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Resolving Polysemy in Transition Finance?

Natixis CIB[*1] and JCR hereby publish the co-article about the comparison of "Transition Finance" between EU and Japan.

> ***Transition is a crucial term when addressing decarbonization efforts across the world. Defining, identifying or designing transition-related financial products or services steer debates across jurisdictions and may result in competing or contradicting labelling or concepts. Yet with no universal definition, there is a risk that transition could significantly differ. Is it a theme, a financial product label, a market sub-component, a set of specific methodological tools, or an argument to dismiss "one size fits all green criteria" and accommodate lower decarbonization paces or requirements?***

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Resolving "Polysemy" in Transition Finance?

Transition is a crucial term when addressing decarbonization efforts across the world. Defining, identifying or designing transition-related financial products or services steer debates across jurisdictions and may result in competing or contradicting labelling or concepts. Yet with no universal definition, there is a risk that transition could significantly differ. Is it a theme, a financial product label, a market sub-component, a set of specific methodological tools, or an argument to dismiss "one size fits all green criteria" and accommodate lower decarbonization paces or requirements?

Towards a Common Goal

Decarbonizing all sectors of the economy is essential if the world is to halve emissions by 2030 and reach net-zero by 2050. This paradigm shift requires deep transformations, not only in technology, but in practices across important socio-economic activities such as agricultural production, electricity generation, transportation systems and industrial processes. **Some sectors are harder, notably costlier and slower to decarbonize**. With a shrinking carbon budget available, there is an urgency to immediately cut greenhouse gas emissions. Jurisdictions face different challenges in enabling the required transformation as **their unique context and history economic structures and resource availability (natural, capital and technological) pose varying obstacles**. While the **individual pathways towards net zero in 2050 may vary in trajectory, as countries have different starting points, they should all uphold the same common goal maintaining global warming below 1.5oC by 2100 vs pre-industrial times**.

Defining Transition Finance

There currently is no universal definition to what transition finance means. It is **widely understood that transition is the decarbonization pathway of entities or economic activities, in particular those that are carbon intensive, particularly hard to abate sectors**, such as industry (cement, chemicals, steel, mining and oil & gas) and transportation (shipping, road and aviation). **The International Capital Market Association (ICMA) has often referred to transition as a process or a trajectory, rather than a label**.

Instead of creating guidance for a new type of label, the ICMA published its Climate Transition Finance Handbook in 2020 (updated in 2023) that emphasizes the development of climate transition strategies at entity level and the role of use of proceeds and KPI-linked instruments in the delivery of these strategies.

Financing the Transition

Both the EU and Japan [1] have implemented regulatory frameworks that include the mobilization of capital to green and transitionally green activities. The **EU adopted the Green Deal**, in 2019, to reduce its Greenhouse Gas (GHG) emissions and reach climate neutrality by 2050 via initiatives across climate, the environment, energy, transport, industry, agriculture and **sustainable finance**. Key regulatory tools to advance the EU sustainability efforts are its Green Taxonomy and corporate and investor disclosure requirements (CSRD & SFDR respectively). **Japan adopted its Green Transformation (GX) Policy** (building on its previous 2021 Green Growth Strategy) in 2023, which also aims at achieving **carbon neutrality by 2050** via initiatives across energy, transport, built environment, industry and **finance**. Unlike the EU, Japan does not have a Taxonomy, but has created **policy and technology roadmaps to guide it decarbonization efforts focusing on technology development.**

Transition Finance in the EU and Japan

While conceptually the EU and Japan share a similar understanding to transition, implementation varies. The definition proposed by the EU's Commission 2023 sustainable finance package understands **transition finance** as the financing of investments that are "compatible with and contributing to the transition, that avoids lock-ins" . The recommendations set out by the commission recognizes the instruments that can be used to finance the transition, particularly green, sustainability and sustainability-linked bonds and loans. The focus is on transition as a process / path.
Japan understands transition finance as finance raised to fund entities that are aiming to reduce GHG emissions. The country developed its own **transition finance guidance**, inspired on the ICMA Transition Handbook, that identifies transition bonds – in both UoP and general-purpose format – as an instrument to finance entity level transition in hard to abate sector. The focus is on transition as a label.

