy.

Key Components: Sustainable finance encompasses a range of financial instruments and practices. On the investment side, this includes green finance – the financing of projects with positive environmental impacts (e.g. renewable energy, pollution control, reforestation) – and broader ESG investing strategies (such as socially responsible investing and impact investing). On the banking side, it includes lending policies that favor sustainable projects and clients with strong ESG performance, as well as developing "sustainable" debt instruments. Examples of such instruments are green bonds, social bonds, sustainability bonds, sustainability-linked bonds/loans (SLBs/SLLs), and green loans.

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Growth of Green Bonds and Sustainability-Linked Loans

Global Growth Since Inception: Green bonds – debt securities issued to finance environmentally friendly projects – have seen explosive growth since their inception in the late 2000s. The first green bonds were pioneered by supranational institutions (the European Investment Bank issued a "Climate Awareness Bond" in 2007), and the market has expanded dramatically in the past decade. From only a few billion dollars in annual issuance in the early 2010s, total *sustainable debt* issuance (including green, social, sustainability, and sustainability-linked instruments) surged to $1.8 trillion in 2021, a peak year driven by intensified corporate sustainability targets and a COVID-19-related boost in social bonds. This represented roughly a quadrupling of annual issuance between 2018 and 2021. While volumes moderated in 2022–2023 amid high inflation and rising interest rates (with some investors growing cautious about *greenwashing* concerns), the overall trend remains strongly upward. Major financial hubs and corporations worldwide are now regular issuers of labeled green and sustainability debt. By 2024, market analysts expected sustainable bond issuance to remain robust – on par with 2023 levels – with particularly high demand for high-quality green bonds backed by clear reporting and impact metrics. On the other hand, there has been some skepticism around sustainability-linked bonds (whose proceeds are for general purposes but whose terms vary with the issuer's sustainability performance) potentially weighing on their growth.

Parallel to the bond market, sustainability-linked loans (SLLs) have also emerged as a significant instrument since around 2017. These are loans where the interest rate is tied to the borrower's performance on predefined sustainability targets (e.g. reductions in carbon emissions or improvements in ESG ratings). If the borrower meets the targets, they benefit from a lower interest rate, creating a financial incentive to improve ESG performance. SLLs grew rapidly in the late 2010s and early 2020s as companies found them attractive for general corporate purposes with a sustainability angle, and banks saw them as a way to encourage ESG improvements. Globally, SLL issuance jumped particularly in 2021–2022, often outpacing the growth of traditional green loans. This was due to the flexibility of SLLs – unlike green loans, which require proceeds to be used for specific green projects, SLLs can finance a wide range of corporate activities as long as sustainability performance targets are met. By giving borrowers more freedom in use-of-proceeds, SLLs have appealed to companies in carbon-intensive sectors looking to transition. However, ensuring transparency and ambition in the selected sustainability targets remains a challenge to avoid "green-lite" deals.

GCC Region: In the GCC, green and sustainable finance began later but has picked up momentum in recent years. The Gulf region's first green bond was issued only in 2017, reflecting a lag behind Europe and other regions. Since then, issuance has grown substantially, albeit from a low base. Total sustainable bond issuance from the Gulf states climbed from roughly $587 million in 2017 to $9.8

billion in 2021, a nearly 16-fold increase in just four years. This rapid growth indicates a rising appetite among regional investors and issuers for green financing, coinciding with government diversification plans and sustainability initiatives. Notably, the Middle East saw the introduction of sustainability-linked bonds (SLBs) in 2020, and by 2021 SLB issuance in the region ($7.5 billion) actually outpaced green bonds ($2.3 billion) by over three-to-one. This mirrors the global trend that SLBs can grow faster due to their flexibility (SLBs fund general corporate needs with sustainability targets, rather than specific projects). However, the overall GCC sustainable debt market is still *underdeveloped* relative to major markets: for perspective, in 2021 the United States issued ~$83.6 billion in green bonds and Germany ~$58.3 billion, compared to about $9.9 billion for all Gulf states combined. Most GCC green and sustainability bond issuances so far have been by financial institutions and corporates, with only one sovereign green bond in MENA (Egypt's $750 million issue in 2020). Governments in the Gulf are starting to consider sovereign sustainable issuances (Saudi Arabia, UAE, and Qatar have all either issued or announced plans), but Kuwait and Bahrain had not issued sovereign green bonds as of 2025.

In terms of sustainable loans (including green loans and SLLs), the Gulf's first such loan was recorded in 2018. Sustainable lending in the region grew from about $2.1 billion in 2018 to $9.7 billion in 2021, reflecting banks' increasing willingness to structure green loans and SLLs for clients. Much of this growth came in 2021 when both green loans and SLLs spiked; SLL volumes in particular "burst onto the scene" in 2021 after a slow start in 2019. Regionally, the largest borrowers for green loans have been in the financial sector (banks financing their own sustainable projects or on-lending), renewable energy developers, and real estate companies building green buildings. These three sectors made up over half of green loan allocations by value between 2018–2022 in MENA.

