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Assessing sustainability focus across global banks

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### Assessing sustainability focus across global banks

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#### ABSTRACT

Global banks play intermediary and even direct roles in achievement of the UN Sustainable Development Goals (SDGs). However, developmental progress is complex to measure due to siloed, varied and even non-transparent, ambiguous, non-standardized ways of calibration and reporting. This research explores public disclosures (sustainability, CSR, and annual reports, press releases, website, and others) of fifty banks across nine geo-segments over five calendar years (2018–2023). Inductive methods, co-word assessments, content analysis are deployed to develop qualitative commentaries indicating geo-specific performances of the banks. The research findings indicate goal-specific attribution and discovery of motives and initiatives. This validates how motives in embracing the SDGs vary and relate to achievement of – (A) core business objectives; (B) support and financing of other industries, organizations, and governments in sustainable initiatives; and (C) corporate citizenship, altruistic and ethical considerations. Methodological approaches to calibrate findings across seventeen SDGs help identify benchmark practices, understand complementary actions, and required focus for banks and other industries. This is relevant to geo-specific sustainability challenges, trade-offs, and requirements. The findings can guide public policies and regulations, empower banks and other institutions to accelerate awareness and evaluate effectiveness towards sustainable developments.

#### 1. Introduction

The Sustainable Development Goals (SDGs) Agenda for 2030 was signed by 193 countries under the United Nations in September 2015 (United Nations, 2021). The crisis generated by the novel corona virus followed by other disruptions including geo-political tensions, socio-economic uncertainties direct towards imperatives of sustainable growth and well-being. It is indisputable, that nations cannot achieve the seventeen sustainability goals without a collaborative and participatory approach across public and private stakeholders (Simona, et al., 2020). Climate crisis, poverty, inequality, injustice, exclusion, gender disparity, human displacements are the challenges that need focused interventions (Yadav, et al., 2021). Existing literature highlights that involvement of corporate and public organizations alongside governments, embracing sustainability in business models (Melville, 2021) is essential to achieve targets across the seventeen SDGs. Banks are key intermediaries in any economic system. Given the intermediary role, banks and financial services can promote sustainable behaviors among industries, organizations, governments, and individuals and can even trigger optimal changes in society (Louche, et al., 2019). It is observed

globally, banks through their offerings directly drive sustainability considerations like financial inclusion, green initiatives, social community-banking, focus on renewable energy, and impact investing (Rizzi, et al., 2018). Globally banks also focus on national development, entrepreneurship, diversity and inclusion, customer centricity, innovation, environment friendly practices and promote industrial compliance aligned to environmental, social and governance (ESG) norms. Despite these, there are concerns about effective implementation of banks' sustainability initiatives. A systemic corporate sustainability management is necessary to govern and improve SDG progress of global banks.

This qualitative research contributes to measurement of sustainability focus of global banks by conducting a systematic narrative analysis of banks' disclosures. The research identifies sustainability/SDG focus for global banks and devises a potential approach to measure the maturity and effectiveness of initiatives. To measure the SDG focus and orientations, we explored answers to the following research questions (RQs):

**RQ1**. What are the key sustainability focus areas of banks across geosegments, aligned with the 17 SDGs?

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**RQ2.** What are the motives for the banks across geo-segments in embracing sustainable developments?

**RQ3.** What are the distinctions and similarities in SDG focus across varied geo-segments?

#### 2. Literature survey

The review of existing literature is broadly segmented into three distinct knowledge areas. Firstly, we review the significance of the Sustainable Development Goals (SDGs) and the dynamics of deployment. We evaluate prime role of banks in achievement of the SDGs. Finally, we assess prevailing literature for contextual variations manifested across SDG focus and enterprise motives.

# 2.1. Significance and dynamics of deployment for the sustainable development goals (SDGs)

The purpose of the seventeen SDGs (United Nations, 2012) is to build a global advocacy and collaborations to call for action and solve key socio-economic, political, and environmental challenges towards establishing more inclusive and sustainable growth agenda. The UN's 17 Sustainable Development Goals are linked to the areas of critical importance – People (P1), Planet (P2), Prosperity (P3), Peace, and Partnership (P4) (Stephen Morton, 2017). While there is significant overlap across the SDGs, the goals in relation to each of the key orientation areas may be segmented as:

- People (P1) [No Poverty (Goal 1) Zero Hunger (Goal 2) Health and Well-being (Goal 3) – Quality Education (Goal 4) – Gender Equality (Goal 5) – Clean Water and Sanitation (Goal 6)].
- Planet (P2) [ Climate Action (Goal 13) Life below Water (Goal 14)
   Life on Land (Goal 15)].
- Prosperity (P3) [ Affordable Clean Energy (Goal 7) Decent Work and Economic Development (Goal 8) – Industry, Innovation, and Infrastructure (Goal 9) – Reduce Inequalities (Goal 10) – Sustainable Cities and Communities (Goal 11) – Responsible consumption and production (Goal 12)] and
- Peace and Partnerships (P4) [Peace, Justice, and Strong Institutions (Goal 16) – Partnerships for the Goals (Goal 17)]

Beyond global focus and established policy frameworks, we observe proliferation of targeted eco-systems towards SDG achievements (Glass and Newig, 2019). A study suggests (Shulla, et al., 2021) that international developments and emerging trends have a somewhat localized influence in response and focus on the SDGs. Thus, understanding the alignment and relevance of initiatives from a geographic perspective helps calibrate if the focus is meaningful and effective in that geo-context. Recent research findings identified lesser engagements, shallow stakeholder perspectives, lack of integration processes and in some instances even non-optimal practices (Urban and Wójcik, 2019) serve as obstacles towards embracing the SDGs across different organizations (Yang and Cormican, 2021). A study conducted to compare the 17 SDGs across 162 UN member states also reveal interdependencies in SDG achievements (Türkeli, 2020). It is necessary to understand how focused initiatives by organizations including banks can be more instrumental and effective. In this scenario, we explore the primacy of the SDGs among banks with alignment to geographies, their inter-relatedness and potential exploration of complementary capabilities.

### 2.2. Role of banks towards achievement of the SDGs

Contemporary sustainable banking was socially constructed under the influence of larger socio-political and economic factors and is influenced by the UN, the World Bank, central banks, the UN Environment Program (UNEP), and other agential factors towards investments aligned to corporate social responsibilities. Gradually these initiatives translated across Multilateral Development Banks (MDBs) (Mendez and Houghton, 2020) and other commercial banks. As an outcome of how financial market could support eco-efficiency, the Dow Jones Sustainability Index (DJSI) was introduced in 1999 (Schmutz, et al., 2020). Banks, as an important orchestrator of socio-economic development, have been responsible to build an overarching understanding of sustainability and interact closely with industry-government and wider ecosystems to foster sustainable developments (Dawson, 2022). SDG related financial instruments, like social impact bonds (Méndez-Suárez, et al., 2020) and green funding have been issued at a significant pace. The estimated market for sustainable investments is at ~35 trillion USD (GSIA, 2020).