Table 1. Overview of the EU and Japan Approach

	European Union	Japan
Condition for transition finance	• No availability of technologically or economically viable green alternative • Activities performance should be enhanced beyond industry standards • Must avoid lock-in of emission intensive assets or processes • Must not hamper future green activity deployment	• Development of a transition strategy • Align to any of Science based targets such as SBTi, IPCC, IEA or NDC of Japan • Must avoid lock-in of emission • Considerations of any negative impacts on environment and society including just transition • Disclose mid-term investment plan for attaining the 2030 and 2050 GHG emission reduction target
Decarbonization Trajectory	• 1.5ºC and Net zero	• To keep limit of 1.5ºC and Net zero
Milestones	• 2030, 2050	• 2025, 2030, 2040, 2050
Criteria/Requirements	• Technology agnostic • Carbon intensity thresholds • DNSH	• Total emission reduction target • Technology development
Economic Sectors and Low Carbon Technologies **＊EU has a taxonomy for the technologies. Japan has a technical roadmap to 2050 but is not a taxonomy.**	• Iron and steel manufacturing (hot metal, sintered ore, coke, iron casting, electric arc furnace – high alloy and carbon steel) • Chemicals (HVC, aromatics, vinyl chloride, styrene, ethylene oxide/ethylene glycols, adipic acid). • Energy (renewables, nuclear, storage of electricity, storage of hydrogen, natural gas) • Ammonia manufacturing • Aluminium manufacturing • Hydrogen manufacturing	• Iron and steel (blast furnace, strand casting - rolling, electric arc, direct reduction) • Chemicals (naphtha cracking, raw material switching, end products, recycling and inorganic chemicals) • Power (gas turbine fueled by ammonia / hydrogen co-firing of coal with biomass/ammonia, co-firing of LNG with hydrogen, CCUS, renewables, nuclear, DR, storage) • Gas (synthetic methane, Green LP gas, hydrogen, biogas, ammonia, CCUS) • Oil (switch to renewable and clean energy such as hydrogen and ammonia, biofuels, synthetic fuels) • Pulp and paper (high-efficiency pulp manufacturing, isolation lignin, efficiency processes, CO_2 capture and absorption) • Cement (energy saving and efficiency processes, raw material switching, biomass thermal energy, CCUS) • Automobile (storage batteries, synthetic fuel, charging infrastructures, hydrogen stations, biofuels)
Sustainable Finance Instruments used to support the transition	• Green, Sustainability and Sustainability-Linked Bonds/Loans	• Transition bonds/loans • Green, Sustainability and Sustainability-Linked Bonds/Loans

Source: 2020 EU Taxonomy; 2023, EU Sustainable Finance Package, 2021, METI Basic Guidelines on Climate Transition Finance; 2021 METI Technology Roadmaps.

The need to resolve polysemy in transition finance

There are significant conceptual differences in the EU and Japan's approach to transition. Though the European Union and Japan are using the same overall rationale, there are important underlying differences on how they are qualifying transition sectors and technologies. Even with the lack of a universal definition, the market is challenging the reliance on technologies that may lead to carbon lock-in and that do not lead to the required level of emission reductions. Creating a unified approach is important to make sure different jurisdictions have the same understanding of transition finance and how to leverage it. Having an alignment on what qualifies and how to address any concerns over greenwashing will be important if the transition of hard to abate sectors is to gain scale and thus need financing. There is a need to capture local priorities and transition challenges, but not at the expense of ambition.

To provide more clarity on developments in Japan and the European Union and how they converge/diverge, the ***Japan Credit Rating Agency (JCR)*** and ***Natixis CIB's Green and Sustainable Hub*** have come together to further discuss transition, how it is developing, the types of approaches and instruments used, and the gaps that need to be addressed if it is to reach maturity and scale.

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Part 1

Why has Japan chosen to focus on the transition label? How is transition defined and how does it influence the choice of sectors/projects and assets?

