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Public Banks and the Ecological Transition: Towards a Paradigm Shift in European Financial Policy

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Public Banks and the Ecological Transition: Towards a Paradigm Shift in European Financial Policy

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Abstract :

Since 2015 the European Union has positioned itself as global leader in the ecological transition, placing the goal of carbon neutrality by 2050 at the heart of its economic and financial agenda. However, achieving this ambition requires massive and long-term investments, raising the critical issue of how to finance them. This article examines the role of public banks, particularly the European Investment Bank (EIB), in structuring the financing of the green transition. Adopting a historical and theoretical perspective, the article first defines the strategic role of public banks in financing long-term investments and traces the evolution of the EIB's investment strategy within EU sustainable finance framework. Then it offers a critical assessment of the growing reliance on private capital mobilization which tends to subordinate ecological goals to market logic. The article explores several reform pathways from incremental institutional adjustments to more ambitious transformations. It notably proposes that national public developement banks be organized in a European network to finance such investments as infrastructure. It also proposes a framework linking the European Central Bank (ECB) and public banks, allowing the latter to finance long-term sustainable projects via linkage to money creation. In a more ambitious move, the article proposes to establish a green securitization platform capable of channeling massive resources toward verifiable sustainability goals and supporting the internationalization of the euro within a progressive financial architecture. The originality of the article lies in its articulation of institutional critique with operational redesign. It seeks to reposition public banks as central drivers of long-term investment, in coordination with central banks, while accounting for the geopolitical dimensions of monetary sovereignty. In doing so, the article contributes to a broader rethinking of public finance as a key lever for a just and effective ecological transition in the European Union.

Introduction

Since the adoption of the European Green Deal in 2019 the European Union (EU) has committed to an ambitious strategy placing the ecological transition at the center of a profound transformation of its economic model. This policy roadmap marks a decisive turning point by outlining a trajectory toward carbon neutrality by 2050. To give this objective legal force, the EU adopted the European Climate Law in 2021. The legislation enshrines the neutrality target in EU law and mandates a 55% reduction in net greenhouse gas emissions by 2030, compared to 1990 levels. This was followed by the "Fit for 55" legislative package which comprehensively revises the EU's sectoral policies (energy, transport, industry and buildings) to align them with its climate goals.

This strategic reorientation, however, entails massive investment needs. According to estimates from the European Commission (EC), meeting the targets set by the Fit for 55 package will require between €520 and €600 billion in additional annual investment spending over the 2021-2030 period, representing roughly 1.5% to 2% of the EU's annual GDP. These funds are needed to finance the decarbonization of key sectors, modernize existing infrastructure and develop essential capacities for the transition, including renewable energy, smart grids, and clean technologies. Yet this substantial financial demand faces a major constraint: the ongoing pressure on public finances in many member states, already burdened by high levels of debt and persistent budget deficits. In response, the EU has introduced various financial and budgetary instruments. For example, 30% of the 2021-2027 Multiannual Financial Framework and the post-pandemic recovery plan (NextGenerationEU) are allocated to climate initiatives. The Sustainable Europe Investment Plan aims to mobilize an additional €1 trillion over ten years. And the Just Transition Mechanism targets regions most affected by structural change. These are complemented by cohesion funds, public sector loans, and targeted subsidies.

Beyond direct public investment, the EU recognizes that these resources remain insufficient to close the green investment gap (estimated at a minimum of €2.5 trillion in additional needs). For this reason, mobilizing private capital has become a central pillar of the EU's climate finance strategy. The challenge is twofold: to capture a portion of European private savings which remain largely directed toward unsustainable assets; and to redirect financial flows toward low-carbon activities. But aligning private investment preferences with climate objectives faces multiple impediments, notably uncertainty over returns, long time horizons often incompatible with market logic, high upfront costs, and significant technological and policy risks. These challenges are compounded by weak carbon pricing and continued fossil fuel subsidies both of which undermine the competitiveness of renewables and create investor uncertainty. And then there is mounting geopolitical instability, as exemplified by the war in Ukraine and the election of Donald Trump, which complicates the path toward a clean energy transition by reinforcing reliance on fossil fuels in several resource-dependent economies.

Against this background it has become clear that the financing of the ecological transition cannot rely solely on either public or private capital. It requires an effective articulation

between public and private financial intermediation. In this spirit the EU has developed a sustainable finance framework structured around three main levers: the integration of environmental, social and governance (ESG) criteria into investment decisions (through instruments such as the EU taxonomy, green bonds and ESG labels); enhanced non-financial disclosure requirements (via the Corporate Sustainability Reporting Directive - CSRD); and responsible corporate governance (through the Corporate Sustainability Due Diligence Directive - CS3D).

At the heart of this hybrid framework stands the European Investment Bank (EIB). As a multilateral institution owned by EU member states, the EIB enjoys a unique status that allows it to combine public policy objectives with market-based tools. In 2019 the EU officially mandated the EIB to become its "climate bank." In this role the EIB has pledged to mobilize €1 trillion in sustainable investment between 2021 and 2030. It is expected to act as a catalyst by structuring projects, mitigating risk, offering guarantees and co-financing initiatives, making it a key intermediary between public funds and private capital. Such a shift from a traditional public bank model to that of a catalyst for private capital raises questions whether the EIB has the tools to meet the urgency of the climate crisis, whether its actions are consistent with social justice principles, and whether it can durably steer financial markets. More broadly, it prompts institutional reflection on the evolving role of public banks in transforming the financial system and their place within a redesigned European monetary governance framework. It is in this context that our article offers a critical analysis of the EIB's evolving role in financing the ecological transition, situating it within a broader reconfiguration of the European financial architecture.

The first section adopts a historical and theoretical perspective to explore the role of public banks, with a particular focus on the EIB. We analyze how its investment strategy has evolved within the broader framework of EU sustainable finance policies. The second section offers a critical examination of the growing dependence on private financing mechanisms, highlighting how these approaches tend to subordinate ecological objectives to market-driven imperatives. Then it outlines a series of institutional adjustments designed to overcome these constraints, with particular attention to the potential for a more integrated framework linking the European Central Bank (ECB) to public financial institutions and national development banks. The third section moves toward a more ambitious paradigm shift, proposing the establishment of new green, social, and sustainable securitization platforms as part of a broader effort to internationalize the euro and to align the EU's monetary governance with its climate commitments.

1.The leading role of the EIB in financing the ecological transition

1.1. A theoretical and historical perspective on public banks

In light of the current limitations of the financial system and the scale of investment required for the ecological transition, several economists stress the strategic role that public financial intermediaries (PFIs) can play in financing long-term projects generating positive externalities

(Mazzucato, 2015). Their centrality stems not only from their financial weight, but also from their institutional features which fundamentally distinguish them from their private counterparts. In this context Plihon and Rigot (2022) define PFIs as “any financial institution at least partially owned or controlled by a state or public authority, operating under a legal mandate to pursue socio-economic objectives, defined with varying degrees of precision, within a specific region or sector.” This definition contains several distinctive characteristics: full or partial public ownership; a clearly defined legal mandate geared toward the public interest; a socio-economic mission as a guiding purpose; and a specific geographic or sectoral scope of action. These features set public banks apart from private institutions in terms of financial behavior, especially in terms of greater risk tolerance, longer investment horizons and their ability to support projects with deferred returns but large social or environmental benefits. Such conditions are often essential for investment in the ecological transition.