Banking organizations themselves engage in sustainable practices that are implemented to achieve an outcome (Baumgartner and Rauter, 2016). These help customers avail savings and adhere to sustainability standards: award of credits for microfinance and exclusion of hazardous or negatively impacting industries from investment beneficiaries. Other considerations include environmental benchmarks in investment decisions and contracts; community financial health and inclusion; and influencing of long-term sustainability (Francisco Javier Forcadell, 2020). Banks increasingly leverage wider ecosystem including collaborations with fintech (Rainer Alt, 2018), technology providers to spread solutions, awareness and advisory for sustainability. Moreover, various banks provide international finance support to many developing countries for wider SDG developments. Banks often adopt a balanced approach to integrate sustainability factors - environmental, social, and ethical in lending and investment decisions and engage in corporate and community welfare. (Giuliana Birindelli and A. I, 2015). Banks, as corporate citizens, can enable sustainable development by empowering communities through building awareness, learning, and involving people and community through multiple participatory techniques (Eitzel et al., 2018). Banks, as trusted intermediaries, can also steer public-private partnerships and accelerate investments in agriculture including digital capabilities that will benefit vulnerable communities and contribute to climate change mitigations (Koo, et al., 2022). The research reveals technology-driven practices to improve agricultural production in ANZ and East Asia.

Although banks allocate funding for community welfare in their focused regions, there is limited pre-defined objectives and direct involvements towards sustainable developments. Further there is reluctance to stop funding to the fossil fuel companies (The Guardian, 2020). Moreover, triggered by geo-political and environmental uncertainties, there has been some declines in sustainable fund allocation and SDG financing (Anon, 2022). Banks, being trustees of their local community wealth and prosperity, strive to ensure their own financial health and resiliency. Multiple countries have initiated measures to make their financial system 'green' (Lee, 2020). In September 2019, multilateral development banks (MDBs) committed to work further with national development banks to develop policies and strategies for a just transition to economic diversification. As several regions still rely on practices that are environmentally hazardous (World Economic Forum, 2019), global banks increasingly collaborate among themselves to localize and contextualize policies and strategies (Mendez and Houghton, 2020).

To address the concerns around effectiveness of banks and other organizations towards impacting sustainable developments on the ground, regulatory bodies are governing business practices aligned to environment and sustainability goals. Central banks play a significant role to steer sustainability focus for respective geographies. For instance, in Brazil, the BACEN (Banco Central Do Brasil) requires all banks to establish socio-environmental risk systems based on the principles of relevance (Banco Central Do Brasil, 2021). Green Finance Task Force of The People's Bank of China suggests 14 recommendations across four broad themes: information flows, legal frameworks, fiscal incentives, and institutional design (Lee, 2020). Globally regulations provide

standards for how organizations can use green bonds to raise capital, mandate financial advisors to disclose how they integrate sustainability considerations in their investment decisions and make it imperative for organizations to report in a standardized and digitized manner. This level of information transparency is instrumental for better measurement of sustainable financing and effectiveness towards development.

#### 2.3. SDG focus and motives of banks - exploring contextual variances

Banks demonstrate multiplicity of strategies to drive their sustainability objectives (Olaf Weber, 2016). In some instances, we observe, SDG focus is central and integrated - banks transform their core operations while simultaneously promoting the SDGs (Zimmermann, 2019). Conversely, sustainability focus of banks also ranges from being peripheral at times, and even disintegrated, to instances where banks merely demonstrate promotions of SDGs without embedding in core businesses. Ability to embed sustainability imperatives as prime to an organization helps re-align offerings and customer engagements based on the SDGs, may lead to more significant impacts. Our review of existing research on sustainable banking practices reveals multiple motives like ethical foundations and focus on sustainable products/solutions/initiatives and business cases (Aracil & Juan-José Nájera-Sánchez, 2021). There are also instances of altruistic/corporate citizenship considerations that are aligned with the SDGs mediated via ethical pursuits (Giuliana Birindelli and A. I, 2015). Different motives co-exist within organizations with varying focus and primacy (Santana, 2015). However, assessment of initiatives is necessary to distinguish genuine sustainable endeavors from opportunistic symbolism, or greenwashing initiatives (Priyanka Aggarwal, 2011). This necessitates need for research to evaluate banks' SDG focus, effectiveness, and outcomes in geographic and local contexts.

#### 3. Methodology

Exploratory research is applied on bank narratives to assess sustainability focus aligned to the 17 SDGs. Bank sustainability disclosures from calendar year 2018-2023 are evaluated. The SDG initiative data is codified to generate SDG focus highlights across the geographic regions, discovering key motives of implementation. Based on the study we see a significant overlap of motives – and distinguishable motives aligned with the socio-political environment in specific geographies. Divergence in the number of SDG initiatives and the level of amplification across observed banks from different geographic regions helps draw comparatives. Such divergences may stem from difference in capital allocations by the banks on SDG initiatives. We follow a systematic approach to remove data bias and measure SDG focus based on similar banks across geographies. SDG focus for respective geographies is analyzed across the four SDG areas - People (P1), Prosperity (P2), Planet (P3), Peace and Partnership (P4). This helps discover findings for RQ1: What are the key sustainability focus areas of banks, aligned with the 17 SDGs?

While the research is anchored on classifications of SDG focus, we apply inductive methods to discover motives of initiatives (Woiceshyn and Daellenbach, 2018). To do this we rely on existing literature, and qualitative assessments including inter-rater data analysis by subject matter experts. Our observations and experience indicate varying degrees of overlap among motives. The three prime motive categorizations include the following - (A) SDG focus that helps improvement of core business or peripheral ventures of the banks' operation. (B) SDG focus to support, invest, and finance other industries, organizations, governments pursuing sustainable initiatives through green products/solutions. (C) SDG focus as corporate citizenship, giving back for social, economic, and environmental benevolence from an altruistic and ethical consideration. Beyond the three key motives the research tries to explore other relevant drivers. Through a rigorous qualitative data coding of narratives, the motives are discovered in response to RQ2: What are the motives for the banks across geo-segments in embracing sustainable

developments?

Beyond observing  $\sim$ 50 banks separately the research collates narratives for each geo-segment by aggregating narratives across the sample banks from that region. This practice not only develops a collective view of banks' SDG focus on the region, but it also helps overcome biases and skewedness arising from singular observations of banks. Collective views on banks across geo-segments help address RQ3: What are the distinctions and similarities in SDG focus across varied geo-segments?