Atsuko Kajiwara (JCRA): Japan considers that supporting the transition efforts of the hard to abate sectors are one of the highest priorities, as the country has large industry sector (30% of emissions comes from the industry). The reason is that transition pathways need discontinuous innovative technology to net zero, which is not linear and easy to attain. The current technology mix is not enough for all sectors to reach net-zero. For example, we cannot fully electrify all industrial processes without new clean energy solutions such as hydrogen or ammonia. In order to promote transition finance, the government also developed a technology roadmap to 2050 Carbon Neutrality for the ten main hard to abate sectors and demonstrated a model of transition finance in these sectors in 2021.

Atsuko Kajiwara

"Japan considers that supporting the transition efforts of hard to abate sectors is one of the highest priorities, as the country has a large industry sector : 30% of emissions come from industry.

When establishing Basic Guidelines for Climate Transition Finance in Japan, it predominately referred to and followed the ICMA's climate transition finance handbook (CTFH). At the same time, it introduced a "Transition Label" for green bonds/loans or sustainability linked bonds/loans, which shall be issued by hard to abate sectors, whose use of proceeds includes innovative R&D or new investment to decarbonization. The Basic Guidelines aim to expand the use of proceeds of traditional green bonds to focus more on innovative R&D or to accelerate the market's attention to transition.

Does the EU approach to transition differ? What approach is being adopted and which sectors/projects and assets are prioritized?

Leisa Souza (Natixis CIB): Unlike Japan, in the EU, transition finance is not adopted as a label but rather as a thematic. It is an underlying theme for the region to meet its medium and long-term emission reduction targets. This is reflected in June 2023 Sustainable Finance Package from the European Commission on facilitating finance for the transition to a sustainable economy. This includes the use of the European Union's Taxonomy for Sustainable activities, the development of transition plans, and the use of green and sustainability use of proceeds and general-purpose bonds and loans.

> *"We understand that transition is an interim process that requires entities to transform their business models and activities to adapt to a carbon constrained world, with a clear starting and arrival point.*

Leisa Cardoso de Souza

Overall, there is a shared understanding that there are already sufficient sustainable finance instruments' labels/formats in the market, with no strong willingness or push for a separate and specific transition label. This does not mean that transition-related transactions are not being issued by companies or sought by investors, particularly for hard to abate sectors. What Natixis CIB has seen in the market is the issuance of general-purpose instruments, targeting emission reduction, across various sectors, including oil and gas, metals and mining, aviation, soft commodities, food and beverages, among others, aligned to the ICMA Principles and the Climate Transition Finance Handbook. We understand that transition is an interim process that requires entities to transform their business models and activities to adapt to a carbon constrained world, with a clear starting and arrival point. This means that transition is an entity-level concept that assesses the entity's broader picture and transformation needs, which explains why general-corporate financing tied to holistic KPIs has been widely used to steer transitions.

Having said that, to reach entity-level decarbonization targets, some investments are obviously needed and could theoretically be identified as clear levers to support this process. One could thus acknowledge the theoretical legitimacy of potential transition thematized use of proceeds instruments, be they labelled or not. Though the lack of an elaborated, dynamic transition taxonomy (as extensive, detailed and science-based as the current EU Taxonomy) is making such an approach particularly exposed to potential "transition-washing" or at least potentially accommodating lower transition paces than needed. Hence the bias towards addressing transition at entity level and supporting decarbonization targets with all relevant types of levers (including that of capex).

Part II

Are there unique factors influencing how Japanese entities demonstrate credible transition plans, and how do these impact transition finance? What feedback from international market players have been given to the methodologies/metrics adopted by Japan?

Atsuko Kajiwara (JCRA): Compared to other countries, it is easier for the Japanese entities to choose the use of proceeds for transition finance, as the government developed prioritized technology roadmap by 2050 for hard to abate sectors as shown in the table 1. In addition, the Japanese entities are requested to disclose its transition plan with high transparency to demonstrate their credibility. They are required to disclose the factors in CTFH: Scope 1, 2 and 3 GHG emission, 2030 milestone and declaration of achieving 2050 **Carbon Neutrality**, governance of transition to net zero, demonstration of how their transition pathways align to Science-Based

Targets (SBTi, IPCC, IEA, etc.), if available, and NDC or Japan's sector roadmap at least, mid-term investment plan for capex of green projects.