Empirical studies conducted across various national contexts by Griffith-Jones and Tyson (2013) as well as Griffith-Jones, Attridge, and Gouett (2020) demonstrate that public banks fulfill a dual role as short-term stabilizers and long-term development promoters. They can act countercyclically, especially during crises, by supporting economic activity when private actors withdraw. In the long term PFIs contribute to shaping industrial, technological and environmental policies by combining financing with technical expertise and institutional support. This perspective aligns with Mazzucato’s (2018) framework which identifies four core functions of public banks: (a) providing countercyclical finance to sustain investment activity during downturns; (b) funding public goods, such as infrastructure, health, and the environment; (c) supporting long-term structural transformations through innovation financing; and (d) playing a catalytic role by mobilizing private capital via guarantees, co-financing, or equity participation.

In the context of the ecological transition characterized by technological uncertainty, unaccounted positive externalities and the need for patient capital, these functions are particularly critical. Thanks to their public mandate, specific governance, and ability to intervene where markets fail, PFIs are key institutional actors in the sustainable finance architecture.

While theoretical analysis supports the strategic role of public banks, a historical approach helps illuminate the cyclical dynamics that have shaped their recognition, marginalization, and eventual redeployment within the global economy.

As early as the 19th century PFIs were created to fund large-scale projects, often beyond the scope or interest of private actors. In France the establishment of the Caisse des Dépôts et Consignations in 1816 stands as a notable example: a long-term instrument serving the public interest, endowed with operational autonomy. A second phase of expansion began after 1945, in the context of post-war reconstruction and strong state intervention. This was the era of the "Trente Glorieuses," during which public banks proliferated at all levels: the World Bank was established in 1944, the European Investment Bank in 1958, and numerous national development banks emerged across Europe. During this period PFIs were widely regarded as

effective levers for financing industry, housing, and infrastructure. A significant portion of banking systems was then under public control.

However, from the 1970s onward this model gradually came under scrutiny. Influenced by the theories of "financial repression" (R. McKinnon, 1973 ; E. Shaw, 1973), public banks were increasingly criticized for inefficiency, politically driven credit allocation, and poor governance. These criticisms fueled widespread deregulation and privatization policies in the financial sector, leading to a retreat of PFIs in favor of market-based mechanisms.

It was not until the 2007-2008 financial crisis that public banks regained attention. This systemic crisis, triggered by the excesses of the private banking sector and deregulation, exposed the limits of financialization and the structural instability of markets. In response, many public institutions were reactivated which significantly increased their counter-cyclical lending. This period marked the beginning of a third historical phase during which PFIs are once again seen as essential instruments to tackle major collective challenges, most notably the ecological transition.

The European Green Deal, launched in 2019, formalized this redefinition of the role of public banks. It explicitly acknowledges their strategic function in financing the transition, alongside market mechanisms. The plan calls for coordinated mobilization of national public banks and the EIB, which was officially mandated to become the EU's "climate bank."

1.2 The EIB: a multilateral public bank serving the ecological transition

The EIB embodies the renewed strategic role of public financial intermediaries (PFIs) within the European Union. Founded in 1957 under the Treaty of Rome, the EIB is a multilateral public bank owned by the 27 EU Member States, each holding voting rights and capital shares in proportion to their economic weight. With a balance sheet nearing €600 billion in 2023, the EIB is the largest multilateral financial institution in the world. Unlike other development banks, the EIB primarily operates in developed countries, although it also intervenes in third countries under specific mandates. It is anchored politically (through its ties to EU institutions), technically (via its recognized expertise), and financially (through its ability to raise capital in financial markets).

The bank's mission has significantly evolved over time. Initially focused on regional cohesion, the EIB gradually expanded into innovation, infrastructure, and environmental financing. In 2007 it became the first international financial institution to issue a green bond. A major strategic shift occurred in 2019 when the EIB was officially designated the EU's "climate bank." It committed to aligning its operations with the Paris Agreement, ending fossil fuel financing by 2021 and mobilizing €1 trillion in sustainable investments between 2021 and 2030. The bank aims to allocate more than 50% of its lending to climate action by 2025. Simultaneously, the EIB plays a pivotal role in bridging public financing with private capital by structuring projects, sharing risk, providing guarantees and engaging in co-financing arrangements. This catalytic function is vital for directing private savings toward

high-impact social and environmental projects often overlooked by the market. In 2025, amid rising geopolitical instability, the EIB's mandate expanded to include security and defense through the RearmEU program, with an investment objective of €3.5 billion. This broadening of its scope reflects the EIB's growing importance in advancing European strategic sovereignty, whether climate-related, industrial or military.

A Shift Toward Market Intermediation: The EIB's Balance Sheet and Financial Instruments

Beyond its capital held by EU Member States, the EIB primarily finances its activities by issuing bonds in international markets. Member State capital serves mainly as a guarantee and does not require actual budget disbursements, except during exceptional capital increases such as in 2012 (following the subprime crisis) and in 2019 (after Brexit). These guarantees, combined with the EIB's policy of not distributing dividends, ensure its AAA credit rating which is higher than that of many individual Member States and allows the bank to borrow at highly favorable interest rates.

Historically, the EIB focused on direct long-term loans and guarantees for economically viable projects aligned with EU objectives but not financed by the private sector. It supported a wide range of actors, including companies, local governments, NGOs and public-private partnerships. EIB financing targeted large-scale or transnational projects, as well as those in less-developed regions. Loans were granted at preferential rates, designed to cover only the Bank's borrowing and administrative costs, setting the EIB apart from traditional EU budgetary instruments. Since 2007 the EIB has taken a decisive turn toward sustainable finance, becoming a pioneer in green bonds with the launch of its first Climate Awareness Bond. Since then it has issued over €110 billion in green and social bonds across 23 currencies. This shift in liabilities reflects the Bank's growing presence in capital markets in response to rising investment needs driven by the ecological transition.

In parallel, the EIB's asset structure has also evolved. The institution now combines its lending operations with EU budgetary instruments and offers technical advisory services, project development assistance, and even indirect equity participation. Since 2015 the EIB has expanded its target beneficiaries beyond large corporations to include SMEs, startups, and high-risk innovative projects. This shift has led to the development of so-called "special activities," which are more speculative in nature and have grown on its balance sheet from €5 billion to €20 billion over five years.

At the heart of this diversification strategy lies the European Investment Fund (EIF), a specialized subsidiary created in 1994. Primarily owned by the EIB, but also by the European Commission and other public or private financial institutions, the EIF operates in the field of venture capital and SME financing. It structures private funds to strengthen capital markets while supporting the green transition. Its objective is to make innovative, high-risk projects bankable by leveraging private savings through risk-sharing mechanisms. We will now examine more closely how its strategy has further evolved toward deeper diversification and closer alignment with market-based operations.