The research studies the focus of SDG initiatives, benchmark practices, and associated motive orientations as demonstrated by large banks globally. For this study 50 banks are identified across 9 geo-segments as indicated in Table 1; Followed by. 1. North America; 2. UK and Western Europe; 3. ANZ and East Asia; 4. Eastern Europe and Middle East; 5. Eastern Europe and Central Asia; 6. Middle East and North Africa; 7. South-East Asia; 8. Sub-Saharan Africa; 9. Latin America and Caribbean. These geo-segments correspond to a set of countries and represented banks as indicated in Table 1. The regions are chosen based on multiple factors catering to homogeneity in developmental indicators within each segment. Moreover, each segment has notable variations with the others on factors relating to socio-economic, human development, demographic, technology diffusion among others. Similar geo-segments have been studied in clusters in previous instances in relation to achievement of sustainable developments (Jeffrey and Sachs, 2021). For greater effectiveness, the banks across geo-segments will have varied focus towards sustainable developments. These are likely to be aligned to the imperatives, pressing concerns and sustainability challenges of the respective geo-segments.

The banks for this study have been identified based on their primacy, regional/national presence and relevance including key parameters like global operations, size by revenue and asset under management, significance in the geo-segment, customer base, high orientations for growth, transformation, and sustainability. The identified 50 banks may be considered suitable leading representatives and in some cases benchmarks to understand sustainability focus among banks within the geo-segment and country. For some geo-segments studied, we included more banks to ensure representations across considered countries. Academic and practitioner experts were consulted to validate the chosen sample for this study. The banks identified for this study have been coded to maintain anonymity and reduce biases and referred to using codes throughout the research.

Relevant narratives obtained from the public disclosures (annual, sustainability and CSR reports, website, press releases and others) of the

**Table 1**Span of data sources across geo-segments and countries.

Geo-Segments	North America	UK and Western Europe	ANZ and East Asia	Eastern Europe and Middle East	Eastern Europe and Central Asia	Middle East and North Africa	South-East Asia	Sub-Saharan Africa	Latin America and Caribbean
Countries in consideration for research	US, Canada	UK, France, Spain, Italy, Germany, Netherlands, Switzerland	Japan, Australia, South Korea	Israel, Poland, Turkey, Czech Republic, Hungary	Russia, Kazakhstan, Ukraine	Qatar, UAE, Saudi Arabia, Egypt	China, India, Singapore	South Africa, Nigeria, Togolese	Brazil, Argentina, Columbia, Mexico
Number of banks studied and coding	6 Code: B1 - 6	9 Code: B7 – 15	5 Code: B16 - 20	<b>5</b> Code: B21 - 25	5 Code: B26 - 30	<b>5</b> Code: B31 - 35	5 Code: B36 - 40	<b>5</b> Code: B41 - 45	5 Code: B46 – 50

50 banks highlight their orientations towards sustainable developments and banking practices. Public disclosures by the banks may be considered reliable data sources - indicates institutional focus, initiatives, and performance among others. All the related public disclosures analyzed in the study were obtained from the respective organization websites. These reports are mostly available in.pdf format. The reports were scanned/searched for relevant narratives around a set of <code>keywords¹</code> aligned to the scope and theme of study on sustainability. These keywords are developed iteratively and continuously through a feedback loop, Natural Language Processing (NLP) capability, algorithmic scraping and in consultation of experts, inter-raters (David Armstrong and T. M, 1997) and practitioners to ensure comprehensiveness. Fig. 1 indicates the overall methodology followed to derive bank focus and motives across 9 geo-segments.

Beyond keywords, the study performed co-word analysis (He, 1999) to generate a comprehensive search strategy and association of keywords to understand sustainable banking practices. The data across the banks disclosures has been captured from ~195 reports over the period of study to understand continuity of observations. The public disclosures (for CY, 2018 to 2023) of the banks are considered for this longitudinal research. The timespan is particularly significant as it helps us understand the focus on sustainability in a dynamic operating environment spanning the period of global pandemic crisis and beyond. In total around sixty thousand narrative sentences across the 50 banks were studied for this qualitative analysis. The relevant narratives were discovered as parts of paragraphs, sections, tables, visuals from the reports.

The coding and analysis are achieved by applying qualitative theme

based narrative analysis and NLP, to build the analysis for 9 geosegments as is shown in Fig. 1. The research bases its coding process on categorization of the narrative disclosures into SDG focus areas. orientations, and motive alignment. The narratives were coded applying theme based narrative analysis techniques for qualitative research; natural language processing; further analyzed to present the findings and insights. Qualitative information in-addition to the narratives included relevant visuals, graphs, and illustrative tables and if any dedicated specific section on sustainability — as available in the reports considered. Such components play a central role in corporate communication practices. The collective narrative across the banks within a geo-segment is utilized to develop the analysis for 9 geo-segments. Aligned to the three research questions, the output of the data analysis generates the SDG focus, assessment of motive alignments, complementary focus areas of banks and their comparative similarities and dissimilarities across geographies. This assessment can help understand if the demonstrated sustainability orientations of the banks are aligned to the developmental needs of the respective geo-segments. The developmental needs of the geo-segments can be ascertained based on SDG index scores published as part of Sustainable Development Report (Jeffrey and Sachs, 2021). The SDG index indicates scores and performance of countries/regions in relation to the 17 SDGs indicating which areas are progressing and areas that need greater focus in achievement of sustainability objectives.

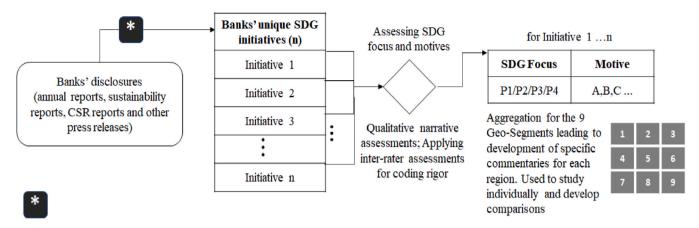
Choosing a single industry context in this research ensures that the business environment is consistent across the institutions within the geosegments. The banking industry provides access to large number of publicly listed significant institutions globally to make a useable sample for this and future research towards more generalized findings. A measurement framework considering the interlinkages of the SDGs provides guidance on a systemic approach for initiatives and realization of effective outcomes. This is important as the progress reporting on SDGs varies widely across organizations. Irrespective of some limitations pertaining to self-serving biases, institutional public disclosures in financial, sustainability, CSR reports are reliable and compliant to stakeholder expectations. Other limitation of the narrative analysis relates to subjectivity in connection with the coding process. Reliability is ensured through a systematic and methodical inter-rater analysis of the data, NLP methods alongside other prescribed processes in the geosegment commentary development.