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Atsuko Kajiwara

As a matter of fact, GX government bonds also disclose the above factors. When explaining Japan's transition package with GX government bond framework to the European and the U.S. investors, we have received very positive comments, such as this bonds framework has high credibility in its transition policy and additionality to various sectors like energy transition, industry, transportation and households, etc. Mr. Sean Kidney, CEO of Climate Bonds Initiative (CBI), mentioned the CBI press release that "This bond shows clearly how governments, and others, can raise funds to invest in that transition. It marks a significant milestone in transition finance [2]".

Are there challenges for business and investors navigating differences considering the EU and Japan approaches? Can such gaps affect cross-border investment?

Olivier Ménard (Natixis CIB): One of main gaps between the European and Japanese approach seems to be semantics and how existing sustainable finance products encompass the transition momentum. The choice on the financing format is more on how an issuer will evidence its transition, if through its corporate expenditure, or if through its level of performance against an interim time frame. In the European Union, the use of green, sustainability and sustainability-linked bonds, loans and even equity are recognized as instruments contributing to raise funds for entities to transition. In fact, the issuance of green use of proceed products are supporting the transition demonstration in its diversification and enabling angle. Regardless of the format, the underpinning question is whether or not the issuer has a credible climate transition plan/strategy, with science-based targets that supports the reduction of GHG emissions. Natixis CIB is observing an increasing emphasis on the development of a public transition plan, which is being reinforced in Europe via disclosure regulations.

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Olivier Ménard

The rationale for defining transition activities also seems to be another difference between the European Union and Japan. The European Taxonomy for Sustainable Activities is often cited as the reference to define the eligibility of activities to investors and the wider market. While many investors have their own investment criteria, the Taxonomy is a useful benchmark as it sets average carbon intensity thresholds for economic activities based on scientific evidence as technical screening criteria. We understand that the EU Taxonomy is not applicable to every jurisdiction as it heavily relies on EU legislation, especially for the DNSH Technical Screening Criteria, and that covers more than 100 activities. So, where there are local taxonomies we may use them, as well as other tools such as the Science-Based Target Initiative (SBTi), to ensure transactions are robust and aligned to a 1.5oC trajectory. Natixis CIB has always advocated for the need of transition finance frameworks at an entity-level that incorporate green/brown shades and holistic criteria. There is already important guidance in the market that sets the fundamental principles in achieving credible transitions. It is important to accentuate these to ensure significant emission reductions are being prioritized and achieved to avoid the lock in of activities that are not aligned to a net zero future.

Part III

How is the Japanese government supporting such initiatives/investments? What are the financial instruments/products commonly used in Japan? How are they delivering against the country's priority sectors/goals (e.g., GX Policies)?

Atsuko Kajiwara (JCRA): Since 2021, the government has been encouraging the transition finance in private sectors, and it is common in Japan that hard to abate sectors are funded for its transition plan by green/transition and/or sustainability linked labeled finance. In order to accelerate further investment, the government plans to issue "GX Economy Transition Bonds" of 20 trillion Japanese Yen (~USD 140billion) in the next ten years. The use of proceeds will support program of innovative R&D, subsidy program for already established energy efficient equipment such as housing equipment, batteries, semiconductors, etc. Japan has international competitiveness in manufacturing intermediate-products. So it is expected that these subsidies promote both the society's GHG emission reduction and keep Japanese corporates' international competitiveness.

Atsuko Kajiwara

> *"Since 2021, the government has been encouraging transition finance in private sectors, and it is common in Japan that transition plans in hard to abate sectors are funded by green/transition and/or sustainability linked labeled finance.*

Another important measure for achieving carbon neutrality is to introduce so called Pro Growth Carbon Pricing Concept. After supporting the zero carbon efforts of the entities by issuing GX government bonds with various support program, the government will introduce carbon pricing to incentivize early GX investment. The revenue from carbon pricing system such as carbon emission trading system, auctioning of allowances power generation companies, and GX surcharge on fossil fuel supply will be utilized for the repayment of GX government bonds.