Kuwait's Experience: Kuwait's sustainable finance market is nascent but achieved significant milestones in 2024. The country saw its *first-ever green bond and first sustainable sukuk* issued in mid-2024 – landmark deals that put Kuwait on the regional sustainable finance map. The National Bank of Kuwait (NBK) pioneered the green bond segment by issuing a US$500 million green bond in June 2024, under NBK's new Sustainable Financing Framework. This was the first green bond out of Kuwait and one of the largest from any conventional (non-Islamic) bank in MENA, reflecting NBK's strategic commitment to ESG principles. The 6-year bond was structured under international standards (Reg S/144A format) and attracted strong global investor demand (3x oversubscribed, with a $1.5 billion order book). NBK has pledged to allocate the proceeds exclusively to finance eligible green assets (such as renewable energy, energy efficiency, green buildings, and clean transportation projects) in line with its framework. This issuance not only diversified NBK's funding sources but also showcased Kuwait's potential to tap global sustainable debt markets.

Around the same time, Warba Bank, a Kuwaiti Islamic bank, issued the

country's first sustainable sukuk (Islamic green bond). In July 2024, Warba successfully placed $500 million of sustainability sukuk due 2029, under a Sukuk Al-Wakala/Murabaha structure. This transaction – structured as "Sustainable Trust Certificates" – is notable for being the first-ever sustainable debt issuance out of Kuwait in either conventional or Islamic format. The sukuk framework ensures proceeds will be used in accordance with Warba's sustainable finance framework, likely for projects with environmental and social benefits. Investor reception was very strong (order book exceeded $1.8 billion, i.e. oversubscribed by ~3.6 times), indicating robust appetite for Kuwaiti ESG-linked credit. Both the NBK green bond and Warba sustainable sukuk underscore a *turning point* in Kuwait's financial sector: from zero presence in sustainable debt markets to roughly $1 billion raised in the first 9 months of 2024 alone. These deals have set benchmarks for other Kuwaiti institutions to follow. Indeed, they contribute significantly to regional totals – Kuwait was reported to have contributed about $1 billion of the GCC's sustainability bond/sukuk issuance in the first three quarters of 2024. Moving forward, more Kuwaiti banks and corporates are expected to explore green bonds, sukuk, or sustainability-linked loans as frameworks and investor demand continue to develop.

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Carbon Markets in Global Trade and Implications for Financial Institutions

As governments work to reduce greenhouse gas emissions, carbon markets have become an important tool – essentially putting a price on carbon to incentivize emission reductions. There are two main types of carbon markets: compliance markets (cap-and-trade systems or carbon taxes implemented by jurisdictions to meet their climate targets) and voluntary carbon markets (where companies buy and sell carbon credits voluntarily, often to meet self-imposed climate goals or to market products as "carbon neutral"). Together, these markets are expanding and increasingly affecting global trade and finance.

Global Development of Carbon Markets: The reach of carbon pricing has grown steadily. As of 2023, there were 75 carbon pricing instruments in operation worldwide (including emissions trading systems and carbon taxes), covering about 24% of global CO_2 emissions. This is a significant increase from a decade prior – for perspective, only ~7% of world emissions were covered by carbon pricing in 2012. Government-led Emissions Trading Schemes (ETS) have proliferated, from the well-established EU Emissions Trading System (operating since 2005) to newer programs in countries like China (which launched a national carbon market for the power sector in 2021). Carbon pricing revenues hit a record $104 billion in 2023, with the majority of that coming from ETS permit auction proceeds. Importantly, more than half of these revenues are being recycled into climate and environmental programs, amplifying their impact.

Carbon markets are also entering new domains of global trade policy. Notably, the European Union is phasing in a Carbon Border Adjustment Mechanism (CBAM) – essentially a tariff adjustment on carbon-intensive imports like steel, cement, and fertilizers. CBAM (in a transitional phase as of 2024) aims to prevent "carbon leakage" by equalizing carbon costs between EU-produced goods and import. This move by the EU is prompting other trading partners to consider carbon pricing for heavy industries to maintain export competitiveness. In the aviation sector, international mechanisms like CORSIA are emerging, and discussions are ongoing for shipping. Meanwhile, voluntary carbon markets have grown as companies seek to offset emissions – the value of voluntary carbon credit sales reached $2 billion in 2021, and is projected to rise to $10–40 billion by 2030 given corporate net-zero commitments. However, the voluntary market faces scrutiny over credit quality and "additionality" of projects, which will determine whether it can scale effectively.

Implications for Financial Institutions: Carbon markets and pricing trends have multifaceted impacts on banks and financial institutions (FIs). Firstly, carbon pricing introduces transition risks for companies in high-emitting sectors. Banks must assess how clients in industries like oil & gas, power generation, metals, aviation, etc., will be affected by current or future carbon costs.