### 4. Research findings

The research findings are reported in this section in a series of nine brief geo-specific commentaries. Each commentary attempts to address the research questions on focus areas, sustainable practices of banks targeting the operating geography and motives of banks to evaluate focus maturity. For the nine geo-segments a qualitative evaluation of the prime motives of banks vis-à-vis the relevant SDGs is provided. Some instances demonstrate existence of more than one motives simultaneously. Comparing across the nine geography specific distinctions and

 $<sup>^{1}</sup>$  Achieve, Action, Affordable, Agreement, Agriculture, Air, Animal, Art, Atmosphere, Award, Below Water, Biodegradable, Bio-diversity, Black, Building, Carbon, Children, Circular, City, Clean Energy, Cycle, Climate, Collaboration, Community, Competition, Contradiction, Consortium, Consumption, COP, COVID-19, Crime, CSR, Culture, Decarbonization, Decent Work, Design, Development, Diversity, Earth, Ecology, Economic Growth, Economy, Education, Effective, Electronic, Emissions, Employee, Endangered, Emission, Energy, Entrepreneur, Environment, Equality, Equator Principle, Equity, Ethics, Erosion, ESG, Farmer, Fertilizer, Fine, Fintech, Focus, Food, Footprint, Funding, Future, Gender, Global, Goal, Good, Government, Governance, Green, Green Bank, Green Bond, Group, Growth, Health (Good, Mental, Work, Physical), Homeless, Housing, Hunger, Ice, Inclusion, Industry, Inequality, Infrastructure, Initiative, Innovation, Institution, Insurtech, Investment, Irresponsible, Islamic Banking, Justice, Land, Leader, LGBTQ+, Life, Literacy, Manufacture, Marginalized, Marine, Meaning, Micro-finance, Mission, Nation, Net-Zero, Norm, Ocean, Ozone, PACTA, Paper, Pandemic, Partnership, Peace, People, Performance, Penalty, Plan, Planet, Pollution, Poor, Profit, Production, Prosperity, Pollution, Poverty, Purpose, R&D, Recycle, Regeneration, Regulation, Renewable, Research, Resilience, Responsible, Re-use, Revenue, River, Risk, Rural, Sanitation, School, Scope, SDG, Sea, Security, Ship, Skeptic, Skill, Smart, Snow, Social, Soil, Solar, Source/Sourcing, Strategy, Strong Institutions, Supply-chain, Sustainable, Technology, Thermal, Tomorrow, Trust, Urban, Vision, Volunteer, Waste, Water, Well-being, Wind, Women, Zero Hunger.

### Assessing Banks' Narratives to Discover SDG Focus and Motive



The reports were scanned/searched for relevant narratives around a set of keywords aligned to the scope and theme of study on sustainability.

Fig. 1. Process to assess banks' narratives to determine SDG focus and motives.

similarity in SDG focus by geo-segments are highlighted.

# 4.1. Banks in North America demonstrates high focus on sustainable development goals 5,7, 8, 9, 11, and 13

The North American banks focus highly on the SDGs associated with Prosperity - SDGs 7, 8, 9 and 11- rendered across core business, ecosystem entities, and communities. Aligned with SDG 7, banks enable net zero transition of other companies, support circular economy, and raise funds through green bonds while monitoring and regulating their own energy use. The key initiatives around SDGs 8, 9 and 11 include investments in new industry and skill development and well-being of communities, employees, and customers. For instance, a bank steered online upskilling programs for more than 140,000 youths; another bank invested US\$ ~64 million for the youth readiness programs. Other focus areas across Prosperity and People goals are affordable housing, education programs, healthcare solutions for community development and promoting gender/racial equity. Leading banks have been prioritizing productive employment, decent job creation, creativity, entrepreneurship, financial accessibility, and innovation. Among the Planet focused goals, SDG 13 is prevalent with banks channeling projects to promote clean energy, infrastructure, water and waste management, environment, and wider ecosystem management. Apart from Motive A relating to core operations, banks provide financing support and governance for customers/partners, which help in energy efficient heating, ventilation, and air conditioning systems in homes and offices. The limited communication on people focused SDGs indicates an emergent focus and need for increased initiatives and communication around SDGs 1 to 6. Among these, North American banks show the highest inclination towards SDG 5: Gender Equality, with most institutions reporting on employee diversity across organizational hierarchies (Motive A). Additionally, banks collaborate with organizations for creating purpose driven ecosystems globally aligned with SDG 17. We see multiple association of banks with global fintechs, insurtechs and startups to steer sustainability. Additionally, banks also collaborate with varied climate experts, global institutions, and organizations to influence and collaborate in formulation of policies and regulations.

Motive narratives across these SDGs highlight initiatives have been driven predominantly aiming towards banks' core operations - Motive A and Motive C – corporate citizenship, indicating a focus towards compliance and promotion. The opportunity lies in aligning initiatives with Motive B – to support, invest and finance other industries and organizations and enable sustainability transition with focused products

and financing schemes. This helps establish banks as purposeful intermediaries in sustainable developments across industries. Banks invest in technology adoption around automation, artificial intelligence, open banking APIs and extended reality to deliver new products and services aligned with Motive B.

# 4.2. Banks in Western Europe and UK demonstrates primary focus on sustainable development goals 1, 3, 4, 7, 8, 9, 11, 13, 14, 15, and 17

The banks in this region prioritize the SDGs aligned with prosperity SDGs 8, 10, 11, and 12. This indicates strategic alignment with EU agenda of 'Green Deal' (European Commission, 2020) - sustainable and inclusive transition, enabled by technology and capability building (Jagannathan, 2020). Aligned with SDGs 11 and 12, most of these banks raise green bonds and sustainability focused funds for green infrastructure. They also invest in sustainable projects - some banks have pledged over EUR 200 billion; some banks have designed innovative products like sustainable credit facilities and inhouse carbon footprint reduction. Additionally, banks have implemented inhouse sustainability assessment framework for project financing. Banks provide assessment for sustainable real estate projects – green, connected, and intelligent architecture, supporting co-working businesses.

COVID-19 impairments and continued geo-political crisis in Europe influence CSR initiatives to support homeless and facilitate employment - particularly relevant for resilience. In line with SDGs 8 and 10, banks encourage inclusiveness in workforce - women and non-binary genders, greater racial and ethnic diversity, especially in the senior roles. Focus on prosperity indicate complementary SDGs especially SDGs 7, and 9 need prioritizations. People focused SDGs show an emerging focus, indicating need for increased initiatives and communication around SDGs 1 to 6. Banks are funding social impact financing and small businesses and rural communities - financial education and inclusion, digital skilling, affordable healthcare, virtual healthcare to help in the pandemic and other crisis responses. Banks address the planet related SDGs through focus on renewable power generation, electric vehicles, and insulation facilities. Additionally, banks also partner with organizations for Conservation of Life Below Water relating to SDG 14 and biodiversity - Life on Land in relation to SDG 15. Banks collaborate with cross-industry organizations, fintechs, big techs, and other technology companies for electric vehicles, green buildings, and sustainable operations and governance, in relation to SDG 17. Most banks are part of Net Zero Banking Alliance (UNEP, 2022), and many are part of European Union's Green Deal (European Commission, 2020).

Like North American peers, banks in this region, implemented technology-enabled energy efficient workplace, leveraged data, AI, IoT, and platforms for learning and skilling for sustainable operations and governance. Narrative analysis derives that the initiatives have been driven predominantly by motive A – core operations and C – corporate citizenship, giving significant opportunity for devising strategies to address customers' sustainability needs by financing other industries, organizations, and initiatives in projects for sustainability, motive B.