The EIB's blended finance orientation: towards a new model of public financing?

The evolution of the EIB reflects a major transformation in the role of PFIs in Europe. By adopting a blended finance approach, the EIB combines public and private capital to meet the massive investment needs associated with the Green Deal. While this strategy broadens financial impact, it raises critical questions regarding the mandate, governance and distributive justice of public action. Blended finance aims to de-risk projects for private investors by making them bankable in a context of budgetary constraints and growing reliance on private savings.

In this framework, the EIB plays a central role as the EU's financial arm. It acts as a strategic intermediary between public policies and capital markets, notably through the relaunch of the Capital Markets Union (CMU) highlighted in the Draghi Report (European Commission, 2024). The CMU seeks to enhance capital mobility within the EU, deepen financial integration, and diversify funding sources particularly for SMEs and innovative companies. The EIB no longer limits itself to long-term lending. Besides designing complex financial instruments, it now acts as guarantor, indirect investor, or liquidity provider while also contributing to shaping market standards, especially around sustainability. Its portfolio has been profoundly reshaped. Alongside traditional loans, the EIB now deploys hybrid tools often inspired by private sector practices, notably green bonds, subordinated debt, first-loss guarantees, securitisation vehicles, and indirect equity stakes. The EIF, which act as the EIB's main venture capital vehicle, complements this strategy. It targets innovative sectors and underserved market segments, while aiming to leverage substantial private savings.

Another major shift in the EIB's investment strategy lies in the introduction of dual eligibility criteria for financing. Investment decisions are now based not only on financial considerations but also on compliance with strict ESG standards, assessed through enhanced due diligence on non-financial risks. The EIB conditions its financing on stringent sustainability requirements comprising evaluation of climate and social risks, alignment with the EU taxonomy, ESG reporting, and support for companies developing transition strategies. This evolution reflects the EIB's commitment to aligning its operations with the EU's climate and social priorities. The bank has thus developed widely recognized expertise in strategic areas such as large infrastructure projects, climate action, and green innovation. Its rigorous project evaluation sends a strong signal to financial markets, bolstering investor confidence while directing capital flows toward sectors deemed essential for the transition.

To address the challenges of integrating ESG considerations, the EIB also promotes close cooperation with its institutional partners. This collaboration operates on both technical and strategic levels, involving other multilateral development banks (MDBs), development finance institutions, national development banks, often acting on behalf of the EIB in financing local projects, as well as international organizations such as the UN, the OECD, and the European Central Bank. In France, for example, the EIB works closely with Bpifrance, the public investment bank, in selecting companies eligible for financing. This partnership approach aims to pool expertise, harmonize standards, and ensure territorial anchoring of

investments, particularly for small-scale projects or those led by local actors. Such efforts are part of the EU's sustainable finance framework, including the Corporate Sustainability Reporting Directive (CSRD), the EU Taxonomy Regulation and the upcoming Corporate Sustainability Due Diligence Directive (CS3D). By encouraging companies to formalize their climate commitments and refusing projects with unmitigated environmental or social risks, the EIB positions itself as a model for promoting non-financial transparency. Acting simultaneously as a funder, ESG assessor and promoter of best practices, the EIB seeks to redefine the standards of sustainable finance in Europe.

The EIB's blended finance orientation is legitimate and purposeful to the extent that it addresses a genuine need to mobilise capital amid tight budgetary constraints. This approach has allowed the Bank to reposition itself as a key actor in the European Green Deal, aligned with broader goals of competitiveness, sustainability, and innovation.

But this current trajectory reveals a structural tension. How can it reconcile the attractiveness of its financing, compliance with market standards, and its public service mission? As it increasingly adopts the tools and norms of private finance, the EIB runs the risk of becoming merely a market facilitator, losing its counter-cyclical capacity, long-term vision and role as a driver of public innovation. Consequently, the EIB may erode the very foundations that justify its public mandate, blurring the line between complementing and replacing private finance.

Indeed, we can identify several limitations concerning the EIB's current strategy, both institutional and financial.

Commenté [SR1]: Robert, voici la partie que j'ai ajoutée suite au commenetaire de Dominique…
Es tu ok avec cela ?

The EIB has progressively incorporated a wide range of instruments aligned with financial market logic, notably bond issuance (including green bonds), guarantees, indirect equity stakes, securitization vehicles, and leverage tools. While these mechanisms aim to maximize the mobilization of private capital, they increasingly subject public investment to the imperatives of profitability, creditworthiness, and bankability. The growing use of structured products or quasi-equity instruments (e.g subordinated debt, first-loss guarantees) may attract private investors. But it also shifts the center of gravity towards short- or medium-term monetizable assets, potentially sidelining less bankable yet socially or environmentally essential projects.

The growing use of instruments wedded to the market logic of profitable short-term asset monetization also poses a risk to the EIB's original mission, centered on the public interest and on long-term investments with positive externalities. The principle of additionality, financing projects that the market would otherwise neglect, was once a cornerstone of PFIs. But the growing use of private intermediaries, investment funds, or structured finance tools increasingly blurs the line between complementing and substituting private finance. The EIB risks becoming more of a market facilitator than a counter-cyclical, strategic long-term investor.

Finally, increased reliance on financial intermediaries and public-private partnerships also raises governance concerns. These operations often involve complex structures where accountability becomes opaque. Transparency in project selection and impact measurement is often limited, especially when funds are channelled through private asset managers. This

evolution tends to favour large financial actors, potentially marginalizing local authorities, SMEs or civil society stakeholders.

These concerns are all the more pressing in a context where the regulatory momentum on sustainable finance in Europe is showing signs of fatigue (e.g. the EU "Omnibus Package"). This situation calls for a deeper rethink of public finance mechanisms, not just in terms of capital mobilization, but in terms of structural transformation. The remainder of this article offers a critical assessment of the EIB's diversification strategy and explores alternative institutional pathways, aimed at building a strategic architecture that links the EIB, the ECB, and national development banks to serve the ecological transition more effectively.

2. Greening of the European Financial System

2.1. Public banks and the orthodoxy of financial economics

The orthodoxy of financial economics, which frames a neoliberal free-market vision in matters of money, financial markets and banking, is grounded in such key theoretical pillars as the loanable-funds theory (K. Wicksell, 1898/1936), the « efficient markets » hypothesis (E. Fama, 1965 ; 1970) and the Quantity Theory of Money's notion of an exogenous money-stock under central bank control (I. Fisher, 1911). These concepts, each on its own and even more so when taken together, accord public financial intermediaries at best only a deliberately limited role, justifying narrowly targeted interventions in the face of undeniable market failures. Public financial intermediaries can help private financial institutions do better, including by means of offering them assurances and guarantees all the way to the socialization of possible losses thus shifted from private lenders to taxpayers. Other than this complementary role correcting market failures, the public investment and development banks are supposed to behave like private financial players. This neoliberal free-market ideology pervading mainstream thinking about finance imposes strong constraints on public banks as a result of which they have ended up severely under-utilized up to now.