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If a significant portion of a bank's loan book is tied to carbon-intensive assets, rising carbon prices (or stricter emission caps) could impair those borrowers' profitability and creditworthiness. For example, a power utility in a carbon-constrained world may face higher operating costs or require costly investments in cleaner technology – factors that influence its default risk. Financial regulators increasingly expect banks to incorporate such climate-related risks into their credit risk assessments and stress testing. By 2025, many large banks have begun using internal carbon price assumptions in project finance models, to evaluate how a price on carbon would affect project viability (especially for long-lived assets like power plants). Central banks and supervisors (through networks like the NGFS) have rolled out climate scenario analyses to test how sudden policy changes (like a rapid increase to, say, $100/ton carbon price) might impact financial stability. In short, carbon markets force FIs to quantify carbon exposure and potentially reallocate capital away from high-carbon projects over time to mitigate risk.

Secondly, carbon markets present new business opportunities and financial products. Banks with trading operations participate in carbon markets by trading carbon allowances or credits on behalf of clients or for their own accounts. Carbon credits and allowances have effectively become a commodity – with prices, derivatives, and arbitrage opportunities that commodity trading desks can handle. For instance, the EU carbon allowance price has seen significant volatility (trading around €80–€90 per ton in 2023) and is projected to trend upward towards 2030. Some banks and asset managers have even launched carbon credit funds or exchange-traded funds to allow investors exposure to carbon as an asset class. These instruments can hedge climate policy risks or bet on the increasing cost of emissions.

Furthermore, carbon finance is a growing niche: banks can finance projects that generate tradable carbon credits (e.g. reforestation, renewable energy in developing markets) and use expected credit revenues as part of the return on investment. In emerging markets, robust carbon markets could help channel international funding into climate-friendly projects (through mechanisms in Article 6 of the Paris Agreement allowing cross-border credit trading). This means banks could facilitate deals where, say, a renewable project in one country is partly financed by the sale of emissions reductions to a company or government elsewhere that needs offsets.

Lastly, FIs need to adapt to client demands and reputation considerations. Many corporate clients have their own net-zero pledges and will seek banking partners who understand carbon markets and can offer solutions – whether it's advice on managing carbon liabilities, financing low-carbon transitions, or providing carbon trading services. Banks themselves are often under stakeholder pressure to reduce the "financed emissions" in their lending and investment portfolios, effectively aligning with Paris Agreement goals. Participating in carbon markets (or at least understanding carbon pricing dynamics) is essential for credible strategies to decarbonize portfolios over time. According to the World Bank, despite progress, less than 1% of global emissions

in 2023 were priced at or above the level needed to achieve the Paris climate goals (a price trajectory consistent with limiting warming below 2°C). This indicates that much stricter carbon policies are likely in coming years, which will further raise the stakes for financial institutions to proactively manage carbon-related risks and opportunities.

In summary, carbon markets are increasingly interwoven with global trade and finance. They act both as a "stick" (cost) and a "carrot" (market incentive) in the climate transition. Financial institutions that price carbon risk into their decisions, help clients navigate carbon costs, and invest in low-carbon technologies will be better positioned as the world economy adjusts to climate constraints. Conversely, those ignoring these signals could face concentrated portfolio risks as high-carbon assets lose value in a carbon-priced future.

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ESG Reporting Standards and Frameworks in Finance and Sector Challenges

Key ESG Reporting Frameworks: As sustainable finance has grown, so has the need for consistent and transparent reporting on ESG factors. A number of frameworks and standards have gained prominence, each serving slightly different purposes:

Global Reporting Initiative (GRI): Established in 1997, GRI provides one of the most widely used sustainability reporting standards in the world. GRI standards offer a comprehensive framework for organizations to disclose their impacts on the economy, environment, and people. By mid-2025, over 14,000 organizations worldwide were using GRI Standards to report on ESG performance in a consistent and comparable way. GRI is stakeholder-oriented and covers a broad range of topics (from greenhouse gas emissions to labor practices), often used by companies to demonstrate accountability to the public and align with global goals like the UN SDGs. Reporting in accordance with GRI typically involves publishing an annual sustainability report with detailed disclosures (e.g., GRI 305 for emissions, GRI 401 for employment, etc.), and many banks have adopted GRI to guide their sustainability reports.

Sustainability Accounting Standards Board (SASB): SASB (founded in 2011) took a different approach by creating industry-specific ESG disclosure standards, focusing on what is financially material for investors. There are separate SASB standards for 77 different industries, including specific metrics relevant to banks (for example, metrics on lending portfolio carbon intensity for commercial banks, or data security for financial services). SASB's philosophy is to boil down the universe of ESG issues to those most likely to impact a company's financial condition or operating performance in each industry. By the early 2020s, SASB standards were widely recognized by investors and many companies (including banks) began reporting SASB metrics alongside other disclosures. In 2022, SASB was consolidated into the new International Sustainability Standards Board (ISSB) under the IFRS Foundation. The ISSB launched its first global sustainability reporting standards (IFRS S1 and S2) in 2023–2024, which effectively integrate SASB's industry-specific metrics and the recommendations of TCFD. The goal is to provide a unified baseline for ESG disclosure that is investor-focused and globally consistent. For banks, this likely means future reporting will involve ISSB standards, which incorporate SASB's financial materiality lens.