# 4.3. Banks in East Asia and ANZ demonstrate high focus on sustainable development goals 7, 8, 9, 11 and 13

The banks in East Asia and ANZ exhibit focus on Prosperity - SDGs 7, 8, 9, and 11 as the other global peers do. Aligned with SDG 7, banks are supporting net zero transition of other companies, reduction of inhouse energy use, and investments in electric batteries, solar and wind power generation. The key initiatives around SDGs 8, 9 and 11, as observed, include investments in improving the ease of living across communities and customers. Banks in this region finance sustainability projects like solar power, or ultra-supercritical thermal power plants in developing economies of Asia and Africa. Banks also encourage innovative technologies to facilitate affordable housing, education and healthcare solutions, accessibility to financial institutions for micro, small and medium enterprises. Subsequently, the focus on Prosperity also indicates an opportunity for the complementary focus of banks in this region on SDGs 10 and 12. Among the Planet focused goals, SDG 13 is dominant. Some banks invested in and financed organizations working for carbon recycling technologies. We also observe credit products focused on rural environment protection and sustainable agricultural practices – with the protection of local flora and fauna (SDGs 14 and 15), emission reduction and water conservation as key criteria for loan approval. Among People focused SDGs, banks in East Asia and ANZ show the highest inclination towards SDG 4: Quality Education. Holistic education influences other People focused goals, primarily SDGs 1 and 5 and enables a future ready workforce. In one encouraging instance the education target is to touch the lives of more than 1 million people among local communities. Yet, the limited communication intensity indicates significant opportunity for increasing focus on the People

Banks adopt analytics and machine learning to assess carbon footprint; virtual assistance to enable financial accessibility; and prioritize cyber security to secure usage of smartphones and wearables, digital and biometric authentications, and processes. We observe the intelligent use of drones and satellite imagery in agricultural practices to reduce carbon footprint and improve food security. Banks in this region partner and promote (SDG 17) innovation and accessibility by organizing startup contests, venture funding, and digital empowerment of ageing population.

The majority of the initiatives reflect motive A – sustainability in core operations. Banks in East Asia and ANZ region differ from that of North America, UK, or Western Europe in significant focus on financing other industries, organizations. More focus on Motive B is evidently manifested across multiple narratives. This is followed by responsibility and focus on community, Motive C.

### 4.4. Banks in Eastern Europe and Middle East demonstrate primary focus on sustainable development goals 5, 8, 9, 11, 12, and 13

Prosperity SDGs like SDGs 8, 9, 11, and 12 are priorities for the banks of Eastern Europe and Middle East. Technology enabled governance and electronic transactions help banks achieve inhouse sustainability targets – in some instances savings of up to 20 million sheets of paper-in relation to SDGs 11 and 12. Banks are purchasing electricity from low-emission sources and rationalizing energy consumptions. Narratives demonstrate banks' adherence to multiple sustainability standards for infrastructure and ESG risk assessment, related to SDG 9, like LEED certification

(USGBC, 2022), IFC Performance Standards (IFC - World Bank, 2021) and Equator Principles (Equator Principles, 2022), ICMA Social Bond Principles 2020 (ICMA, 2020), LMA Green Loan Principles (LMA, 2022) and others. Aligned to SDG 8, banks encourage an inclusive and circular economy, financial accessibility, and inclusion, through employment, infrastructure development and even corporate charities. Some banks partnered to provide free finance education for students in Hungary, Slovakia, Romania, and Moldova. Focus on the SDGs related to Prosperity infers an opportunity to steer complementary SDGs 7 and 10.

Most banks in this region prioritize Planet focus on SDG 13-climate actions, exploring green mortgage, green grants, green car initiatives, and reduction in paper and plastic consumption. Drive to increase women representation in leadership roles – some banks have more than 40% women in board - and employing differently abled individuals, aligned to SDG 5 – Gender Equality, are evident. In cooperation with the European Investment Fund (EIF, 2022), banks help entrepreneurs. The observed banks also finance women owned small-business supporting wider women-empowerment. While initiatives are in place, we observe opportunities for banks to address more People focused SDGs by steering education, health, and well-being. Banks are adopting public-private partnership models, aligned with SDG 17, for supporting projects related to environmental protection and the pro-environmental modernization of public service facilities. Digitization of sales and service, governance of environmental impact in core activities and paperless transactions are among key technology priorities. Further, some banks have been investing in technology startups that develop solutions addressing social and environmental issues.

Although countries of the region are under diverse governance (EU 27 and non-EU), a high degree of homogeneity is observed as SDG motives are fairly centered around banking operations and core products (Motive A). Beyond transforming inhouse processes or sourcing drivers to implement responsible consumption, financial institutions are encouraging borrowers and consumers to embrace sustainability through multiple organizational messages and practices like ESG assessment in lending and financing. Evidence on Motive B towards enabling other businesses to adopt more sustainable practices were present across narratives in banks from this region.

# 4.5. Banks in Eastern Europe and Central Asia demonstrate primary focus on sustainable development goals 4, 6, 7, 8, 9, 11, 12, and 13

Initiatives of the banks in Eastern Europe and Central Asia align towards prosperity related SDGs 7,8, 9, 11, and 12. Aligned with SDGs 7 and 11 banks adopt global certifications, green capital expenditures for sustainable transport, technology automation to optimize inhouse energy consumption, and e-waste management. One bank in this region launched collaborative projects for environmental recycling of end-of-life electronic waste. Aligned to SDG 12, banks finance renewable energy projects including wind and solar power plants in Russia. Incorporating ESG factors in operations like lending and investment, for instance considering responsible investments in assets is prevalent among the banks in this region.

Relating to SDGs 4, 8 and 11, banks extensively facilitate learning opportunities and future skill development, as this will further steer economic prosperity and societal well-being. Higher educational establishments, promoting STEM education to develop future talent pool, financial literacy and inclusion are key aspects of these initiatives. Banks are engaging in multiple charitable initiatives from corporate citizenship perspective. For instance, a bank's charitable foundation developed app based gamified programs to drive financial literacy for youths. We observe, specific drives to foster regional culture for society and wellbeing – SDG 3 and recycling initiatives aligned with SDG 6. A bank held online exhibitions promoting artists and collectors that enabled over 11 million online walking tour views on social networks. Among the Planet SDGs banks have undertaken initiatives aligned with SDG 13 – climate action. To preserve biodiversity, some banks in this region are

participating in the conservation of endangered species like Amur tiger and Persian leopards, aligned to focus on SDG 15 - life on land. Along with paperless transactions, banks in this region have been investing in digital platforms, reliable systems for data storage, remote identity verification, monitoring, and improving cyber literacy of customers to achieve system resilience and reach. Further, some banks have been leveraging smart automatic parameter control for prudent use of office resources.

We observe an overarching focus on the SDGs associated with People, Prosperity, and Planet in this region. The sustainability narrative highlights dominance of Motive A – focus on core operations. This leads to potential focus opportunities on financing other industries, organizations, aligned with Motive B and wider prosperity issues, and community development aligned with complementary SDGs 1,2,5 and 10. In a recurring theme, we observe how banks venture on sustainability focus for organizational development with a required focus on impacting and transforming other industries - may be attributable to banks' direct span of control.