A first constraint of that ideological nature imposed on public development banks in particular is that they ought to focus primarily on co-financing or co-investing with private partners. Such public-private partnerships are supposedly providing "virtuous" effects, notably allowing more leverage for private investors. In mixed « blended finance » arrangements a single euro of public funds invested should mobilize a multiple of private euros. Having thereby lowered their own capital invested with the help of public-fund injections, private investors can get proportionately higher rates of return on their (consequently smaller) equity.

But the public-private partnership envisaged here goes even further. Public investment banks are often under pressure to delegate all or part of their portfolios to private asset management companies tracking stock market indices (i.e. lower-risk « index funds «). These are typically very far from being on the 1.5°C trajectory called for in the Paris Accord of 2015. According

to Stephens et al. (2018), the S&P500 would be on a trajectory of 4.9°C, the MSCI World of 5°C, the MSCI Europe of 5.2°C, and France's CAC 40 also for a projected rise of 5.2°C. Even considering more recent advances in renewables and battery-storage technology having pushed worst-case climate-change scenarios closer to the still-terrible 4ºC mark (K. Anderson, 2024), it is obvious that public development banks are too locked in to the inadequately ambitious « business as usual » portfolio strategies prevailing in dominant stock and bond markets (Wall Street, US Treasuries) (H. Nilsen et al., 2018). This is a crucial contradiction, because here the PFIs align themselves clearly with the logic of the market even though their principal *raison d'être* is to compensate for the limitations of private finance.

The third constraint is that PFIs must respect market conditions. One such condition is that of refraining from market-distorting or disproportional support for certain categories of customers, because this would run counter to the "free and undistorted competition" that must prevail in the European Union. For the European Investment Bank (EIB) this alignment with market conditions manifests itself in its desire to preserve the AAA rating awarded by the credit-rating agencies (Moody's Standard & Poor's, Fitch) with the aim of financing itself on the best possible terms in the international bond markets. Such fixation on the top-rating can lead to excessive caution on the part of the EIB, which enjoys the benefit of substantial implicit guarantees from its public shareholders.

Last but not least, the fourth constraint faced by public banks concerns their ability to refinance themselves, their access to liquidity. In reality, these public players operate like non-banking financial intermediaries, such as investment funds. They have to refinance their loans themselves, mainly through resources raised in bond or money markets, possibly also equity injections from their public shareholders. The latter are intrinsically limited by the often severe budgetary constraints and fiscal austerity policies prevailing in the European Union.

These various constraints limit the financing capacity of public banks such as the EIB. According to estimates quoted by Grandjean and Dufrêne (2020), the financing granted by the EIB for climate and the environment over the seven-year period from 2012 to 2018 represents only half of the "green" financing needs over one year in the European Union. Let it also be known that the EIB, while now presenting itself often as Europe's 'Climate' Bank, continues to finance "brown" or carbon-intensive projects such as freeways and fossil fuels. As for Bpifrance, its financing capacity depends primarily on the resources it receives from the French government. As pointed out by the Cour des Comptes (2023), even though having gone through its first decade in steady mode of expansion, Bpifrance's capacity for action is limited by its under-endowment in financial resources.

2.2. Acknowledging the money-creation power of public banks

We are thus faced with a perplexing paradox, linked to the application of an unfounded doctrine marginalizing the role of public financial intermediation to that of a narrowly focused supplement. On the one hand, while their capacity to finance « green » transition investments is limited for the reasons of short-termism mentioned above, commercial banks are endowed

with the power of money creation so that they do not depend on their own financial resources to make loans. Nor do they face any real liquidity constraints, because they have always access to central bank refinancing. Data shows that the world's leading commercial banks use their power of money creation to direct massive amounts of financing to the fossil-fuels sectors (Banking On Climate Chaos Coalition, 2025). On the other hand, public investment banks, which have a strategic role to play in financing the ecological transition, are severely limited in doing so because of the constraints imposed on them by the loanable-funds, efficient-market and exogenous money-stock orthodoxies of financial economics mentioned above. None of these pillars of financial-economics orthodoxy leave any space for endowing public banks with any capacity for money creation, confining them to the much more limited scope of « proceeds banks » relying on funding by issue of bonds.

The conclusion in the face of this counterproductive paradox is clear. We need to modify the theoretical and doctrinal framework applied to our public development and investment banks. Above all, it is time to recognize the power of these public players to carry out, like other banks, financing through money creation, i.e. by anticipating future wealth creation. It is essential that financing by public banks does not depend on their prior financial resources, as the theories of loanable funds and exogenous money arguably stipulate. Breaking out of their dependence on financial markets is necessary to enable public banks to finance riskier and longer-term investments, possibly even socially beneficial projects that would not be considered profitable if judged by the narrowly framed cost-benefit criteria of financial capitalism (e.g. applying a high discount rate to value the future).

2.3. Relations between central banks and public investment banks

Relations with the central bank are essential, if public investment or development banks are to exercise and maintain their power to create money. European rules allow the European Central Bank (ECB) to make liquidity available to such public banks if they have the status of a « public credit institution, » as stipulated in article 123.2 of the Treaty on the Functioning of the European Union (TFEU). Generally defined in rather broad terms, public or private credit institutions receive funds from public deposits or other repayable funds (e.g. bonds) and grant credits for their own account.[1] In this context it is not necessarily essential when the central bank's liquidity provision takes place. It can occur in the form of ex-post refinancing, once bank financing through money creation has taken place.

Relations between the ECB and public investment banks can take place within the framework

[1]Article 123 TFEU (ex-article 101 TEC) :

1. The European Central Bank and the central banks of the Member States, hereinafter referred to as "national central banks", shall be prohibited from granting overdrafts or any other type of credit facility to Union institutions, bodies, offices or agencies, central governments, regional or local authorities, other public authorities, other bodies governed by public law, or public undertakings of Member States; the purchase directly from them by the European Central Bank or national central banks of debt instruments shall also be prohibited.
2. Paragraph 1 shall not apply to public credit institutions which, in the context of the provision of liquidity by central banks, receive the same treatment from national central banks and the European Central Bank as private credit institutions.

of conventional monetary policy. It is sufficient for the assets representing the financing of ecological-transition (ET) projects granted by public investment banks to be accepted as collateral by the ECB, at preferential interest rates, as part of its refinancing operations. Helpful further steps in this direction would have the ECB modulate the interest rates charged for bank refinancing by including a climate premium and, in addition, redefine the collateral hierarchy according to the greenhouse-gas emissions of the projects financed (H. Kempf, 2020). If such “greening” of monetary policy becomes finally a priority for the ECB, public investment banks should be the first to benefit.

Bpifrance Financement, a subsidiary of Caisse des Dépôts et Consignations (CDC) with the status of a public credit institution, uses ECB instruments to refinance itself either through overnight operations or longer-term operations such as the LTRTO (Long Term Refinancing Targeted Operations) program. Bpifrance Financement could benefit from the ECB's greener policy as well.