Task Force on Climate-related Financial Disclosures (TCFD): Formed by the Financial Stability Board in 2015, the TCFD developed a framework specifically for climate-related disclosure, structured around four pillars: Governance, Strategy, Risk Management, and Metrics & Targets. Unlike GRI or SASB, TCFD is not a set of specific indicators but rather high-level recommendations on how companies (especially financial companies) should report the impact of climate change on their business and how they manage those risks/opportunities. The TCFD framework quickly gained global traction – by 2023, over 2,600 organizations were officially supporting TCFD and it had

effectively become the gold standard for climate risk disclosure, with several jurisdictions (UK, EU, Japan, and others) making TCFD-aligned reporting mandatory for large firms and banks. TCFD has been particularly relevant for banks in assessing both physical risks (e.g., how extreme weather might affect collateral and operations) and transition risks (e.g., how climate policy or cleantech could affect borrowers and investments). As of July 2024, the TCFD's recommendations have been formally incorporated into the new IFRS sustainability standards (the TCFD organization itself wound down, its mission effectively accomplished). Going forward, banks will likely report climate information through the ISSB's climate standard (IFRS S2), which retains TCFD's structure but adds more detail on items like climate scenario analysis and Scope 1-2-3 emissions disclosure.

Other Frameworks: There are other important frameworks like the CDP (Carbon Disclosure Project), which runs a global environmental disclosure system focusing on climate, water, and deforestation (over 20,000 organizations respond to CDP questionnaires each year to benchmark their performance). Many banks also disclose to CDP to score their climate management. The UN Principles for Responsible Banking (PRB) is another initiative – signatory banks commit to align their strategy with the SDGs and Paris Agreement. Additionally, at the regulatory level, the EU has introduced the Corporate Sustainability Reporting Directive (CSRD) with European Sustainability Reporting Standards (ESRS), and taxonomies for sustainable activities, which will affect banks operating in or lending into Europe. In the U.S., the SEC has been working on climate disclosure rules (not finalized by 2025) that draw from TCFD for public companies, including banks.

Challenges for the Banking & Finance Sector: Despite the proliferation of frameworks and growing regulatory mandates, banks face several challenges in ESG reporting and performance measurement:

Data Quality and Availability: Banks must gather ESG data not only on their own operations (e.g. energy use of branches, diversity of workforce) but critically on their portfolios (the ESG characteristics of companies they lend to or invest in). This portfolio-level ESG data is often hard to obtain and verify. For instance, measuring "financed emissions" (greenhouse gases emitted by clients that a bank finances) requires clients to report their emissions and for banks to use methodologies like PCAF (Partnership for Carbon Accounting Financials). Many smaller clients may not have sophisticated emissions tracking. Data on social and governance aspects of borrowers can be even more elusive. In emerging markets like Kuwait, the disclosure rates of corporates on ESG metrics are improving but still limited. This data gap can lead to inconsistent or underestimated risk assessments.

Multiple Standards and Evolving Frameworks: While convergence is underway (with ISSB bringing together SASB and TCFD, for example), as of 2025 banks still navigate a complex landscape of ESG reporting requirements. A large bank might simultaneously produce a GRI-referenced sustainability report (to satisfy general stakeholders), report SASB/ISSB metrics for investors, provide TCFD-aligned disclosures for climate risk,

respond to CDP questionnaires, and comply with any local regulator's ESG reporting rules. Ensuring consistency across these and avoiding "reporting fatigue" is challenging. The good news is many frameworks are aligning (e.g., the concept of Scope 1/2/3 emissions originally formalized by GRI is now common across TCFD, ISSB, and others). But until a unified global standard is fully adopted, banks have to manage overlapping demands. This also means extra burden for compliance teams and the need for robust internal ESG data systems.

Materiality and Relevance: Determining what ESG issues are *material* for a bank is a challenge. For example, environmental issues like direct emissions might be less material for a bank's own operations (banks have relatively small carbon footprints directly), but extremely material via lending to oil & gas. Social issues such as financial inclusion or customer protection can be significant, as can governance issues like anti-corruption. Balancing broad sustainability goals with what matters financially requires thoughtful analysis. The SASB/ISSB approach helps by highlighting industry-specific issues, but banks often go beyond that to consider wider stakeholder concerns (sometimes called "double materiality" in EU parlance, meaning impact on the world and impact on the firm).