# 4.6. Banks in Middle East and North Africa demonstrate primary focus on sustainable development goals: 5, 7, 8, 9, 10, 12, 13 and 17

As evident across strategic objectives for major banks in this region and other prime narratives, banks integrate sustainable finance and environment, social and governance criteria into financing activities to deliver profit with purpose. Banks lend to businesses that contribute towards sustainable development goals, improve access to finance for smaller enterprises and underserved groups. Banks in this region amplify through multiple focused documents that delivering sustainable finance is the most significant way in which banks can support national and global sustainable developments. Banks believe that sustainability orientations also help them reduce reputational risks and maximize business opportunities as evident across multiple narratives. Banks focus on financial inclusion, accessibility, and education alongside digital innovation and transformation relate to multiple sustainability initiatives in this region. Data security, customer privacy, and customer experience are the key areas of technology innovations in the region. Throughout the reporting periods, most banks collaborate with fintechs to harness multiple innovative capabilities. In some instances, we observe how banks support and deliver a range of support towards social and humanitarian, arts and culture, health and environment, economic and international affairs, and sports. Multiple banks focus to align with SDGs 4, 7, 8, 9, 12, and 13. Banks in this region demonstrate collaborations with the European Union especially for energy efficient and renewable energy projects and associated fundings.

We observe instances where many banks articulate realistic and quantitative estimates on emerging opportunities arising from transitions to a greener, inclusive, and sustainable economy. These quantitative estimates clearly indicate how banks intend to capitalize sustainable practices for value realization and associated opportunities beyond core operations aligned with Motives A and B.

# 4.7. Banks in South-East Asia demonstrate primary focus on sustainable development goals: 1, 4, 5, 6, 7, 8, 9, 10, 12, and 13

Amid fundings to mitigate environmental and social risks, the banks in this region focus on SDGs associated with Prosperity. Banks steer inclusive finance, product innovation, coordinated epidemic prevention, process and governance mechanisms to build green financial requirements for due diligence, project assessment, credit rating, fund disbursement and post-lending/investment management, primarily aligned with SDGs 8 and 9. These procedures follow global regulations and, in some cases, are more rigorous to establish benchmark practices. In multiple instances, banks in this region amplify sustainability initiatives including establishing benchmarks through awards and recognitions like – 'Best Green Financial Bank of the Year', 'Best Green Financial

Bank in Overseas Market Performance' among others.

A core strategic intent to avoid risks and uncertain scenarios including climate inclemency, rising sea levels, social disruptions, and threat of diseases in many cases influence the embracing of sustainable development. Sustainability focus of banks needs orientation around complementary SDGs in Prosperity like SDGs 7, 10, 11, and 12. During the reporting period, we observed most banks issued guidance on strengthening protection of and service provisions to women employees, pertaining to SDG 5, by guaranteeing their right to rest, leisure and paid holiday during maternity. Regional banks increasingly offer jobs to financially weak, women, and marginalized individuals to steer poverty alleviation aligned to SDGs 1 and 2.

Additionally, the banks conscientiously collaborated and fulfilled the national governments' focus on green funding, improvement of agriculture, renewable energy, education, and health. Banks demonstrated continued focus over the period to enable digital inclusive finance by collaborating with fintechs in the region and globally. We observed multiple initiatives to provide financial services for small and micro enterprises, control risks and sustain business development. In comparison to other regions, we see an emergent focus on technology. Along with technology collaboration, banks consider both in-person and branch-based banking. Mobile technology is focused as primary channel for banking across this region with increasing investments in elevating customer experience.

As evident from the observations associated with South-East Asia, the sustainability focus is comparatively lesser than that of the developed regions. This leads to significant opportunities for the South-East Asian banks to adopt the best practices for SDG implementations by other regions and promote the SDGs for wider society and banks' prosperity. Initiatives in SDG are primarily viewed to fulfill Motive C appearing socially responsible. Embedding sustainable developments as core strategic imperative is observed sparsely among the sample banks of this region.

### 4.8. Banks in Sub-Saharan Africa with primary focus on sustainable development goals: 3, 4, 8, and 13

The banks in Sub-Saharan Africa show a high focus on People focused goals for education, health, and well-being like SDGs 3 and 4. Mostly driven by Motive C: Corporate Citizenship, they launched multiple initiatives helping students with online coaching and partnered with African Universities to distribute a substantial number of laptops and mobile devices for enabling online learning sessions. Banks are supporting the development of resilient healthcare facilities in Africa, by donating for medical equipment, volunteering for healthcare operations, and enabling training of nurses in this region to manage the health crisis arising out of the pandemic. Focus on People indicates additional need for focus on SDGs 1,2, and 5.

To foster economic growth, banks primarily focus on SDG 8, enabling direct fund transfers to farmers and supporting underserved communities. A bank supported a platform-based business that digitally connects small suppliers in FMCG from African towns. Banks partnered with the government, employment exchange group and several other businesses to create large job opportunities on a cross industry platform for unemployed youth. Banks partnered with top technology companies to impart digital skills to small and medium enterprise employees and owners, with a focus on SDG 17.

Among the Planet focused goals, the Sub-Saharan African banks focus mostly on SDG 13 relating to climate actions. These include projects which promote clean energy and relate to carbon footprint management. The banks in this region are using web-based fleet management data collection and reporting service that enables users to measure and manage CO2 emissions. Digital literacy campaigns for African youths and other population segments are also prominent across narratives. Focused topics include cloud fluency and cybersecurity. Banks are also entering into fintech partnerships to expand remittance

services for migrant workers and other cross border payments, connecting suppliers with FMCG companies.

The banks in Sub-Saharan Africa can play a key role in the transition to a low-carbon and sustainable economy, by transforming their own operations and products to support the SDGs. The motive narratives across these SDGs indicate initiatives have been driven predominantly by motives A and C; leaving significant growth opportunity for Motive B — to support, invest, impact and finance other industries and organizations.

# 4.9. Banks in Latin America and Caribbean demonstrates primary focus on sustainable development goals 4, 8, 10, 13, and 16

The banks in Latin America and Caribbean prioritize Prosperity focused goals like UN SDGs 8 and 10. To advance economic growth agenda, key banks in this region accelerate critical programs on financial accessibility. Evident instances of transforming bank branches into consultation centers that opened new opportunities for employment. Multiple banks in this region advocate for high-quality freelance or small craftsmen and women entrepreneurs, encouraging both employability as well as economic growth, inclusion, and accessibility. Banks represented in international conferences created new opportunities for Brazilian students hailing from LGBTQ + communities. Banks promote innovative technology apps and portals rendering accessibility to customers. These overcome disabilities including hearing impairments.

Subsequently, the focus on Prosperity also indicates a complementary focus on SDGs 7, 9, 11, and 12. SDG 4: Quality Education is the prime focus among the People Goals. Banks in this region launched remote training programs and platforms that supported public schools with tools to resume learning experiences for students during Covid-19 pandemic.