Grandjean and Dufrêne (2020) go one step further in proposing an « ecological money » creation process at the center of the ECB’s relationship with the public investment banks. They propose that public investment banks, starting with the EIB, should initially issue bonds at low or zero interest rates. Those could be bought up (i.e. « subscribed «) in the primary market by the ECB as a way of directly providing liquidity for these public lenders and thus overcoming the financing constraints which these institutions are currently subject to. In this way the financing of public banks could be “taken out of market conditions,” as the authors put it, in line with the ever-more urgent funding and investment imperatives of the ecological transition. Grandjean and Dufrêne’s ECB-monetization proposal in support of greatly expanding the public banks’ lending operations would in many ways be a logical next step in the post-crisis evolution of the central bank’s unconventional monetary policy involving successively more ambitious asset-purchase programs between 2010 and 2022.

Under the current rules, as set out in Article 123.2 of the TFEU, the ECB must make liquidity available to public credit institutions on market terms, so as not to distort competition with private banks. Clearly, this last condition has to be set aside if the strategic role of public banks in financing the ecological transition is to be recognized. For operations in compliance with low-carbon objectives, the ECB should be able to offer refinancing on preferential terms. Such “greening” of monetary policy implies that the ECB abandons the principle of market neutrality, which is based on the questionable assumption that financial markets are efficient (E. Jeffers and D. Plihon, 2023).

As part of its strategic review announced in July 2021, the ECB indicated that it would integrate climate considerations into its monetary and financial policy, notably by taking environmental criteria into account in the choice of its securities and in the list of securities it will accept as collateral. During much of 2022 until mid-2023 the ECB gradually decarbonized its portfolio of corporate bond holdings acquired as part of its quantitative easing, using a three-part (emissions-, targets-, and disclosure-based) climate score to tilt its bond purchases toward. But the ECB has yet to commit to other « greening policy » measures

it has been discussing, such as using dual interest rates favoring low-carbon projects and penalizing high-carbon borrowers, supporting sovereign green bonds, and recalibrating its collateral framework while continuing its push for better climate-related disclosure and management of climate risks (European Central Bank, 2025a).

2.4. Strategic benefits of monetary financing by public investment banks

Involving PFIs, and in particular public investment banks, in the monetary financing of ET will be beneficial for three strategic reasons. Firstly, we need to recognize the importance of this channel of money creation, currently restricted by an outdated doctrine at the center of neo-liberal economic orthodoxy, in helping to reduce the worrisome shortfall in ET-financing on the part of both private and public financial players. Clearly, the governance of PFIs invested with this monetary power will need to be adapted. Insofar as money is first and foremost a social institution serving the general interest and climate is a common good, all players concerned by ET will have to participate in the management bodies of the PFIs. This implies placing them under social control.[2]

Secondly, monetizing the financing provided by PFIs will allow them to extricate themselves from the market conditions to which they are still subjected in subservience to the dominant logic of finance. The ECB's monetization of their debt creates a new financing channel which liberates public policies from their current dependence on the demands of financial markets, especially the so-called « bond vigilantes » which are at the root of austerity policies.

Thirdly, the transformation of PFIs into public monetary actors will put them at the center of the enhanced cooperation between public authorities made necessary by ET (P. Bolton et al., 2020). On the one hand, such empowered PFIs will act as agents commissioned by the public authorities responsible for fiscal policy to help carry out a far-reaching, wide-ranging, ongoing transition to a low-carbon economy by means of a massive public and private investment program they will help to fund. On the other hand, the money-creating public banks will be tightly connected to the ECB and the successive « greening » of its monetary policy. In this dual position PFIs will contribute to strengthening the "green policy mix" which meets the imperatives of ET (E. Jeffers and D. Plihon, 2023).

Especially when considering them as agents of the much-needed « green policy mix, » Europe's public banks should also cooperate more with one another.[3] They should be organized in a tight regional network to facilitate cooperation and develop joint financing of the ET. This public-finance nexus should be seen as the third pillar of the EU financial system, besides private commercial banks and institutional investors. But due to their specific

[2] These governance specifications resemble Saule Omarova's (2022) proposal for a National Investment Authority in the US.

[3] Major public banks in the EU include the EIB, the Kreditanstalt für Wiederaufbau (KFW) in Germany, the Banque Publique d'Investissement (BPI) and the Banque Postale in France, Luxembourg's Banque et Caisse d'Épargne de l'État (Spuerkeess), the Caixa Geral de Depósitos (CGD) in Portugal. Italy's Cassa Depositi e Prestiti (CDP) or Spain's Instituto Crédito Official (ICO).

role, public banks should not be considered and regulated in the same way as private banks and institutional investors. Nor need prevailing market conditions be the rule for the refinancing of PFIs at the ECB. The links between the public banks and the central bank need to be adapted and reinforced, possibly experimenting further with unconventional monetary policy arrangements promoting the systematic « greening » of monetary policy. At the heart of this linkage between public banks and the ECB are the latter's direct purchases of the former's ET-financing bond issues in the primary market for a direct debt-monetization channel. In that context, it is also imperative that public banks have an appropriate governance based on public-interest rules with an increased role given to stakeholders.

This ECB-PB nexus should be responsible for the jointly pooled and mutualized issuance of eurobonds financing, apart from ET-projects, also other infrastructure investments and public-sector services improvements (e.g. education, health, public transport, public housing). The nexus could also serve as a guarantor of blended-finance arrangements between public banks and private financial institutions. Such co-financing needs to be organized so as to prioritize the public interest, a condition rendered more likely thanks to the power and central position of the public-financing nexus. Of course, this orientation towards the public interest in nexus-supported funding of ET projects has to draw steady support from the stakeholder-oriented governance prevailing among the public financial intermediaries which allows them to define and pursue precisely that interest for the common good. Once successfully put in place, the nexus comprising the European Central Bank, the European Investment Bank and the national development banks could then launch a new large-scale « green » securitization platform funding expanded lending facilities for the ecological transition as recently proposed by France (Banque de France, 2025).

3. Towards a Progressive Euro Regime

3.1. Europe's Opportunity as a « Third Way » Alternative

We want to develop the idea of monetary financing for public banks, built around our proposed nexus tying together the ECB, the EIB and various national development banks, as the vector for a euro-denominated sustainable finance platform with global reach. This platform should move beyond direct public financing (e.g. long-term loans at low interest rates) to a potentially much larger scale of issuing a variety of sustainability-linked bonds backing the financing of all kinds of activities across the globe in pursuit of sustainable-development goals.[4] We are proposing here a new socio-economic, monetary/financial and technological regime for sustainable development which we term *progressive euro regime*.