Risk of Greenwashing and Consistency: With increased scrutiny on ESG claims, banks must ensure their reporting is accurate and not overstated. The lack of standardized definitions historically made it possible for some institutions to label activities as "sustainable" with relatively lax criteria. Now, regulators and investors are demanding more rigor. For instance, the EU Taxonomy has strict technical criteria for what qualifies as an environmentally sustainable activity. Banks operating across jurisdictions face the task of mapping their exposures to such criteria and reporting taxonomy-aligned financing – a new exercise requiring deep analysis of loan purposes and client activities. Misreporting or over-claiming on sustainability (greenwashing) can lead to reputational damage and even legal risks. Ensuring third-party assurance of ESG data is becoming a best practice to enhance credibility.

Integrating ESG into Core Business: Many banks initially approached ESG reporting as a compliance exercise – a box to tick for regulators or a PR exercise for corporate image. This mindset is changing, but not without hurdles. The organizational change needed to embed ESG into decision-making is significant. It involves educating credit officers to consider ESG risks, adjusting lending policies, developing new sustainable products, and sometimes making hard choices (such as phasing out financing for certain coal projects). Some institutions still treat ESG reporting separately from financial reporting, which can lead to inconsistencies and missed strategic alignment. The challenge is to move from *"just reporting"* to using ESG data to genuinely inform strategy, risk management, and capital allocation. Companies that treat ESG superficially (merely as a compliance task) often see weak results and miss opportunities – for example, they may fail to capture the upside of financing the growing renewable energy sector or fall behind in managing climate risks, which could hurt financial returns in the long run.

Sector-Specific Issues – Banking: In banking specifically, one challenge is quantifying climate risks in credit models. Traditional credit risk models rely on historical data, but climate change is introducing unprecedented shifts (e.g., properties in certain areas could become uninsurable due to rising sea levels). Banks are working with regulators on stress tests that project 30-year scenarios – a timescale far beyond usual stress tests – and results have shown potential significant losses under disorderly transition scenarios. There's also the question of how regulators might treat assets exposed to climate risk – some have discussed higher capital requirements for carbon-intensive exposures, which would affect banks' balance sheets. Navigating these evolving supervisory expectations is challenging as the rules are in flux. Another issue is ESG in investment portfolios for banks (treasuries and asset management arms) – aligning those with sustainability goals (like investing in green bonds or applying ESG criteria to equity holdings) while still meeting liquidity and return requirements.

In summary, ESG reporting and management in banking is rapidly maturing, supported by frameworks like GRI (broad sustainability context), SASB/ISSB (investor focus, industry specifics), and TCFD (climate focus). Banks that have robust ESG reporting benefit from improved stakeholder trust and better insight into their own risk exposures. Yet, the sector faces ongoing challenges in data gathering, harmonizing to emerging global standards, and truly embedding ESG into the business rather than treating it as a mere reporting exercise. The trend in 2024–2025 is toward more mandatory disclosure (especially in the EU, and likely in other major economies) and greater standardization. Notably, the creation of the ISSB and the incorporation of TCFD into its standards are positive steps toward reducing fragmentation. Over time, this should make it easier for banks to tell their sustainability story in a coherent way that satisfies regulators, investors, and civil society alike.

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Climate Policies and Their Impact on Financial Institutions

Global climate policies – especially the 2015 Paris Agreement and subsequent national commitments – have been a major catalyst in reshaping investment strategies and risk assessments within financial institutions. The Paris Agreement set the long-term goal of limiting global warming to well below 2°C (preferably 1.5°C), and in doing so signaled an eventual shift away from fossil fuel-dependent economic activity. For the financial sector, this has translated into both pressure and planning for alignment with a net-zero future by mid-century.

Net-Zero Commitments: In the wake of Paris, hundreds of financial institutions have made pledges to achieve "net-zero" greenhouse gas emissions in their portfolios by 2050. Initiatives like the Net-Zero Banking Alliance (NZBA) (launched in 2021 under UNEP FI) brought together over 130 banks globally, committing to decarbonize their lending and investment portfolios in line with 1.5°C scenarios. These banks, collectively representing a significant share of global banking assets, must set interim targets (for 2030, for example) for reducing emissions in key sectors such as power, oil & gas, transport, and real estate. While voluntary, such alliances create peer pressure and a framework for banks to gradually phase down financing of high-carbon activities and boost green financing. By 2025, some banks have started publishing transition plans showing how they will increase green asset ratios or cut exposure to coal, etc. There has also been pushback – for instance, a few major banks in the U.S. and elsewhere withdrew from certain climate alliances amid political pressures. But broadly, the net-zero movement has taken hold: even outside formal alliances, many large asset managers and owners (pension and sovereign funds) are demanding that banks and companies have credible decarbonization strategies.