How does the EU broader sustainable finance market assess international approaches and how is the market encouraging such investments?

Olivier Ménard (Natixis CIB): Due to the large number of regulatory requirements it is natural for the broader European sustainable finance market to assess how international approaches are aligning with what is being implemented in their region. This means understanding how technical screening criteria may compare against the EU's Taxonomy and if entities are publishing transition plans that cover all scopes of emission (1-3) and if these are addressed in short-, medium- and long-term reduction targets. Even with regulatory requirements, in terms of transition finance most financial institutions are following best market practice, mainly the recommendations set by the ICMA. In a sense, there is already a common language that is helping to streamline the transition thematic market to make it more acceptable for investors.

> "*In a sense, there is already a common language that is helping streamline the transition thematic market to make it more acceptable for investors.*

Olivier Ménard

Though there is no differentiation on green, sustainability or sustainability-linked bonds as transition instruments in Europe, sustainability-linked instruments seem to be the preferred instrument for carbon intensive sectors; despite the green label being the most used in the European sustainable finance market. So, we see a larger focus going towards the materiality of key performance indicators and if these are in fact addressing core emission scopes. While labels are an important indicator for investors, to void any greenwashing claims, it is critical to look at the underlying elements to confirm if robust practices are being implemented by entities. As previously mentioned, this includes the development of a transition plan based on a 1.5oC trajectory, with science-based targets, and material key performance indicators and full disclosure of the levers expected to contribute to achieving the targets. By having this clear framework it is easier to assess international approaches.

Part IV

What is the outlook for transition in Japan and the EU? How is it expected to evolve in the coming years?

Atsuko Kajiwara (JCRA): Japan intends to utilize the issuance of 20 trillion-yen GX government bonds in the next ten years as a catalyst to mobilize 130 trillion-yen from private financial sectors to realize the Green Transformation of Japan. The first GX government bonds issued on February 14 and 27, 2024, were certified by the CBI as climate bonds which aligned to 1.5oC commitment. Bloomberg classified these bonds as green. Those are quite important messages to the market, that the transition finance can be considered a valid sub-set of green finance. It is also noteworthy that we observed “Greenium”[3] on these bonds.

Atsuko Kajiwara

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It is expected that investors will use transition finance as one of the tools to communicate with the issuers about their transition plans, as issuers are required to disclose their detailed transition plans, compared to ordinary green bonds. Many next-generation technologies are expected to be commercialized by 2030. These technologies will provide new decarbonization solutions to countries like Japan, which have a large manufacturing industry. It is preferable that these Japanese transition efforts are disseminated to other countries, mostly in Asia, that are facing challenges in achieving 2050 Carbon Neutrality.

Leisa Souza (Natixis CIB): The European Union has set clear policy and regulatory framework to guide its net zero transition towards 2050. The transition thematic has been incorporated into energy, transport, agriculture, industry, innovation and financing sectors and over the next few years much of the set requirements for decarbonization, disclosures and labels will be rolled out. Though the focus of Europe's transition has been green, other central topics for the region have emerged in the last two years around strategic autonomy, industrial competition and innovation. This also highlights the need to further diversity the sectors receiving sustainable funding in Europe, particularly in the industrial sector and critical supply chains.

As a thematic, transition will continue to underpin the sustainable finance market. Retaking discussions on an extended taxonomy to clearly address transition activities could provide further guidance to the market on the type of activities and trajectories needed. In the meantime, financial institutions can provide innovative instruments focused on transition, including exit finance to bring the necessary change to reach hard to abate sectors.

[1] The United States has also implemented similar frameworks via its Inflation Reduction Act (IRA) in 2022.
[2] Climate Bonds Initiative, 2024. Japan will issue 1.1bn Climate Transition Bond.
[3] A lower yield on a green instrument compared to a similar conventional instrument.