[4] The United Nations' 2030 Agenda for Sustainable Development (United Nations, 2015) defined seventeen sustainable-development goals whose progress gets assessed annually by the High-Level Political Forum on Sustainable Development (United Nations, 2025)

Our proposal offers a timely relevant response to a difficult geo-political context for the European Union. The EU is being squeezed by the intensifying conflict between Trump's America, having turned into a bully with imperialist ambitions and neo-mercantilist policies, and China, pursuing its global reach more aggressively under the autocratic rule of Xi Jinping. Trump's return to the White House in January 2025 has turned the United States from a long-standing ally of the EU into an adversary seeking to undermine the union. Internally, growing domestic political polarization has already pulverized traditional post-war coalition politics and put far-right nationalistic (and anti-EU) parties at the edge of taking power in an ever-growing number of EU member states (Hungary, Slovakia, Czech Republic, Italy). The Far Right's politicization of climate policy has forced EU leaders to slow down the union's own ambitious agenda for ecological transition (see note 4 below) just at a time when the world needs acceleration of effort to avoid far more troublesome, even catastrophic scenarios of climate change. Our proposal aims to turn this moment of crisis into an opportunity for progress whereby the EU regains momentum as a « third way » alternative to America's hyper-capitalistic pursuits as the world's leading petrostate and China's top-down *dirigisme* aiming for technological leadership in key ecological-transition technologies (renewables, electric vehicles, batteries) as a tool of power and control (World Economic Forum, 2025).

Our proposed progressive euro regime also serves as a « third way » alternative in the context of domestic European politics. For one, it offers an answer to domestic Far-Right mobilization of anti-EU sentiments by making the case for an alternative vision – one pro-European, pro-justice, pro-environment, pro-cooperation, pro-live-and-let-live. The ecological transition is the crucial question here, because it frames everything else going forward. For example, EU leadership in matters of global sustainable development could slow or even reverse the anti-immigrant Far Right's progress by helping manage the inevitable climate-induced migration waves better and more locally anchored via international cooperation. Our proposal would at the same time also help EU's embattled democratic center move beyond its current posture of preserving what can be salvaged from the Green Deal policy framework and go from defense to offense by reviving center-left coalition politics around sustainable development.

3.2. Justifying the progressive euro regime

Why propose such a progressive euro regime in the first place ? The answer to this question must start with the recogntion that many stubbornly persistent internal barriers hamper the EU's growth dynamic. Right now Europe is stuck in a stagnant and incomplete monetary regime containing a fair degree of financial repression. Europe's banks are hesitant to invest in the long term or in high-risk activities, its financial markets relatively underdeveloped, and its over-regulated securitization activities by comparison tiny. Typically risk-averse European households put their comparatively abundant savings mostly into savings accounts at their local banks. Tens of billions of euros are tied up in low-earning bank deposits while the still-fragmented EU banking system directs those funds into a relatively narrow range of well-proven assets. That giant pool of household savings across the continent could instead be redirected towards long-term, socio-economically useful funding channels to give a massive boost across the planet for climate finance and sustainable development.

Another justification points to different ideas currently circulating among EU policy-makers to strengthen EU financial policy which our proposal might integrate and so give them greater coherence. For example, the EIB's suggested building blocks for advancing Europe's largely incomplete capital markets union (CMU) include funding large venture-capital firms through the European Tech Champions Initiative, launching a pan-European securitization platform including "green" asset-backed securities, standardizing a green bond market in the EU, and promoting the digitization of bonds (EIB, 2025). As a complement to the CMU the EU has recently launched a so-called "Savings and Investments Union" (SIU) aimed at creating better investment opportunities for its citizens while making sure savings connect to productive investments (European Commission, 2025a). Our regime proposal would run such a SIU through the public ECB-PB nexus while also acknowledging the money-creation dynamic typically driving such savings-to-investments intermediation forward.

The EU is rethinking its regulatory approach to key aspects of its financial structure, notably its climate-related disclosure and sustainability accounting rules as well as its over-regulated, hence barely used securitization infrastructure.[5] One way to avoid excessive back-tracking on its climate-finance commitments while opening up securitization connecting non-bank financial intermediation or public-finance intermediation to bank lending is to push for a large-scale "green" or, even more broadly defined "sustainable," securitization platform underwritten by the public-finance nexus connecting the central bank to public investment and development banks. This is the defining core of our proposed euro regime.

We call it the « euro regime » to imply also its potential for accelerating the hitherto slow and halting internationalization of the euro. Advancing global circulation of the euro would give the EU more policy space by lowering borrowing costs, strengthening Europe's geopolitical influence, rendering the EU more resilient to global shocks, and making the EU less exposed to US sanctions (European Central Bank, 2025b). Ultimately the euro's internationalization may be an opportunity to offer the world community of nations an attractive alternative to the increasingly weaponized dollar standard and/or China's push into a digital yuan with global reach (R. Guttmann, 2022 ; B. De Conti and R. Guttmann, 2025), rooted in a shared commitment to sustainable finance and environmental justice. Our proposal aims to offer such a progressive alternative inasmuch as it offers a range of highly-rated and widely traded bonds through its « green » securitization platform.

Central to the euro's internationalization process is the availability of euro-denominated « safe » assets traded at great volume globally in highly liquid international markets. A short

[5] The EU has about €558 billion in outstanding securitization issues, compared to $14 trillion in the US. Annual issues in Europe are about a tenth of that in the US. See European Commission (2025b) for its ideas to expand securitization incentives through regulatory changes of the Securitisation Regulation, the Capital Requirement Regulation and the Liquidity Coverage Ratio Delegated Regulation. The EC's Omnibus Simplification Package proposes burden-reducing changes to three key climate-finance initiatives, the Corporate Sustainability Reporting Directive, the Corporate Sustainability Due Diligence Directive, and the EU Taxonomy (see M. Segal, 2025). The much-discussed Draghi Report on EU Competitiveness (European Commission, 2024) also de-emphasizes sustainability in favor of greater focus on growth.

while ago the European Commission launched its first generation of jointly mutualized Eurobonds to fund its €800bn. NextGeneration EU post-Covid recovery fund. Those collectively guaranteed NGEU bonds were significantly oversubscribed, indicating very strong global demand for such euro-denominated "safe" assets with room for more to come.[6] The « green » securitization platform at the heart of our progressive euro proposal would provide a large boost to the EU's supply of internationally traded « safe » assets at a time when the US Treasuries market has shown signs of great strain and China's capital and exchange controls make its global supply of tradeable assets inherently limited.

Such widely accepted euro-denominated "safe" assets assets should have the safety guarantees of its ECB-PB nexus as issuer or guarantor so that they can also offer an array of innovatively structured asset-backed bonds integrating a sustainable-development securitization infrastructure which should be capable of funding various targeted activities and eligible social actors. For that purpose we have already introduced "green bonds," one area also aggressively pursued by China, and are about to launch "Green, Social, Sustainability and Sustainability-linked" (GSSS) bonds.[7] In that context we will need to popularize the idea of "socially useful" bonds, with their own well-defined societal benefits arising in the wake of funding projects in pursuit of sustainable-development goals and setting up a unique social-validation infrastructure of activist networks assessing those projects' progress on the ground using sustainable-finance principles (e.g. communal and environmental benefits measures, social discount rates, "participation" rewards to bondholders, social-value accounting, determination of the surplus and its distribution).