Integration into Risk Management: Climate policy is no longer seen as just an ethical or reputational issue; it is viewed as a financial risk driver. Financial regulators have explicitly linked climate change to their mandates: for example, the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), which by 2025 includes central banks overseeing essentially the entire global banking system, has worked to develop climate risk assessment methodologies for banks. Central banks like the Bank of England, European Central Bank, and others have conducted climate stress tests. These exercises typically examine scenarios where, for instance, a rapid policy tightening occurs to meet Paris goals (a "late policy action" scenario) and stress how banks' credit portfolios would perform if carbon-intensive sectors face a sharp increase in costs or demand destruction. The results have generally indicated that while immediate risks are manageable, over the longer term banks could face notable losses if they do not reduce exposures to high-emitting industries. This has spurred banks to incorporate scenario analysis into their own risk management. Moreover, credit rating agencies are

factoring climate policy risks into corporate ratings, which feeds through to bank risk assessments as well.

Policy Signals and Investment Strategy: The Paris Agreement led most countries to submit Nationally Determined Contributions (NDCs) – essentially national climate action plans. Financial institutions pay close attention to these and to subsequent policy developments like carbon pricing, renewable energy targets, phase-out dates for internal combustion engine vehicles, etc. For example, policies stemming from Paris: - In Europe, the EU Green Deal and national laws (e.g., coal phase-out commitments by Germany and others) prompted many European banks to announce they would stop financing new coal projects and put stricter conditions on oil & gas. EU banks also have to comply with the Sustainable Finance Disclosure Regulation (SFDR) and taxonomy, which affect how they design products and report on sustainability. - In the US, while federal climate policy has been more volatile, the Inflation Reduction Act (2022) with massive clean energy investments signaled future growth sectors, influencing investment and lending towards renewables, electric vehicles, and related infrastructure. - In Asia, countries like Japan and South Korea set 2050 net-zero targets, and China set 2060. Banks in those countries have started to align (e.g., Japanese mega-banks set policies to restrict coal lending after Japan's 2050 pledge).

In the GCC context, climate commitments are also emerging. All GCC countries except one (Qatar) have now announced net-zero emissions targets by mid-century or shortly after: for instance, the UAE aims for net-zero by 2050, Saudi Arabia by 2060, and Kuwait declared it will reach net-zero for the oil and gas sector by 2050 and economy-wide by 2060. These national targets (while generally farther out and conditional compared to some Western economies) nonetheless send a policy signal. In Kuwait's case, the pledge made at COP27 in 2022 means that its core industries – oil and gas – will be undergoing changes such as emissions reduction projects, possibly carbon capture, and energy efficiency measures to hit the 2050 sectoral goal. For banks, this suggests that over the next few decades, more financing will be needed for clean energy, carbon-cutting technologies, and diversification projects, and less for unabated fossil fuel expansion. Already, we see Kuwait's KPC (national oil company) committing to net-zero for its Scope 1 and 2 emissions by 2050, implying significant investments in emissions control that may require financing.

Transition vs Physical Risks: Transition risks: Tighter climate policies (e.g., Paris Agreement) can leave carbon-heavy assets "stranded," such as coal plants forced into early closure. Banks now assess portfolio exposure and often require clients to present credible transition plans, seen in the growth of sustainability-linked loans (SLLs) and ESG-based financing terms. **Physical risks**: Even with limited warming (1.5–2°C), natural disasters like floods, hurricanes, and wildfires increase in frequency and severity. Insurers and lenders are adjusting models accordingly. Paradoxically, both strong climate action (transition risk) and weak climate action (physical risk) create financial challenges. The ultimate goal is an orderly transition that minimizes both categories of risk,

supported by regulators and banks through careful planning.

Opportunities – Climate-aligned Investment Strategies: The flip side of risk is opportunity. Climate policies have catalyzed entire new industries – renewable energy, clean tech, battery storage, electric vehicles, green hydrogen, etc. Banks and investors are capitalizing on these growth areas. Green bonds (discussed earlier) are one avenue to invest in climate solutions. Private equity and venture arms of financial institutions are also channeling funds into climate tech startups, often spurred by government incentives or carbon pricing that improve the economics of clean solutions. National targets (like Saudi Arabia's huge renewable program or UAE's investments ahead of hosting COP28) often involve financing packages that banks compete to arrange. Many banks have set targets to increase their green financing to a certain amount by 2030 (e.g., committing hundreds of billions towards sustainable finance). These targets are usually in response to policy signals and stakeholder expectations post-Paris.

Regulatory Expectations and Fiduciary Duty: Increasingly, climate policy alignment is seen as part of fiduciary duty and prudent risk management. Regulators in some jurisdictions (like European Central Bank) now include climate risk as part of their supervisory review – meaning banks could be required to hold more capital if they are heavily exposed to climate-risky assets, or at least they are asked to show plans to manage such exposures. In the US, while not as formalized, the Federal Reserve in 2023 launched a pilot climate scenario analysis with six large banks, indicating a move in that direction. In the GCC, regulators are starting to pay attention too (as we'll detail in the Kuwait section, the Central Bank of Kuwait has issued guidance on sustainability). All of this is a response to the Paris Agreement's influence – it effectively turned climate change into a mainstream economic concern, not just an environmental one.