Among the Planet focused goals, the banks prioritize SDG 13: Climate Action in partnership with leading global banks to incorporate ESG practices like sustainable funding, impact measurement and assessment, socio-environmental risk assessment, and human rights. Amid socio-political crises, we observe distinct focus on SDG 16: Peace and Justice Strong Institutions. Banks in this region are adopting technology, electronic transactions, and virtual learning platforms to manage in-house energy consumption, spreading awareness on AML, ESG and other governance issues. Banks have also created innovation centers to design sustainability focused technical solutions and to support SMEs and customers.

Motive narratives across these SDGs indicate initiatives have been driven predominantly by motives A and C, with an opportunity of growth for Motive B – to support, invest and finance other industries and organizations. Banks in Latin America and Caribbean can play a key role in transition to low-carbon and inclusive economy, by transforming their own operations and products to support the SDGs.

#### 4.10. Comparative view across the 9 geo-segments

The application of qualitative narrative assessments to calibrate SDG orientation is a methodological novelty that this research operationalizes. Our research provides a unique longitudinal approach to measure banks focus on the SDGs. SDGs that need focus over a time-period, prioritized SDGs specific to geographies are identified. This research evaluates SDG initiatives by banks at the intersection of themes – People, Prosperity, Planet, Peace & Partnership. A study of narratives across banks globally indicates multiple best practices and benchmarks which can help across regions and support global learning. The approach to cluster banks by specific regions clearly factors how SDG focus is contextual to operating environments. Interestingly the study indicates, banks within a specific region tend to embrace similar initiatives. While this may cater to the pressing needs of the region, it may impede a wider focus across all SDGs and render redundancies. Variance in focus across SDGs in a particular region will drive wider developmental

opportunities and devise unique value propositions for banks to explore.

This research focuses on a comparative analysis of the SDG focus of the banks across geo-segments. Moreover, generates an intuitive data visualization as in Fig. 2 to bring out present bank focus, variance across regions, and nature of alignment to the operating market. Fig. 2 compares intensity of sustainable initiatives by banks across the 17 SDGs visà-vis the present SDG Index (Jeffrey and Sachs, 2021) of the specific region. Despite the evaluations being qualitative – a direct comparison clearly reveals how the banks' sustainability initiatives are aligned to the SDG performance of the specific region. Moreover, it is evident from visual how bank narratives revolve on similar sustainability initiatives with primary focus linked to 'Prosperity' SDGs.

Greater diversity in SDG focus is likely to ensure comprehensiveness for regional/global sustainable developments. The comparative view in Fig. 2 clearly indicates the necessity for the convergence of strategic initiatives of banks to attend their SDG objectives and the requirements of respective geo-segments. Globally, prosperity emerges as a dominant focus leading to the relevance of a complementary approach to SDGs 10, and 12 and conforming to the motive narrative. Triangulating with motive narrative infers that the SDG orientation is more from a perspective of realizing value in core operations by enabling work, economic growth, innovation, energy efficiency, focus on renewable sources and circular consumption in multiple instances.

Opportunities for development in People focused SDGs is aligned with the needs for emerging markets and developing countries. For example, banks in Eastern Europe, Middle East and Central Asia have emerging focus on SDGs 1,2,3,5, and 6 aligned with the respective geographic focus. The visualization also reveals clear comparatives in SDG focus across regions studied. The People focused goals vary significantly among geographies, for instance, we see how banks in Sub-Saharan Africa and Latin America and Caribbean focus on SDGs associated with no poverty and zero hunger in comparison to other global banks. When this is viewed against the regional performance on the upper-half of Fig. 2 on specific SDGs 1 and 2 - it brings out clearly that banks in this region are focused on the 2 key issues that need to improve in this specific geo-segment. Appraisal of the regional performance (as in upper half of Fig. 2) across SDGs, can be considered as inputs in steering banks' SDG alignments. Focusing on challenging areas will be more effective towards improved sustainable developments in the region. While SDG 5 (gender equality) is on focus in North America and Western Europe; SDG 4 (quality education) is considered in East Asia, Latin America and Caribbean and Sub-Saharan Africa. All regions focus on 17 SDGs at varied levels and previous research demonstrates interrelatedness in SDG achievements. Specific needs and concerns of a region require to be addressed. This helps realize effective outcomes associated with sustainable developments. Assessing communication/ narrative intensity across the three motives - we clearly observed primacy of (A) followed by (C) and (B). Based on the evidenced narratives this varies across geo-segments. The distribution of narrative across the three motives is indicated in Table 2. Through the process of codification, it was realized some sustainability initiatives have focus across multiple motives as represented in Table 2. Despite some motive overlaps banks have a clear perspective on choice of sustainability initiatives and how banks are likely to generate value from SDG alignments.

#### 5. Conclusion

The research helps analyze the sustainable practices among banks globally and measure key SDG focus areas. Calibrating the span of focus across the region vs SDGs in Fig. 2 clearly brings out a comparative view of nature of variations across the banks represented across the nine geosegments. Systematically categorizing SDG focus across four key areas - People, Prosperity, Planet, Peace, and Partnership helps banks monitor focused initiatives comprehensively and strategize future scope based on complementary SDGs, rationalizing opportunities and risks in managing and balancing portfolio of sustainable initiatives.

					Low	Moderate	High
	P1 - SDG 1						
	P1 - SDG 2						
a a	P1 - SDG 3						
Based on	P1 - SDG 4						
ase	P1 - SDG 5						
	P1 - SDG 6						
Level Progress – SDG Index 2021	P2 - SDG 7						
gre x 2	P2 - SDG 8						
ro	P2 - SDG 9						
el F	<b>P2- SDG 10</b>						
SDC	<b>P2 - SDG 11</b>						
al I	P2 - SDG 12						
Regional	P3 - SDG 13						
Seg-	P3 - SDG 14						
	P3 - SDG 15						
	P4 - SDG 16						
	P4 - SDG 17						

SDGs: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reduced Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice, Strong Institutions, (17) Partnerships for the Goals