3.3. Key Components of Our "Progressive Euro Regime" Proposal

The principal idea for the proposed regime is to mobilize a large chunk of European households' savings into the ECB-PB nexus which supports the euro's internationalization by means of a new generation of safe assets tied to a "green/social/sustainable" securitization platform that provides earmarked funding along several policy channels. The securitization we have in mind here follows European covered-bond standards as specified in the EU's Covered Bond Directive (CBD) of 2019, but adapted to concessionary lending for socio-environmentally validated projects promoting the ecological transition.[8] Our regime has four building blocks, all integrated into a coherent dual-circulation fund-transfer mechanism.

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[6] For more on the increasingly urgent question of European safe assets see K. Janse (2023) as well as P. Benigno and E. Reviglio (2025).

[7] Green bonds fund projects with a positive environmental impact. Social bonds finance projects with a direct and measurable social impact. Sustainability bonds offer proceeds that can be used for either. Sustainability-linked bonds channel funds to sustainability-enhancing projects and are evaluated based on corporate key performance indicators. All these GSSS-bond categories are subject to guidelines by the International Capital Markets Association (ICMA, see www.icmagroup.org under "sustainable finance"). For more on the GSSS Bonds see G. Thomson, H. Páez and R. Modh (2024) or OECD (2024) or the World Bank's GSSS Quarterly Newsletter (www.thedocs.worldbank.org).

[8] These CBD standards, including dual recourse of bondholders to both lender and underlying loan asset, robust regulatory oversight, and lenders retaining the underlying loan asset on their balance sheets (so-called "skin in the game"), make the EU's covered-bond securitization much safer than American securitization practices with asset-

3.3.1. The EU Citizen "Sustainability" Account: In an act of initial money creation at a scale of about half a trillion euros we are proposing a €1000 account for every EU citizen as a starting point which can be redeemed quite a bit later – say, at 55 years old or after holding it for 25 years. Newly born babies or newly naturalized citizens would also be given such an account (see E. Theogene and C. Weller, 2025 for a discussion of such « baby bonds »). The idea, besides generating thereby a funding stream for our ECB-PB nexus, is to get Europeans vested and actively involved in this universal regime. Such citizen engagement should extend to being informed about progress with the ecological transition it helps to finance, learning how to appreciate long-term planning horizons, experiencing the power of compounding, and coming to terms with both climate-change-related and transition-related risks. Whatever returns accrue on these accounts (to be defined), they are tax-exempt and thus allowed to compound more rapidly. EU citizens can top up their "sustainability" accounts by adding more funds voluntarily, with additional contributions tax-deductible up to €3000 per year. They can decide whether to invest these funds in the public-finance nexus' bonds (see subsection 3.3.2) or in the "sustainability" securitization platform (see subsection 3.3.3).

3.3.2. The ECB-PB Nexus: A self-selected portion of the EU Citizen "Sustainability" Accounts gets directed to fund the ECB-PB nexus by buying its bonds issued by its public banks. The key aim here is to have a large pool of top-rated (AAA) "safe" euro-denominated assets, backed by the central bank and providing a guaranteed "real" return of, say, 1.5 percent per year. This rate is the mid-point of a low zero-to-three-percent range for the social discount rate which appropriately values the future high enough (when discounting future cash flows to present value) for the kind of long-term investment projects we need for the ecological transition, for much-needed social and physical infrastructure investments (e.g. electricity grids, public transportation, affordable housing), and for the revival of public services (e.g. health, education).[9]

These public-bank bonds should be protected against inflation, much like the US Treasury Inflation-Protected Securities (TIPS), by adjusting their principal based on a recognized inflation index and then paying the bond's fixed coupon on the indexed principal. Such indexation makes especially sense when considering the inflationary biases of climate change (because of supply disruptions) and the net-zero transition (which needs steadily rising carbon prices either imposed through emissions taxes or cap-and-trade schemes). While the market yields on these inflation-indexed bonds will vary based on demand, the ECB might want to use its powers under Article 123.2 of the Treaty on the Functioning of the European Union (see section 2.3) to keep their "real" return within the desired social-discount-rate range, preferably within the 1%-2% bracket.

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backed securities. "Greening" those CBD standards for adaptation to our proposed "green" securitization platform (see subsection 3.3.3) does not change how the underlying covered-bond principles apply.

[9] The social discount rate (see J. Broughel, 2020), a widely used concept in cost-benefit analysis, is a measure of how society values the future as compared to the present. The lower that rate, the more highly is the future valued (i.e. the less discounted it is to present value).

These return-protected public-bank bonds would go a long way towards allowing those public financial intermediaries help fill the annual €700bn. to €800bn. investment gap identified by the recent Draghi Report on EU Competitiveness (European Commission, 2024). The proceeds from these bonds would allow the PFIs in our network to scale up their operations in support of the EU's high-tech ambitions, rearmament efforts, infrastructure modernization, rebuilding of public services, loss-socialization support schemes for removing "brown" (e.g. fossil-fuel) assets before their full amortization or for compensating victims of climate change damage, migrants' integration, and other worthwhile endeavors best handled on the federal level of the union. One crucial aspect of funding through the public-bank bonds would be to support the "green" securitization platform discussed next.

3.3.3: A "Green" Securitization Platform: EU Citizen Sustainability Accounts can alternatively be invested in a fund responsible for securitizing loans that finance a variety of socially beneficial activities. The idea here is to provide a much-needed boost to loan securitization in Europe and do so in the right direction of sustainable development. The securities issued by that fund would be the aforementioned green, social, sustainability and sustainability-linked bonds (see note 6 in section 3.2). We would want to apply the GSSS designation not only to the type of activities funded by these bonds, but also to alternative social-benefit returns in lieu of interest payments.

We propose here four separate funding tracks for our "green" securitization platform issuing asset-backed GSSS bonds, one for each type of bond.

•The first promotes investments in "green" technology such as batteries, new sources of renewable energy, green trucking, green shipping, urban microclimates, et cetera. The "green" bond securitization in this category might go beyond loans to include blended-finance arrangements bringing together private venture-capital investors and the PFIs as well as subsidies, including investment tax credits.

•A second track, relying on issue of asset-backed "social" bonds, pushes funding of activities (e.g. creation of commons) and actors (e.g. cooperatives, social enterprises) in the social and solidarity economy (SSE) prioritizing social and environmental objectives over the profit motive.[10] This sector promises to become especially relevant as a vector of experimentation and communal problem-solving, whose tremendous potential should not be held back by its hitherto notorious lack of financial support. With proper funding support the SSE has a much better chance to generate societally elaborated solutions to urgent problems.