In summary, the Paris Agreement and subsequent climate policies have acted as a strategic inflection point for financial institutions. Investment strategies are being reoriented to support decarbonization and avoid obsolete assets, and risk management frameworks are being updated to account for long-term climate scenarios. While implementation is still in early stages (we are only 10 years past Paris), the direction is clear: banks and investors are expected to be part of the solution to climate change. Those that move early can gain reputational advantages and build expertise in green finance, while laggards may face abrupt adjustments later. As climate policies tighten in the run-up to 2030 and beyond, the scrutiny on financial institutions' alignment will only increase. The ultimate goal for many in the sector is to demonstrate that their portfolios are consistent with a net-zero 2050 pathway – essentially proving that the collective capital allocation is Paris-aligned.

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Kuwait's Sustainable Finance Policies and Institutional Landscape

Kuwait, as a major oil-producing economy, is at an early but important stage in developing a sustainable finance ecosystem. In recent years, Kuwaiti authorities and institutions have begun laying the groundwork to integrate ESG principles into financial regulation and investment practices, recognizing both the global momentum and the country's own Vision 2035 emphasis on sustainable development. This section highlights the key policies and the roles of major institutions – namely the Capital Markets Authority (CMA), the Central Bank of Kuwait (CBK), and the Kuwait Investment Authority (KIA) – in advancing sustainable finance.

Central Bank of Kuwait (CBK): The CBK has taken significant steps to encourage sustainability in the banking sector. In November 2022, the Central Bank issued a circular (No. 2/BS, IBS/500/2022) to all local banks outlining directives on sustainable finance. This directive was a landmark in raising awareness and setting expectations. It formally defined the three pillars of sustainability (Environmental, Social, Governance) for the banking context and provided key principles that banks should consider regarding sustainable finance. Areas covered likely include integrating ESG into risk management, offering products that support sustainable development, and possibly disclosures. Notably, the CBK has reportedly instructed banks to earmark a portion of their loan portfolios for green financing – in other words, to actively increase lending towards projects or companies with positive environmental impact. This could mean setting internal targets or quotas for green loans, or at least tracking and reporting such lending. The CBK's motivation aligns with New Kuwait Vision 2035, which lists sustainable development as a pillar; thus, the banking sector is seen as a lever to achieve those national goals. Additionally, CBK has organized or supported industry events (such as workshops on climate risk or sustainable finance) to build capacity within banks. By embedding sustainability considerations, the CBK is effectively nudging banks to future-proof their strategies and ensure they support (and are resilient to) the global low-carbon transition.

Capital Markets Authority (CMA) and Boursa Kuwait: On the capital markets side, the CMA – often in collaboration with Boursa Kuwait (the national stock exchange) – has initiated measures to foster ESG transparency and sustainable investment. Boursa Kuwait is a signatory to the UN's Sustainable Stock Exchanges (SSE) Initiative, indicating its commitment to promote sustainable and transparent capital markets. Under this banner, Boursa Kuwait issued an ESG Reporting Guide for listed companies and has been encouraging voluntary ESG disclosures. The guide provides listed firms with a framework on how to report ESG metrics and likely aligns with international standards (possibly referencing GRI or SASB indicators). The CMA supports these moves as part of its mandate to develop Kuwait's capital market and attract international investors,

who increasingly expect ESG information. In 2023, Boursa Kuwait also hosted workshops on the new IFRS sustainability disclosure standards (ISSB's S1 and S2). By familiarizing companies and investors with ISSB standards (which incorporate TCFD and SASB elements), the Kuwaiti market is preparing for a future where ESG reporting could become mandatory or at least standard practice. While ESG reporting is currently voluntary, these steps build momentum towards greater corporate transparency. Better disclosure will, in turn, enable the growth of sustainable investment products (like ESG-themed funds or indices) on the Kuwaiti stock market.

The CMA has also worked on regulatory frameworks or strategies for sustainable finance. In 2023 Kuwait had put in place a *Sustainable/Green Finance Framework or Strategy* at the national level, and all major Kuwaiti banks have adopted sustainable finance frameworks internally. Although specifics are sparse, this likely refers to high-level plans to integrate ESG into financial regulation and possibly incentives for green financial instruments. For instance, CMA could consider guidelines for green bonds issuance (ensuring they adhere to standards like ICMA's Green Bond Principles) or even incentives such as fast-track approval or fee waivers for ESG-oriented funds. While Kuwait hasn't issued a sovereign green bond yet (unlike some GCC peers), it is reported that such issuance is "in progress" or under study as part of the framework. The CMA would presumably be involved in any such debt issuance if it pertains to capital markets, and in setting the rules for any listed green bonds or sukuk.