	Cimilate 1 ietic	, (1 1) Liie	Below Water, (	is) Ene on E	ana, (10) 1 C	ice, sustice, sur	ong moutat	10115, (17)1 til	therships for	the Goals
	Geo- Segments	North America	UK & Western Europe	ANZ and East Asia	Eastern Europe and Middle East	Eastern Europe and Central Asia	Middle East and North Africa	South- east Asia	Sub- Saharan Africa	Latin America and Caribbean
	Countries in consideration for research	US, Canada	UK, France, Spain, Italy, Germany, Netherlands, Switzerland	Japan, Australia, South Korea	Israel, Poland, Turkey, Czech Republic, Hungary	Russia, Kazakhstan, Ukraine	Qatar, UAE, Saudi Arabia, Egypt	China, India, Singapore	South Africa, Nigeria, Togolese	Brazil, Argentina, Columbia, Mexico
	Number of	6	9	5	5	5	5	5	5	5
	banks						Code:			
	studied and	Code: B1 – 6	Code: B7 - 15	Code: B16 - 20	Code: B21 – 25	Code: B26 - 30	В31 -	Code: B36 - 40	Code: B41 - 45	Code: B46 – 50
	coding	D1 – 0	B7 - 13	B10 - 20	B21 – 23	B20 - 30	35	D30 - 40	D41 - 43	D40 – 30
	P1 - SDG 1									
	P1 - SDG 2									
S	P1 - SDG 3									
jion	P1 - SDG 4									
Reg	P1 - SDG 5									
ss ] ite)	P1 - SDG 6									
cro   da	P2 - SDG 7									
s A.	P2 - SDG 8									
nks )23	P2 - SDG 9									
SDG Focus of Banks Across Regions (2018 – 2023 till date)	<b>P2- SDG 10</b>									
s of 18-	P2 - SDG 11									
cus (20	P2 - SDG 12									
Fo	P3 - SDG 13									
90	P3 - SDG 14									
$\mathbf{S}$	P3 - SDG 15									
	P4 - SDG 16									
	P4 - SDG 17									
People (P1), Planet (P2), Prosperity (P3), Peace, and Partnership (P4)					ship (P4)	Emerging Narratives / Initiatives			High Focus	

Fig. 2. Comparative map – banks' SDG orientation across regions vis-à-vis regional SDG progress.

**Table 2**Key motive codification intensity of the narratives on sustainability initiatives across banks.

Geo- Segments (→) Motive (↓)	North America	UK & Western Europe	ANZ and East Asia	Eastern Europe and Middle East	Eastern Europe and Central Asia	Middle East and North Africa	South- east Asia	Sub-Saharan Africa	Latin America and Caribbean
(A)	51%	53%	51%	76%	70%	49%	48%	31%	28%
(B)	30%	38%	52%	41%	37%	53%	48%	30%	25%
(C)	57%	61%	35%	43%	42%	32%	45%	85%	72%
A + B	12%	16%	11%	29%	31%	19%	14%	5%	5%
A + C	23%	32%	17%	21%	13%	11%	20%	19%	10%
$\mathbf{B} + \mathbf{C}$	13%	14%	13%	17%	8%	6%	10%	24%	12%
A + B + C	10%	9%	3%	7%	3%	1%	3%	2%	2%

Motives: (A) SDG focus that helps improvement of core business or peripheral ventures of the banks' operation. (B) SDG focus to support, invest, and finance other industries, organizations, governments pursuing sustainable initiatives through green products/solutions. (C) SDG focus as corporate citizenship, giving back for social, economic, and environmental benevolence from an altruistic ethical perspective.

Higher motive orientation indicated in **bold font** to understand variance across geo-segments.

Sum of the Motive intensity scores add up to over 100% as banks undertake initiatives with overlapping motives.

The period of this research is significant to study this phenomenon. This is aligned to the building of a global advocacy on sustainable developments as evident from global COP 26 pledges and initiatives across nations, formulation of multiple regulatory expectations across the regions among others. Moreover, the period of study is mediated by a global pandemic, varied geopolitical tensions and socio-economic uncertainties triggering multiple purposeful initiatives across industry sectors including banking.

This research faces limitations as sustainability narratives vary across banks and as many banks operate globally their sustainability narratives could be influenced by their regional sustainability orientations. Further, analysis of the effectiveness of sustainability initiatives and motives is a continued assessment. This may be challenging for corporate managers who need to monitor and note the complex interactions on a continuous basis. However, the qualitative assessment methodology indicated here is effective for decision-making given an unavailability of standardized mechanisms of comparison and evaluation of sustainability initiatives.

In future, integrating the visualizations as indicated in Fig. 2 and Table 2 with a system database will help evaluate data beyond SDG focus. An ability to timestamp the initiatives, best practices, benchmarks by systematically storing narratives from banks and other industrial entities will enable to calibrate progress and understand trends. For example, banks invest in technology, innovations, and promotion of electronic vehicles. Thus, implementing internal best practices and governance in financing renewable energy projects will steer effective impact in SDGs 11 and 12. Specific narratives on meaningful amplification of perspectives on sustainability codified by banks' motive orientations can make this visual interactive, contextual, and even predictive. Structured transparency of sustainability initiatives enhances the reputation of banks, and forge collaborations with global advocacies. Network diagrams to establish SDG associations, focus and impacts will be significant for strategic directions to evaluate if present focus is effective and provide considerations for next steps to improve sustainable development agenda. For instance, we observe North America, Western Europe and UK, ANZ and East Asia report similar SDG progress. In this region, banks publish limited narratives on People focused SDG initiatives. This may be primarily attributed to the fact that these regions already have high sustainable performance on these areas. While the representative banks in this region operate globally the findings reveal the focus on SDG is rooted in the region of origin. We believe, banks need to consider an international focus to strategize their SDG orientations. SDGs relating to life on land and life below water, both need to be focused on heavily, yet we observe limited narratives and focus. Sustainable banking practices across regions are linked with embracing digital technology and emergent innovations. Therefore, understanding the impact of technology in sustainable transformations could be explored further - beyond the instances indicated in this

research.

The measurement of SDG focus of banks will serve as a chronicle and reference for future research. Overlaying SDG focus discoveries in Fig. 2 vis-à-vis actual performance across SDGs for specific geo-segments (UN, 2021) will help understand banks' alignment towards SDGs that are under-performing and need greater focus. Such calibration of focus will ensure comprehensive purposeful developments. The primacy of focus across SDGs 7 (affordable and clean energy), 8 (work and economic growth), 9 (industry, innovation, and infrastructure), 11 (sustainable climate and communities) and 13 (climate) clearly reveals the present considerations for sustainability are restricted to realization of business objectives, value realizations and overall, Prosperity. On the other hand, varied and emerging focus on SDGs 1,2,3, 4, 5, and 6 infers Banks need to orchestrate societal development, skilling for sustainable and technology developments especially in collaboration with advisory and regulation bodies of respective Geographies. This relates to achieving wider financial inclusion and addressing needs of underserved communities.

Beyond banking, similar studies to explore the influence of other industries in achieving sustainable practices will help. Responses from industries majorly impacting environment and sustainability can be calibrated vis-à-vis sustainable banking to assess variance and crossindustry maturity. With regards to motive orientation towards embracing sustainable development, banks across regions are impacting sustainable behaviors across industries in a limited manner. Narrative discovery around motive 'B' where global banks play a role to support, invest and finance other industries, organizations, governments pursuing sustainable initiatives through green products/solutions is sparse. This may be attributable to many reasons including lack of control in governance of sustainable behavior of other industries and banks' business motives. The strategic decisions and initiatives from global banks may have momentous consequences for future of industries and sustainability. Lessons learned from the pandemic will help to prioritize sustainable developments and face future challenges with resilience. We believe, banking and other industries globally will seize sustainability opportunities, strategize focus, and drive action, transformation, innovation, restoration, and resilience for the coming decade.

#### **Declaration of competing interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

Data will be made available on request.

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