•A third track, for global climate policy and hence issued by the EU for other countries, should use more widely anchored euro-denominated "sustainability" bonds. Those could be jointly mutualized between the EU and beneficiary countries, while also involving

[10] The Social and Solidarity Economy, still in its infancy, is likely to grow in the future as the combination of worsening climate change, inequality, and injustice deepens into a crisis of the capitalist mode of production requiring post-capitalist alternatives to the organization of production, distribution and consumption. For more on the SSE see United Nations Economist Network (2023) and International Labor Organization (2024).

rich-country sovereign wealth funds as investor demand support. These "sustainability" bonds could fund wider networks of public financial intermediaries or even blended-finance arrangements with institutional investors while also having guarantee support from the respective central banks connected to the ECB through currency swap lines. Once set up in this social-network fashion, we can make this vector of the euro's internationalization a feasible multilateral response to the funding mobilization needed in the Global South for its various, already deeply affected regions and zones to face the climate crisis. The COP 29 Baku Agreement, besides agreeing to a framework for an international carbon market, also foresaw $300bn. to be generated annually by developed countries for the developing countries in climate finance support. This initiative is the EU's contribution to the Baku Agreement's funding goal, with a possible expansion in line with the addendum to the agreement known as the "Baku to Belem Roadmap to $1.3 Trillion."[11] Given the post-pandemic spike in indebtedness on top of intensifying vulnerabilities from climate change and trade wars, the sustainability-bond funding platform envisaged here would benefit from large participation of public funding sources and offering more grants than loans. Another aspect of the proposal concerns the policy framework. We should revisit in COP31 at Antalya (Turkey) in November 2026 the gap between the "conditional" and "unconditional" climate policy plans as specified in the developing nations' respective Nationally Determined Contributions of which member countries presented more ambitious versions for last year's COP30 in Bélem (Brazil). These NDC comparisons will give us a better sense for each country concerned what kind of climate policy initiatives it could undertake if it had adequate financial support available, thus allowing us to tie funds to specific climate policy initiatives and projects.

•Finally, a fourth track using "sustainability-linked" bonds would help finance the creation of a global institutional apparatus driving the ecological transition forward. Three sustainability-linked endeavors are imaginable here. First and foremost, we need to have a new well-staffed human infrastructure providing social (ex-ante and, even more so, ex-post) validation of thereby credit-financed activities along all three tracks of the "green" securitization platform. In other words, why not hire an army of talented and committed youngsters who vet proposals, agree in detail to plans and proposals, monitor their implementation for agreed-to initiatives, and follow progress over time through recurrent visits or being permanently embedded in the operation of the project? We need to have an engaged citizenry pushing the ecological transition into happening and then making it work, and a multinational corps of enthusiastic and creative activists can assure a degree of accurate verification of progress on the ground so that the perennial problem of "greenwashing" can finally be overcome. A second endeavor would consist of funding alternative "social" returns rewarding the borrowers for obtaining better-than-expected results from their thus funded projects and policies. Such social-return rewards might involve turning loans into grants, lowering interest payment obligations, restructuring debt towards less onerous debt servicing, converting bonds into open-ended participation shares (see subsection 3.3.4) or forgiving debt altogether. Finally, we could also include here a funding pipeline for additional ecological-transition support mechanisms, such as funds to incentivize removal of "brown" assets, funds

[11] See UNFCCC (2024) for more on the Baku Agreement's climate-finance provisions discussed here.

to compensate vulnerable groups for the costs they bear from climate change and/or the ecological transition (e.g. compensation for higher carbon prices) or funds to maintain the online knowledge-commons platforms informing the world community of the ecological-transition projects funded and their progress so that we can learn from each other.

3.3.4: Social Tranching : Asset-backed securities, following the logic of "structured finance," get typically carved up into separate tranches determining the pay-off hierarchy, with the so-called "equity" (or "junior") tranche the first to absorb losses and hence riskiest, followed by the "mezzanine" tranche carrying some manageable degree of default risk, and finally the "super" as well as "super-senior" tranches being paid off first, thus supposedly fully protected against default-related losses and so generally rated triple-A. But in the "green" securitization platform we might think of a different range of tranches, one we can think of as "social tranches." While we may have a super-senior tranche fully backed by the ECB-EIB-national PFIs network against any default losses and a senior tranche guaranteeing a "real" return of 1.5% (perhaps even enforced by an automatic-convertibility promise for exchange with the aforementioned public-bank bonds issued by the ECB-PB nexus), we would have two additional new kinds of tranches applied to those GSSS bonds of the "Sustainability Fund" (see section 3.3.3) that investors could choose to buy into for potentially higher returns also reflecting higher risks. There could be a "reward" tranche applied to the sustainability-linked bonds (or perhaps even extended to all four kinds of GSSS bonds) whose investors allow successful borrowers debt relief of the kind mentioned above as social returns accruing to successful climate stabilization projects (in subsection 3.3.3). And we may also contemplate a "participation" tranche where investors allow their bonds to be converted into open-ended participation shares, at pre-determined conversion conditions, if they are ready and willing to become long-term partners beyond just being passive investors.

Our progressive euro regime aims to make a push for sustainable finance on a global scale, centered for greater social-benefit capacity on a public financial intermediation network which we are proposing to design here from scratch. We want to make sure that this new regime adds a communal organizational dimension by engaging activists worldwide for social validation and turning investors potentially into long-term partners. Our regime supplants the profit logic with a social-return logic for which we propose specific rewards to the ecological-transition actors upon proving their verified success. Those positive incentives can get built into the "reward" and "participation" tranches of the asset-backed GSSS bonds at the heart of this new euro regime.

What about the macro-economic consequences of such a regime? There may be widely shared fears of the inflationary consequences of such a money-creation wave directly supported by the European Central Bank. But such fears need to make sure that they are well founded. It is already noteworthy that the bonds at the center of our €-regime are inflation-protected securities. Climate change itself is likely to be an inflationary process if we want to internalize the massive negative externalities of greenhouse emissions into a steadily rising carbon price which we also need to do just to send the correct market signals driving the transition from fossil fuels to renewable energy. Let us also be clear that preventing or lowering the cost-

inflationary impact of climate change on supply disruptions is itself a disinflationary process, which our proposal helps to foster. Similarly, our regime also contains the deflationary implications of phasing out "brown" or "dirty" (high-carbon) assets in orderly fashion rather than letting the implied "carbon bubble" burst.[12] Many of the "green" or more broadly sustainable investments funded by our progressive euro regime will operate on the supply side of the economy through capacity improvements that mitigate against the initially inflationary impact of boosting (debt-financed) spending volumes in the economy. In the end, the progressive euro regime with complement as well as complete the "greening" of monetary policy by the ECB discussed earlier in subsection 2.3. The progressive euro regime can also be meaningfully connected to the ECB's digital-euro project being extended to digital bonds. And in so doing, the EU and its ECB can promote international monetary reform through the internationalization of the euro taking shape around a progressive financing regime using public banks and other public financial intermediaries for a long-term push against climate change and for ecological transition. Organizing a coalition of the EU and other nation-states from all corners of the world can thereby provide a reform path to counter Trumpist America's bully path and Xi's China push for global influence and power.

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[12] The notion of "carbon bubble," still highly relevant today as recognized by the European Central Bank and other monetary authorities or financial regulators grouped together in the Network for the Greening of the Financial System (NGFS; ngfs.net), was first introduced by Carbon Tracker (2017) and refers to the overvaluation of carbon-intense assets (e.g. fossil-fuel reserves, coal- or oil-fired plants) which we will have to stop using before their time.

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