Kuwait Investment Authority (KIA): The KIA, Kuwait's sovereign wealth fund (one of the world's largest), is a critical player in driving sustainable finance due to its substantial assets under management. In recent years, the KIA has increasingly recognized the importance of ESG in its investment strategy. It was reported that KIA is working to make its portfolio completely ESG-compliant. While "ESG-compliant" is broad, this suggests a comprehensive effort to integrate ESG criteria into KIA's portfolio management – potentially including screening out certain unsustainable investments, increasing allocation to renewable energy, clean technology, and other sustainable assets, and exercising active ownership (voting and engagement) to encourage ESG practices in companies it invests in. For example, many sovereign funds globally have joined initiatives like the One Planet Sovereign Wealth Fund group, which focuses on climate-friendly investing; KIA's statements indicate a similar direction of travel. If KIA moves strongly on ESG (even gradually), it sets an example for the domestic financial market and can catalyze demand for sustainable financial products. KIA also can support domestic green projects – though most of its investments are international, it has the clout to invest in local initiatives (such as renewable energy infrastructure) if aligned with national priorities. In fact, Kuwait is planning major renewables (like the Shagaya solar park expansion) and environmental projects that could benefit from KIA's participation, directly or via funds.

Other Institutional Efforts: Apart from CBK, CMA, and KIA, other bodies in Kuwait are contributing to the sustainable finance landscape: - The government's Supreme Council for Planning and Development has emphasized

environmental sustainability in national development plans, which indirectly influences financial policies. - Commercial banks, as seen, are establishing their own ESG units and policies. For instance, NBK's establishment of a Sustainable Financing Framework in 2022 (ahead of its green bond) is a sign of bottom-up initiative. Kuwait Finance House (KFH), the country's other banking giant, has also been active – KFH reportedly increased its investments in green sukuk to over $650 million in 2024, signalling appetite in Islamic sustainable finance. - There are educational and awareness initiatives (such as the Boursa Academy's reports and banks' training programs) that are building knowledge on sustainable finance within the local financial community.

Policy Challenges and Outlook: While Kuwait's progress is notable, challenges remain. The domestic economy is still heavily hydrocarbon-dependent, and aligning financial flows with sustainability will require balancing diversification goals with short-term economic realities. One challenge is the relatively limited pipeline of green projects in Kuwait seeking financing – this might be addressed as the government ramps up renewable energy (the target is 15% of electricity from renewables by 2030). Another is regulatory enforcement: to date, most ESG initiatives are *voluntary* or in guideline form. Over time, the CBK and CMA may need to move from guidance to mandatory requirements to truly mainstream these practices. They would likely do so in step with international trends to keep Kuwait aligned with global financial standards.

On a positive note, Kuwait's sovereign commitment to net-zero (2060) and interim steps – like joining the Global Methane Pledge, investing in carbon capture research, etc. – will increasingly filter down to financial policies. As the country prepares for a lower-carbon future, we can expect further development of green finance frameworks: perhaps green loan targets, government incentives for green mortgages or electric vehicle financing, and support for fintech or innovation in areas like energy efficiency financing. The roles of CBK, CMA, and KIA will be central in this evolution: - CBK can integrate climate risks into prudential supervision (ensuring banks hold sufficient capital against climate exposures and conduct stress tests), and possibly offer refinancing advantages or lower risk-weight for green loans (a concept tried in some countries as "green supporting factor"). - CMA/Boursa can move toward requiring ESG disclosures in annual reports, create ESG indices, and facilitate new instruments (like yieldcos or sustainability-linked sukuk listings). - KIA can further drive ESG integration and perhaps allocate a certain percentage of assets to green investments, thus channeling capital to sustainable opportunities globally and locally.

To sum up, Kuwait's institutional landscape for sustainable finance is taking shape with clear direction: the CBK is guiding banks on sustainability and risk, the CMA/Boursa is guiding listed companies and market practices, and the KIA is greening investment portfolios. These efforts, albeit in early stages, form the foundation upon which Kuwait can build a robust sustainable finance sector that aligns with both national development objectives and international climate commitments.

Conclusion

Sustainable finance has shifted from a niche concept to a core pillar of the global financial system, reshaping how banks, regulators, and investors define success—integrating profitability with sustainability. Green bonds, sustainability-linked loans, carbon markets, and ESG reporting have become mainstream, mobilizing vast capital for climate action and embedding environmental costs into financial decisions.

In the GCC, momentum is building despite a late start. Kuwait's issuance of its first green bond and sustainable sukuk in 2024 highlights strong potential, but achieving a resilient green economy will demand scaling projects, strengthening ESG disclosure, phasing down carbon-intensive activities, and enhancing regional cooperation.

For financial institutions, the message is clear: sustainable finance is not temporary but a fundamental transformation. Banks that innovate and adapt will thrive, while laggards risk penalties and irrelevance as global capital pivots to green investments.

Kuwait and its neighbors stand at a critical juncture—with prudent policies and bold financial leadership, the region can secure competitiveness and attract global green capital. The green economy vision offers a path to long-term, inclusive prosperity beyond oil, and finance is the engine to drive it forward.

Sustainable Finance and the Green Economy

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